
**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): March 7, 2019

APTEVO THERAPEUTICS INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

001-37746
(Commission File Number)

81-1567056
(IRS Employer Identification No.)

2401 4th Avenue, Suite 1050
Seattle, Washington
(Address of Principal Executive Offices)

98121
(Zip Code)

Registrant's telephone number, including area code: (206) 838-0500

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))

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 8.01 Other Events.

Underwriting Agreement

On March 7, 2019, Aptevo Therapeutics Inc. (“Aptevo”) entered into an underwriting agreement (the “Underwriting Agreement”) with Piper Jaffray & Co., as representative of the several underwriters named therein (collectively, the “Underwriters”), relating to the issuance and sale of (i) 19,850,000 shares (the “Shares”) of its Common Stock (“Common Stock”), (ii) warrants to purchase up to 22,000,000 shares of Common Stock (the “Warrants”) and (iii) pre-funded warrants to purchase up to 2,150,000 shares of Common Stock at an exercise price of \$0.01 per share (the “Pre-Funded Warrants”). The Warrants are exercisable immediately upon issuance at an initial exercise price of \$1.30 per share and will expire five years from the date of issuance. The Pre-Funded Warrants are exercisable immediately upon issuance at an initial exercise price of \$0.01 per share and will expire ten years from the date of issuance.

The combined public offering price in this offering for each Share and accompanying Warrant is \$1.00 and the combined public offering price in this offering for each Pre-Funded Warrant and accompanying Warrant is \$0.99. The net proceeds to Aptevo from this offering are expected to be approximately \$20.2 million, after deducting underwriting discounts and commissions and other estimated offering expenses payable by Aptevo, and excluding any proceeds Aptevo may receive upon exercise of the Warrants and Pre-Funded Warrants.

The exercise price and the number of shares of Common Stock purchasable upon the exercise of the Warrants and Pre-Funded Warrants are subject to adjustment upon the occurrence of specific events, including sales of additional shares of Common Stock, stock dividends, stock splits, reclassifications and combinations of Aptevo’s Common Stock. If, at any time Warrants or Pre-Funded Warrants are outstanding, any fundamental transaction occurs, as described in the Warrants and Pre-Funded Warrants and generally including any consolidation or merger into another corporation, the consummation of a transaction whereby another entity acquires more than 50% of Aptevo’s outstanding voting stock, or the sale of all or substantially all of its assets, the successor entity must assume the obligations to the Warrant holders. Additionally, in the event of a fundamental transaction, other than one in which a successor entity that is a publicly traded corporation assumes the Warrants or Pre-Funded Warrants, each holder will have the right to require Aptevo, or its successor, to repurchase the Warrants or Pre-Funded Warrants for an amount of cash equal to the Black-Scholes value of the remaining unexercised portion of such warrants.

The offering is being made pursuant to an effective registration statement on Form S-3 (Registration Statement No. 333-221499), as previously filed with the Securities and Exchange Commission, and a related prospectus.

The Underwriting Agreement contains customary representations, warranties and agreements by Aptevo, customary conditions to closing, indemnification obligations of Aptevo and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties. Broadridge Financial Solutions, Inc. will act as warrant agent for the Warrants and Pre-Funded Warrants.

The Underwriting Agreement, the form of Warrant and form of Pre-Funded Warrant are filed as Exhibit 1.1, Exhibit 4.1 and Exhibit 4.2, respectively, and the description of the terms of the Underwriting Agreement, the Warrants and the Pre-Funded Warrants are qualified in their entirety by reference to such exhibit. A copy of the opinion of Cooley LLP relating to the legality of the issuance and sale of the Shares, Warrants and Pre-Funded Warrants is attached as Exhibit 5.1 hereto.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement between Aptevo Therapeutics, Inc. and Piper Jaffray & Co., dated March 7, 2019.</u>
4.1	<u>Form of Warrant</u>
4.2	<u>Form of Pre-Funded Warrant</u>
5.1	<u>Opinion of Cooley LLP</u>
23.1	<u>Consent of Cooley LLP (contained in Exhibit 5.1)</u>

SIGNATURE

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

APTEVO THERAPEUTICS INC.

Date: March 11, 2019

By: /s/ Marvin L. White

Marvin L. White

President and Chief Executive Officer

Aptevo Therapeutics Inc.

Common Stock and Warrants to Purchase Common Stock

PURCHASE AGREEMENT

March 7, 2019

PIPER JAFFRAY & CO.

As Representative of the several

Underwriters named in Schedule I hereto

c/o Piper Jaffray & Co.

U.S. Bancorp Center

800 Nicollet Mall

Minneapolis, Minnesota 55402

Ladies and Gentlemen:

Aptevo Therapeutics Inc., a Delaware corporation (the **“Company”**), proposes to issue and sell to the several Underwriters named in Schedule I hereto (the **“Underwriters”**) an aggregate of (i) 19,850,000 shares (the **“Shares”**) of Common Stock, \$0.001 par value per share (the **“Common Stock”**), of the Company, (ii) warrants to purchase up to 22,000,000 shares of Common Stock in the form set forth on Exhibit A (the **“Warrants”**) and (iii) pre-funded warrants to purchase up to 2,150,000 shares of Common Stock at an exercise price of \$0.01 per share in the form set forth on Exhibit B (the **“Pre-Funded Warrants”**) and, together with the Shares and the Warrants, the **“Securities”**). Each Share is being sold together with a Warrant to purchase one (1) share of Common Stock at an exercise price of \$1.30 per whole share of Common Stock. Each Pre-Funded Warrant is being sold with a Warrant to purchase one (1) share of Common Stock at an exercise price of \$1.30 per whole share of Common Stock. The shares of Common Stock underlying the Warrants and the Pre-Funded Warrants are herein called the **“Warrant Shares”**).

The Company hereby confirms its agreement with respect to the sale of the Securities to the several Underwriters, for whom Piper Jaffray & Co. is acting as representative (the **“Representative”**).

1. **Registration Statement and Prospectus.** The Company has prepared and filed with the Securities and Exchange Commission (the **“Commission”**) a registration statement on Form S-3 (File No. 333-221499) under the Securities Act of 1933, as amended (the **“Securities Act”**) and the rules and regulations (the **“Rules and Regulations”**) of the Commission thereunder, and such amendments to such registration statement as may have been required to the date of this Purchase Agreement (this **“Agreement”**). Such registration statement has been declared effective by the Commission. Each part of such registration statement, including the amendments, exhibits and any schedules thereto, the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act and the documents and information otherwise deemed to be a part thereof or

included therein by Rule 430B under the Securities Act (the “**Rule 430B Information**”) or otherwise pursuant to the Rules and Regulations, as of the time the Registration Statement became effective, is herein called the “**Registration Statement**.” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act is called the “Rule 462(b) Registration Statement” and, from and after the date and time of filing of the Rule 462(b) Registration Statement, the term “Registration Statement” shall include the Rule 462(b) Registration Statement.

The prospectus in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement is herein called the “**Base Prospectus**.” Each preliminary prospectus supplement to the Base Prospectus (including the Base Prospectus as so supplemented), that describes the Securities and the offering thereof, that omitted the Rule 430B Information and that was used prior to the filing of the final prospectus supplement referred to in the following sentence is herein called a “**Preliminary Prospectus**.” Promptly after execution and delivery of this Agreement, the Company will prepare and file with the Commission a final prospectus supplement to the Base Prospectus relating to the Securities and the offering thereof in accordance with the provisions Rule 430B and Rule 424(b) of the Rules and Regulations. Such final supplemental form of prospectus (including the Base Prospectus as so supplemented), in the form filed with the Commission pursuant to Rule 424(b) is herein called the “**Prospectus**.” Any reference herein to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act as of the date of such prospectus.

For purposes of this Agreement, all references to the Registration Statement, the Rule 462(b) Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System or any successor system thereto (“**EDGAR**”). All references in this Agreement to financial statements and schedules and other information which is “described,” “contained,” “included” or “stated” in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus (or other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which are incorporated by reference in or otherwise deemed by the Rules and Regulations to be a part of or included in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be; and all references in this Agreement to amendments or supplements to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to mean and include the subsequent filing of any document under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and which is deemed to be incorporated therein by reference or otherwise deemed by the Rules and Regulations to be a part thereof.

2. **Representations and Warranties of the Company.** The Company represents and warrants to, and agrees with, the several Underwriters as follows:

(i) **Registration Statement and Prospectuses.** No order preventing or suspending the use of any Preliminary Prospectus or the Prospectus (or any supplement thereto) has been issued by the Commission and no proceeding for that purpose has been initiated or is pending or, to the knowledge of the Company, threatened by the Commission.

As of the time each part of the Registration Statement (or any post-effective amendment thereto) became or becomes effective (including each deemed effective date with respect to the Underwriters pursuant to Rule 430B or otherwise under the Securities Act), such part conformed or will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations. Upon the filing or first use within the meaning of the Rules and Regulations, each Preliminary Prospectus and the Prospectus (or any supplement to either) conformed or will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations. The Registration Statement and any post-effective amendment thereto has become effective under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement, any post-effective amendment or any part thereof is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are threatened by the Commission.

(ii) *Accurate Disclosure.* Each Preliminary Prospectus, at the time of filing thereof or the time of first use within the meaning of the Rules and Regulations, did not contain an 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, in the light of the circumstances under which they were made, not misleading. Neither the Registration Statement nor any amendment thereto, at the effective time of each part thereof or at the Closing Date (as defined below), contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Time of Sale (as defined below), neither (A) the Time of Sale Disclosure Package (as defined below) nor (B) any issuer free writing prospectus (as defined below), when considered together with the Time of Sale Disclosure Package, included an untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. Neither the Prospectus nor any supplement thereto, as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b) of the Rules and Regulations, at the Closing Date, 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 light of the circumstances under which they were made, not misleading. The representations and warranties in this Section 2(a)(ii) shall not apply to statements in or omissions from any Preliminary Prospectus, the Registration Statement (or any amendment thereto), the Time of Sale Disclosure Package or the Prospectus (or any supplement thereto) made in reliance upon, and in conformity with, written information furnished to the Company by you, or by any Underwriter through you, specifically for use in the preparation of such document, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 6(f).

Each reference to an *“issuer free writing prospectus”* herein means an issuer free writing prospectus as defined in Rule 433 of the Rules and Regulations.

“Time of Sale Disclosure Package” means the Preliminary Prospectus dated March 6, 2019, any free writing prospectus set forth on Schedule II and the information on Schedule III, all considered together.

Each reference to a ***“free writing prospectus”*** herein means a free writing prospectus as defined in Rule 405 of the Rules and Regulations.

“Time of Sale” means 8:19 a.m. (Eastern time) on the date of this Agreement.

(iii) ***Issuer Free Writing Prospectuses***. (A) Each Issuer Free Writing Prospectus does not include any information that conflicts with the information contained in the Registration Statement, any Preliminary Prospectus or the Prospectus. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by you or by any Underwriter through you specifically for use therein; it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 6(f).

(B) (1) At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) under the Securities Act) of the Securities and (2) at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405 under the Securities Act, including the Company or any subsidiary in the preceding three years not having been convicted of a felony or misdemeanor or having been made the subject of a judicial or administrative decree or order as described in Rule 405 of the Rules and Regulations (without taking account of any determination by the Commission pursuant to Rule 405 of the Rules and Regulations that it is not necessary that the Company be considered an ineligible issuer), nor an “excluded issuer” as defined in Rule 164 under the Securities Act.

(C) Each Issuer Free Writing Prospectus satisfied, as of its issue date and at all subsequent times to the Time of Sale, all other conditions to use thereof as set forth in Rules 164 and 433 under the Securities Act.

(iv) ***Emerging Growth Company***. From the time of initial filing of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication (as defined below)) through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the Securities Act (an ***“Emerging Growth Company”***). ***“Testing-the-Waters Communication”*** means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act.

(v) ***Testing-the-Waters Materials***. The Company (i) has not alone engaged in any Testing-the-Waters Communications, other than Testing-the-Waters Communications with the prior consent of the Representative with entities that are

qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representative to engage in Testing-the-Waters Communications. The Company reconfirms that the Representative has been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications (as defined below) other than those listed on Schedule V hereto. **“Written Testing-the-Waters Communication”** means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. Any individual Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement or the Time of Sale Disclosure Package, complied in all material respects with the Securities Act, and when taken together with the Time of Sale Disclosure Package as of the Applicable Time, did not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(vi) **No Other Offering Materials.** The Company has not distributed and will not distribute any prospectus or other offering material in connection with the offering and sale of the Securities other than any Preliminary Prospectus, the Time of Sale Disclosure Package or the Prospectus or other materials permitted by the Securities Act to be distributed by the Company; *provided, however*, that, except as set forth on Schedule II, the Company has not made and will not make any offer relating to the Securities that would constitute a free writing prospectus, except in accordance with the provisions of Section 4(a)(xv) of this Agreement and, except as set forth on Schedule V, the Company has not made and will not make any communication relating to the Securities that would constitute a Testing-the-Waters Communication, except in accordance with the provisions of Section 2(a)(iv) of this Agreement.

(vii) **Financial Statements.** The financial statements of the Company, together with the related notes, set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus comply in all material respects with the requirements of the Securities Act and the Exchange Act and fairly present the financial condition of the Company and its consolidated subsidiaries as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with generally accepted accounting principles in the United States consistently applied throughout the periods involved; the supporting schedules included in the Registration Statement present fairly the information required to be stated therein; all non-GAAP financial information included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus complies with the requirements of Regulation G and Item 10 of Regulation S-K under the Securities Act. No other financial statements or schedules are required to be included in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus. The interactive data in eXtensible Business Reporting Language (**“XBRL”**) included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus fairly present the information called for in all material respects and have been prepared in accordance with the rules and guidelines of the Commission applicable thereto.

(viii) Auditor Independence. Ernst & Young LLP, which has expressed its opinion with respect to the financial statements and schedules filed as a part of the Registration Statement and included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, are independent public accountants as required by the Securities Act and the Public Accounting Oversight Board.

(ix) No Off-Balance Sheet Transactions. There are no transactions, arrangements or other relationships between and/or among the Company, and/or, to the knowledge of the Company, any of its affiliates and any unconsolidated entity, including, but not limited to, any structural finance, special purpose or limited purpose entity (each, an **“Off-Balance Sheet Transaction”**) that could reasonably be expected to materially affect the Company’s liquidity or the availability of or requirements for its capital resources, including those Off-Balance Sheet Transactions described in the Commission’s Statement about Management’s Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), and are required to be described in the Prospectus, which have not been described as required.

(x) Organization and Good Standing. The Company and each of its subsidiaries (as defined in Rule 405 under the Securities Act) has been duly organized, validly existing and in good standing under the laws of their respective jurisdictions of organization, except where the failure to be so duly organized, duly organized, validly existing and in good standing would not reasonably be expected to have Material Adverse Effect (as defined below). The Company and each of its subsidiaries are, and will be, duly licensed or qualified as a foreign corporation for the transaction of business and in good standing under the laws of each other jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such license or qualification, and have all corporate power and authority necessary to own or hold their respective properties and to conduct their respective businesses as described in the Registration Statement and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect or reasonably be expected to have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), prospects, stockholders’ equity or results of operations of the Company and its subsidiaries, taken as a whole, or prevent or materially interfere with the consummation of the transactions contemplated hereby (a **“Material Adverse Effect”**). The Company does not own or control, directly or indirectly, any entity other than the subsidiaries listed in Exhibit 21.1 to the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2017, except for subsidiaries that in the aggregate would not constitute a “significant subsidiary” (as defined in Rule 405 under the Securities Act).

(xi) Absence of Certain Events. Except as contemplated in the Time of Sale Disclosure Package and in the Prospectus, subsequent to the respective dates as of which

information is given in the Time of Sale Disclosure Package, neither the Company nor any of its subsidiaries has (i) sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, (ii) issued or granted any securities (other than pursuant to employee benefit plans, qualified stock option plans or other equity compensation plans or arrangements existing on the date hereof and disclosed in the Registration Statement and the Prospectus), (iii) incurred any material liability or obligation, direct or contingent, other than liabilities and obligations that were incurred in the ordinary course of business, (iv) entered into any material transaction not in the ordinary course of business or (v) declared or paid any dividend on its share capital; and since such date, except as disclosed in the Registration Statement and the Prospectus, there has not been any change in the share capital, long-term debt, net current assets or short-term debt of the Company or any of its subsidiaries or any adverse change, or any development involving a prospective adverse change, in or affecting the condition (financial or otherwise), results of operations, shareholders' equity, properties, management, business or prospects of the Company and its subsidiaries, taken as a whole.

(xii) Absence of Proceedings. Except as set forth in the Time of Sale Disclosure Package and in the Prospectus, there is not pending or, to the knowledge of the Company, threatened or contemplated, any action, suit or proceeding (a) to which the Company or any of its subsidiaries is a party or (b) which has as the subject thereof any officer or director of the Company or any subsidiary, any employee benefit plan sponsored by the Company or any subsidiary or any property or assets owned or leased by the Company or any subsidiary before or by any court or Governmental Authority (as defined below), or any arbitrator, which, individually or in the aggregate, might result in any Material Adverse Effect, or would materially and adversely affect the ability of the Company to perform its obligations under this Agreement or which are otherwise material in the context of the sale of the Securities. There are no current or, to the knowledge of the Company, pending, legal, governmental or regulatory actions, suits or proceedings (x) to which the Company or any of its subsidiaries is subject or (y) which has as the subject thereof any officer or director of the Company or any subsidiary, any employee plan sponsored by the Company or any subsidiary or any property or assets owned or leased by the Company or any subsidiary, that are required to be described in the Registration Statement, Time of Sale Disclosure Package and Prospectus by the Securities Act or by the Rules and Regulations and that have not been so described.

(xiii) Disclosure of Legal Matters. There are no statutes, regulations, contracts or documents that are required to be described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus or required to be filed as exhibits to the Registration Statement by the Securities Act or by the Rules and Regulations that have not been so described or filed.

(xiv) Authorization; No Conflicts; Authority. This Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such

enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity. The execution, delivery and performance of this Agreement and the consummation of the transactions herein contemplated will not (A) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to 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, (B) result in any violation of the provisions of the Company's charter or by-laws or (C) result in the violation of any law or statute or any judgment, order, rule, regulation or decree of any court or arbitrator or federal, state, local or foreign governmental agency or regulatory authority having jurisdiction over the Company or any of its subsidiaries or any of their properties or assets (each, a **"Governmental Authority"**), except in the case of clause (A) as would not result in a Material Adverse Effect. No consent, approval, authorization or order of, or registration or filing with any Governmental Authority is required for the execution, delivery and performance of this Agreement or for the consummation of the transactions contemplated hereby, including the issuance or sale of the Securities and, upon exercise of the Warrants and/or the Pre-Funded Warrants, the Warrant Shares by the Company, except such as may be required under the Securities Act, the rules of the Financial Industry Regulatory Authority (**"FINRA"**) or state securities or blue sky laws; and the Company has full power and authority to enter into this Agreement and to consummate the transactions contemplated hereby, including the authorization, issuance and sale of the Securities and, upon exercise of the Warrants and/or the Pre-Funded Warrants, the Warrant Shares as contemplated by this Agreement.

(xv) Capitalization; the Securities; Registration Rights. The Company has an authorized and outstanding capitalization as set forth in Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus (other than for subsequent issuances, if any, pursuant to employee benefit plans, under the exercise of outstanding options or as otherwise described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus). All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and non-assessable, conform in all material respects to the description thereof contained in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus and were not issued in violation of any preemptive right, resale right, right of first refusal or similar right. All of the Company's options, warrants and other rights to purchase or exchange any securities for shares of the Company's capital stock have been duly authorized and validly issued, and conform in all material respects to the description thereof contained in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus. All of the issued shares of capital stock or other ownership interests of each subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims, except for such liens, encumbrances, equities or claims as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as otherwise stated in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, (A) there are no preemptive rights

or other rights to subscribe for or to purchase, or any restriction upon the voting or transfer of, any shares of Common Stock pursuant to the Company's charter, by-laws or any agreement or other 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; (B) neither the filing of the Registration Statement nor the offering or sale of the Securities, or the issuance of the Warrant Shares upon conversion of the Warrants and/or the Pre-Funded Warrants, as contemplated by this Agreement gives rise to any rights for or relating to the registration of any shares of Common Stock or other securities of the Company (collectively "**Registration Rights**") and (C) any person to whom the Company has granted Registration Rights has agreed not to exercise such rights until after expiration of the Lock-Up Period (as defined below). All of the issued and outstanding shares of capital stock of each of the Company's subsidiaries have been duly and validly authorized and issued and are fully paid and nonassessable, and, except as otherwise described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, the Company owns of record and beneficially, free and clear of any security interests, claims, liens, proxies, equities or other encumbrances, all of the issued and outstanding shares of such stock. The Company has an authorized and outstanding capitalization as set forth in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus under the caption "Capitalization." The Common Stock (including the Securities and the Warrant Shares) conforms in all material respects to the description thereof contained in the Time of Sale Disclosure Package and the Prospectus.

(xvi) Stock Options. Except as described in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, there are no options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company or any subsidiary of the Company any shares of the capital stock of the Company or any subsidiary of the Company. The description of the Company's stock option, stock bonus and other stock plans or arrangements (the "**Company Stock Plans**"), and the options (the "**Options**") or other rights granted thereunder, set forth in the Time of Sale Disclosure Package and the Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights. Each grant of an Option (A) was duly authorized no later than the date on which the grant of such 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 (B) was made in accordance with the terms of the applicable Company Stock Plan, and all applicable laws and regulatory rules or requirements, including all applicable federal securities laws.

(xvii) Ownership of Assets. The Company and each of its subsidiaries have good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by them that are material to the business of the Company, in each case free and clear of all liens, encumbrances and defects, except for such liens, encumbrances and defects 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. All assets held under lease by the Company and its subsidiaries that are material to the business of the Company are held under valid, subsisting and enforceable leases, with such exceptions as do not materially interfere with the use made and proposed to be made of such assets by the Company and its subsidiaries.

(xviii) **Intellectual Property.** To the knowledge of the Company, the Company and its subsidiaries own or possess the valid right to use all (i) patents, patent applications, trademarks, trademark registrations, service marks, service mark registrations, internet domain name registrations, copyrights, copyright registrations, licenses and trade secret rights (collectively, ***“Intellectual Property Rights”***) and (ii) inventions, software, works of authorships, trademarks, service marks, trade names, databases, formulae, know how, Internet domain names and other intellectual property (including trade secrets and other unpatented and/or unpatentable proprietary confidential information, systems, or procedures) (collectively, ***“Intellectual Property Assets”***) necessary to conduct their respective businesses as currently conducted and as proposed to be conducted and described in the Registration Statement, the Pricing Disclosure Package or the Prospectus. The Company and its subsidiaries have not received written notice of any challenge, which is still pending, by any other person to the rights of the Company and its subsidiaries with respect to any Intellectual Property Rights or Intellectual Property Assets owned or used by the Company or its subsidiaries, except as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, the Company and its subsidiaries’ respective businesses as now conducted do not give rise to any material infringement, material misappropriation or other material violation of any valid and enforceable Intellectual Property Rights of any other person. All licenses for the use of the Intellectual Property Rights described in the Registration Statement, the Pricing Disclosure Package or the Prospectus are valid, binding upon and enforceable by or against the parties thereto in accordance with their terms. The Company has complied in all material respects with, and is not in breach and has not received any asserted or threatened claim of material breach under, all material Intellectual Property licenses, and the Company has no knowledge of any material breach by any other person to any Intellectual Property license to which the Company is a party. No claim has been made, and is currently pending, against the Company alleging the infringement by the Company of any patent, trademark, service mark, trade name, copyright, trade secret, license in or other intellectual property right or franchise right of any person, except as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has taken all reasonable steps to protect, maintain and safeguard its Intellectual Property Rights, including the execution of appropriate nondisclosure and confidentiality agreements. The consummation of the transactions contemplated hereby will not result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other person in respect of, the Company’s right to own, use, or hold for use any of the Intellectual Property Rights as owned, used or held for use in the conduct of the business as currently conducted.

(xix) **No Violations or Defaults.** Except as disclosed in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, neither the Company nor any of its subsidiaries (i) is in violation of its certificate of incorporation,

charter or by-laws (or similar organizational documents), (ii) is 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, condition or other obligation contained in any indenture, mortgage, deed of trust, loan agreement, license or other agreement or instrument to which it is a party, by which it is bound or to which any of its properties or assets is subject (iii) is in violation of any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over it or its property or assets or (iv) has failed to obtain any license, permit, certificate, franchise or other governmental authorization or permit necessary to the ownership of its property or to the conduct of its business, except in the case of clauses (ii) and (iii), to the extent any such conflict, breach, violation or default would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(xx) Taxes. The Company and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date hereof, subject to permitted extensions, and have paid all taxes due, and no tax deficiency has been determined adversely to the Company or any of its subsidiaries, nor does the Company have any knowledge of any tax deficiencies that have been, or would reasonably be expected to be asserted against the Company, that would, in the aggregate, reasonably be expected to have a Material Adverse Effect.

(xxi) Exchange Listing and Exchange Act Registration. The Common Stock is, and, when issued upon exercise of the Warrants and/or the Pre-Funded Warrants, the Warrant Shares will be, registered pursuant to Section 12(b) of the Exchange Act and is, and, when issued upon exercise of the Warrants and/or the Pre-Funded Warrants, the Warrant Shares will be, included or approved for listing on the Nasdaq Global Market and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the Nasdaq Global Market nor has the Company received any notification that the Commission or the Nasdaq Global Market is contemplating terminating such registration or listing. The Company has complied in all material respects with the applicable requirements of the Nasdaq Global Market for maintenance of inclusion of the Common Stock, including the Warrant Shares, thereon. The Company has filed an application to include the Securities, including the Warrant Shares, on the Nasdaq Global Market. Except as previously disclosed to counsel for the Underwriters or as set forth in the Time of Sale Disclosure Package and the Prospectus, to the knowledge of the Company, no beneficial owners of the Company's capital stock or subordinated debt who, together with their associated persons and affiliates, hold in the aggregate 10% or more of such capital stock or subordinated debt, have any direct or indirect association or affiliate with a FINRA member.

(xxii) Internal Controls. The Company and its subsidiaries maintain a system of internal accounting controls designed to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles in the United States and to maintain accountability for assets; (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 existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in XBRL included or incorporated by reference in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus fairly present the information called for in all material respects and are prepared in accordance with the rules and guidelines of the Commission applicable thereto (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes-Oxley Act, and the rules and regulations promulgated in connection therewith as of an earlier date than it would otherwise be required to so comply under applicable law). Except as disclosed in the Registration Statement, in the Time of Sale Disclosure Package and in the Prospectus, the Company's internal control over financial reporting is effective and none of the Company, its board of directors and audit committee is aware of any "material weaknesses" (as defined by the Public Company Accounting Oversight Board) in its internal control over financial reporting, or any fraud, whether or not material, that involves management or other employees of the Company and its subsidiaries who have a significant role in the Company's internal controls; and since the end of the latest audited fiscal year, there has been no change in the Company's internal control over financial reporting (whether or not remediated) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company's board of directors has, subject to the exceptions, cure periods and the phase in periods specified in the applicable stock exchange rules ("**Exchange Rules**"), validly appointed an audit committee to oversee internal accounting controls whose composition satisfies the applicable requirements of the Exchange Rules and the Company's board of directors and/or the audit committee has adopted a charter that satisfies the requirements of the Exchange Rules.

(xxiii) No Brokers or Finders. Other than as contemplated by this Agreement, the Company has not incurred any liability for any finder's or broker's fee or agent's commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby.

(xxiv) Insurance. Except as would not reasonably be expected to have a Material Adverse Effect, the Company and each of its subsidiaries maintain insurance from nationally recognized, in the applicable country, insurers in such amounts and covering such risks as is commercially reasonable in accordance with customary practices for companies engaged in similar businesses and similar industries for the conduct of their respective businesses and the value of their respective properties and as is customary for companies engaged in similar businesses in similar industries. All insurance policies of the Company and its subsidiaries are in full force and effect; the Company and each of its subsidiaries are in compliance with the terms of such policies in all material respects; neither the Company nor any of its subsidiaries has received notice from any insurer or agent thereof that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance; there are no material claims by the Company or any of its subsidiaries under any such policy as to which any insurance company is denying liability or defending under a reservation of rights clause; 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 reasonably be expected to have a Material Adverse Effect.

(xxv) Investment Company Act. Neither the Company nor any of its subsidiaries is and, after giving effect to the offering and sale of the Securities and, upon exercise of the Warrants and/or the Pre-Funded Warrants, the issuance of the Warrant Shares and the application of the proceeds therefrom as described under the caption “Use of Proceeds” in the Registration Statement, Time of Sale Disclosure Package and the Prospectus, none of them will be, (i) an “investment company” or a company “controlled” by an “investment company” (within the meaning of the Investment Company Act of 1940, as amended (the “**Investment Company Act**”), and the rules and regulations of the Commission thereunder) or (ii) a “business development company” (as defined in Section 2(a)(48) of the Investment Company Act).

(xxvi) Eligibility to use Form S-3. The conditions for use of Form S-3, set forth in the General Instructions thereto, have been satisfied.

(xxvii) Incorporated Documents. The documents incorporated by reference in the Time of Sale Disclosure Package and in the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and were filed on a timely basis with the Commission and none of such documents contained an untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; any further documents so filed and incorporated by reference in the Time of Sale Disclosure Package or in the Prospectus, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act, and will not contain an 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.

(xxviii) Sarbanes-Oxley Act. There is and has been no failure on the part of the Company or, to the knowledge of the Company, any of the Company’s directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act that are applicable to the Company or its directors or officers in their capacities as such.

(xxix) Disclosure Controls. The Company and each of its subsidiaries maintain “disclosure controls and procedures” (as defined in Rule 13a-15(e) under the Exchange Act) designed to ensure that the information required to be disclosed by the Company and its subsidiaries in the reports they file or submit under the Exchange Act is accumulated and communicated to management of the Company and its subsidiaries, including their respective principal executive officers and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure to be made, and such disclosure controls and procedures are effective in all material respects to perform the functions for which they were established.

(xxx) ***Anti-Bribery and Anti-Money Laundering Laws***. Each of the Company, its subsidiaries and its controlled affiliates and any of their respective officers and directors, and to the knowledge of the Company, their supervisors, managers, agents, or employees, has not violated, its participation in the offering will not violate, and the Company and each of its subsidiaries has instituted and maintains policies and procedures designed to ensure continued compliance with, each of the following laws: anti-bribery laws, including but not limited to, any applicable law, rule, or regulation of any locality, including but not limited to any law, rule, or regulation promulgated to implement the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, signed December 17, 1997, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.K. Bribery Act 2010, or any other law, rule or regulation of similar purposes and scope (collectively, “***Anti-Bribery Laws***”), or anti-money laundering laws, including but not limited to, applicable federal, state, international, foreign or other laws, regulations or government guidance regarding anti-money laundering, including, without limitation, Title 18 U.S. Code section 1956 and 1957, the Patriot Act, the Bank Secrecy Act, and international anti-money laundering principles or procedures by an intergovernmental group or organization (collectively, “***Anti-Money Laundering Laws***”), such as the Financial Action Task Force on Money Laundering, of which the United States is a member and with which designation the United States representative to the group or organization continues to concur, all as amended, and any Executive order, directive, or regulation pursuant to the authority of any of the foregoing, or any orders or licenses issued thereunder. No action, suit or proceeding by or before any court or governmental agency, authority, or before any body or arbitrator, involving the Company or any of its subsidiaries with respect to Anti-Money Laundering Laws is pending or to the knowledge of the Company, threatened.

(xxxi) ***OFAC***.

(A) Neither the Company nor any of its subsidiaries, nor any of their directors or officers, nor, to the Company’s knowledge, any employee, agent, affiliate or representative of the Company or its subsidiaries, is an individual or entity that is, or is owned or controlled by an individual or entity that is:

(1) 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***”), nor

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

(B) Neither the Company nor any of its subsidiaries will, 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 individual or entity:

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

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

(C) For the past five years, neither the Company nor any of its subsidiaries has knowingly engaged in, and is not now knowingly engaged in, any dealings or transactions with any individual or entity, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(xxxii) Compliance with Environmental Laws. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and each of its subsidiaries (i) are, and at all times since August 1, 2016 were, in compliance with all laws, regulations, ordinances, rules, orders, judgments, decrees, permits or other legal requirements of any governmental authority, including without limitation any international, foreign, national, state, provincial, regional, or local authority, relating to pollution, the protection of human health or safety, the environment, or natural resources, or to use, handling, storage, manufacturing, transportation, treatment, discharge, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “**Environmental Laws**”) applicable to such entity, which compliance includes, without limitation, obtaining, maintaining and complying with all permits and authorizations and approvals required by Environmental Laws to conduct their respective businesses, and (ii) have not received written notice or otherwise have knowledge of any actual or alleged violation of Environmental Laws, or of any actual or potential liability for or other obligation concerning the presence, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except in the case of clause (i) or (ii) where such non-compliance, violation, liability or other obligation would not, in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (x) there are no proceedings that are pending, or to the knowledge of the Company, threatened, against the Company or any of its subsidiaries under Environmental Laws in which a governmental authority is also a party, other than such proceedings regarding which it is reasonably believed no monetary sanctions of \$100,000 or more will be imposed, (y) the Company and its subsidiaries are not aware of any issues regarding compliance with Environmental Laws, including any pending or proposed Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that could reasonably be expected to have a material effect on the capital expenditures, earnings or competitive position of the Company and its subsidiaries and (z) none of the Company and its subsidiaries anticipates material capital expenditures relating to Environmental Laws.

(xxxiii) Compliance with Occupational Laws. The Company and each of its subsidiaries (A) is in compliance, in all material respects, with any and all

applicable foreign, federal, state and local laws, rules, regulations, treaties, statutes and codes promulgated by any and all Governmental Authorities (including pursuant to the Occupational Health and Safety Act) relating to the protection of human health and safety in the workplace (“**Occupational Laws**”); (B) has received all material permits, licenses or other approvals required of it under applicable Occupational Laws to conduct its business as currently conducted; and (C) is in compliance, in all material respects, with all terms and conditions of such permit, license or approval. No action, proceeding, revocation proceeding, writ, injunction or claim is pending or, to the Company’s knowledge, threatened against the Company or any of its subsidiaries relating to Occupational Laws, and the Company does not have knowledge of any facts, circumstances or developments relating to its operations or cost accounting practices that could reasonably be expected to form the basis for or give rise to such actions, suits, investigations or proceedings.

(xxxiv) **ERISA and Employee Benefits Matters.** (A) Each “employee benefit plan” (within the meaning of Section 3(3) of the Employee Retirement Security Act of 1974, as amended (“**ERISA**”)) for which the Company or any member of its “Controlled Group” (within the meaning of Section 414 of the Internal Revenue Code of 1986, as amended, and the rules and regulations promulgated thereunder (the “**Code**”)) would have any liability (each, a “**Plan**”) has been maintained in compliance in all material respects with its terms and with the requirements of all applicable statutes, rules and regulations, including, without limitation, ERISA and the Code; (B) no “prohibited transaction” (within the meaning of Section 406 of ERISA or Section 4975 of the Code) has occurred with respect to any Plan excluding transactions effected pursuant to a statutory or administrative exemption; (C) with respect to each Plan subject to Title IV of ERISA (1) no “reportable event” (within the meaning of Section 4043(c) of ERISA) has occurred or is reasonably expected to occur that would result in a material loss to the Company, (2) no “accumulated funding deficiency” (within the meaning of Section 302 of ERISA or Section 412 of the Code), whether or not waived, has occurred or is reasonably expected to occur, (3) the fair market value of the assets under each Plan that is required to be funded exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan) and (4) neither the Company or any member of its Controlled Group has incurred, or reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guaranty Corporation in the ordinary course and without default) in respect of a Plan, including a “multiemployer plan” (within the meaning of Section 4001(c)(3) of ERISA); and (D) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, to the knowledge of the Company, whether by action or by failure to act, which would cause the loss of such qualification.

(xxxv) **Business Arrangements.** Except as disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has granted rights to develop, manufacture, produce, assemble, distribute, license, market or sell its products to any other person and is not bound by any agreement that affects the exclusive right of the Company or such subsidiary to develop, manufacture, produce, assemble, distribute, license, market or sell its products.

(xxxvi) **Labor Matters.** No labor disturbance by or dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent that could reasonably be expected to have a Material Adverse Effect.

(xxxvii) **Restrictions on Subsidiary Payments to the Company.** No subsidiary of the Company is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's property or assets to the Company or any other subsidiary of the Company, except as described in or contemplated by the Time of Sale Disclosure Package and the Prospectus.

(xxxviii) **Statistical Information.** The statistical and market-related data included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus and the consolidated financial statements of the Company and its subsidiaries included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus are based on or derived from sources that the Company believes to be reliable in all material respects.

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

(xl) **Absence of Enforcement Actions.** The Company and, to the knowledge of the Company, its directors, officers, employees and agents (while acting in such capacity) are and, at all times prior to the date hereof, have been in compliance with all health care laws and regulations applicable to the Company or any of its product candidates or activities, including development and testing of pharmaceutical products, kickbacks, recordkeeping, documentation requirements, the hiring of employees (to the extent governed by Health Care Laws), quality, safety, privacy, security, licensure, accreditation or any other aspect of developing and testing health care or pharmaceutical products (collectively, **"Health Care Laws"**), except where such noncompliance would not, individually or in the aggregate, have Material Adverse Effect. The Company has not received any notification, correspondence or any other written or oral communication, including notification of any pending or threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority, including, without limitation, the U.S. Food and Drug Administration (the **"FDA"**), the U.S. Drug Enforcement Administration, the Centers for Medicare & Medicaid Services and the U.S. Department of Health and Human Services Office of Inspector General, of potential or actual non-compliance by, or liability of, the Company under any Health Care Laws. To the knowledge of the Company, there are no facts or circumstances that would reasonably be expected to give rise to liability of the Company under any Health Care Laws, except as would not individually or in the aggregate have a Material Adverse Effect.

Neither the Company nor any of its subsidiaries has engaged in activities that are, as applicable, cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid or any other state or federal health care program. Except as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, as applicable, (i) there have been no recalls, field notifications, field corrections, market withdrawals or replacements, safety alerts or other notices of action relating to an alleged lack of safety, efficacy, or regulatory compliance of the Company's products ("**Safety Notices**"), (ii) any Safety Notices have been resolved or closed and (iii) to the knowledge of the Company, there are no material complaints with respect to the Company products that are currently unresolved.

(xli) *Permits.* The Company and its subsidiaries possess all material certificates, authorizations, clearances, approvals, registrations, exemptions, licenses or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described the Prospectus ("**Permits**"), and all such Permits are valid, current and in full force and effect, except where the failure to so possess or be valid, current and in full force and effect would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit. Neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any Permits which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Effect. The Company has not received any written notice denying, revoking or modifying any "approved enterprise," "benefited enterprise" or "preferred enterprise" status with respect to any of the Company's facilities or operations.

(xlii) *Compliance with Applicable Laws and Regulations.* Except as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, as applicable, the Company and its subsidiaries: (i) are and at all times have been in compliance with all statutes, rules 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 Issuer, including, without limitation, the Federal Food, Drug and Cosmetic Act (21 U.S.C. §301 et seq.), the Public Health Service Act (42 U.S.C. § 201 et seq.), the federal Anti-Kickback Statute (42 U.S.C. §1320a-7b(b)), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the administrative False Claims Law (42 U.S.C. § 1320a-7b(a)), the federal Physician Payment Sunshine Act (42 U.S.C. Section 1320a-7h), the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a), the exclusion laws (42 U.S.C. § 1320a-7), all criminal laws relating to health care fraud and abuse, including, but not limited to, 18 U.S.C. §§ 286 and 287, the criminal health care fraud provisions of the Health Insurance Portability and Accountability Act of 1996 (18 U.S.C. §§ 1035 and 1347) ("HIPAA"), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), HIPAA as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and the Patient

Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, the regulations promulgated pursuant to such laws, any successor government programs and comparable state laws, regulations relating to Good Clinical Practices and Good Laboratory Practices, collection and reporting requirements and the processing of any applicable rebate, chargeback or adjustment, under applicable rules and regulations relating to the Medicaid Drug Rebate Program (42 U.S.C. § 1396r-8), any state supplemental rebate program, Medicare average sales price reporting (42 U.S.C. § 1395w-3a), the Public Health Service Act (42 U.S.C. § 256b), the VA Federal Supply Schedule (38 U.S.C. § 8126) or under any state pharmaceutical assistance program or U.S. Department of Veterans Affairs agreement, and any successor government programs, and all other local, state, federal, national, supranational and foreign laws, manual provisions, policies and administrative guidance relating to the regulation of the Company (collectively, the **“Applicable Laws”**); (ii) have not received any notice from any court or arbitrator or governmental or regulatory authority or third party alleging or asserting noncompliance with any Applicable Laws or any Permits and supplements or amendments thereto (**“Authorizations”**); (iii) possess all Authorizations, and such Authorizations are valid and in full force and effect and are not in violation of any term of any such Authorizations; (iv) have not 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 violation of any Applicable Laws or Authorizations, nor is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (v) have not received any written, or to the knowledge of the Company, oral, notice that any court or arbitrator or governmental or regulatory authority has taken, is taking or intends to take any action to limit, suspend, materially modify or revoke any Authorizations, nor is any such limitation, suspension, modification or revocation threatened; and (vi) have filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its subsidiaries is a party to or has any ongoing reporting obligation pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement with or imposed by any governmental or regulatory authority. Neither the Company, any of its subsidiaries nor any of its or their respective officers, directors, employees or, to the knowledge of the Company, agents, has been excluded, suspended or debarred from or otherwise ineligible for 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, ineligibility or exclusion.

(xliii) *Clinical Trials*. The clinical and pre-clinical trials conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, that are described in the Registration Statement, the Time of Sale Disclosure Package and the

Prospectus or the results of which are referred to in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, as applicable, were and, if still pending, are being conducted in accordance with standard medical and scientific research procedures and all applicable statutes, rules and regulations of the FDA and comparable drug regulatory agencies outside of the United States to which they are subject (collectively, the **“Regulatory Authorities”**), including, without limitation, 21 C.F.R. Parts 50, 54, 56, 58 and 312, and current Good Clinical Practices and Good Laboratory Practices; the descriptions in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus of the results of such studies and trials are accurate and complete and fairly present the data derived from such trials; the Company has no knowledge of any other trials 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 Disclosure Package and the Prospectus; the Company and its subsidiaries have each operated and are currently in compliance with all applicable statutes, rules and regulations of the Regulatory Authorities; and neither the Company nor any of its subsidiaries has received any written notice, correspondence or other communication from the Regulatory Authorities or any governmental authority which could lead to the termination or suspension of any clinical or pre-clinical trials that are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or the results of which are referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus, and there are no reasonable grounds for same.

(xlv) *Absence of Settlement Agreements or Undertakings.* Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental authority.

(xlv) *No Other Brokers.* Except for fees payable by the Company to Roth Capital Partners, LLC, neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against any of them or the Agent for a brokerage commission, finder’s fee or like payment in connection with the offering and sale of the Shares.

(xlv) *No Integration.* The Company has not sold or issued any securities that would be integrated with the offering of the Shares pursuant to the Securities Act or the interpretations thereof by the Commission.

3. ***Purchase, Sale and Delivery of Securities.***

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Shares, Warrants and Pre-Funded Warrants to the several Underwriters, and each Underwriter agrees, severally and not jointly, to purchase from the Company the number of Shares, Warrants and Pre-Funded Warrants set forth opposite the name of such Underwriter in Schedule I hereto. The

combined purchase price for each Share and Warrant shall be \$0.94 per unit. The combined purchase price for each Pre-Funded Warrant and Warrant shall be \$0.9306 per unit. The obligation of each Underwriter to the Company shall be to purchase from the Company that number of Shares and Warrants and that number of Pre-Funded Warrants and Warrants (to be adjusted by the Representative to avoid fractional shares) which represents the same proportion of the number of Shares and Warrants and the number of Pre-Funded Warrants and Warrants to be sold by the Company pursuant to this Agreement as the number of Shares and Warrants and the number of Pre-Funded Warrants and Warrants set forth opposite the name of such Underwriter in Schedule I hereto represents to the total number of Shares and Warrants and the total number of Pre-Funded Warrants and Warrants to be purchased by all Underwriters pursuant to this Agreement. In making this Agreement, each Underwriter is contracting severally and not jointly; except as provided in paragraph (b) of this Section 3 and in Section 8 hereof, the agreement of each Underwriter is to purchase only the respective number of Shares and Warrants and only the respective number of Pre-Funded Warrants and Warrants specified in Schedule I.

The Securities will be delivered by the Company to you for the accounts of the several Underwriters against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Piper Jaffray & Co., U.S. Bancorp Center, 800 Nicollet Mall, Minneapolis, Minnesota, or such other location as may be mutually acceptable, at 9:00 a.m. Central time on the second (or if the Securities are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the second) full business day following the date hereof, or at such other time and date as you and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, such time and date of delivery being herein referred to as the ***“Closing Date.”***

(b) *Delivery.* If the Representative so elects, delivery of the Securities may be made by credit through full fast transfer to the accounts at DTC designated by the Representative. Certificates representing the Securities in definitive form and in such denominations and registered in such names as you have set forth in your notice of option exercise, or evidence of their issuance, will be made available for checking at a reasonable time preceding the Closing Date at the office of Piper Jaffray & Co., 800 Nicollet Mall, Minneapolis, Minnesota, or such other location as may be mutually acceptable.

(c) *Purchase by Representative on Behalf of Underwriters.* It is understood that you, individually and not as Representative of the several Underwriters, may (but shall not be obligated to) make payment to the Company, on behalf of any Underwriter for the Securities to be purchased by such Underwriter. Any such payment by you shall not relieve any such Underwriter of any of its obligations hereunder. Nothing herein contained shall constitute any of the Underwriters an unincorporated association or partner with the Company.

4. **Covenants.**

(a) Covenants of the Company. The Company covenants and agrees with the several Underwriters as follows:

(i) Required Filings. During the period beginning on the date hereof and ending on the later of the Closing Date or such date, as in the opinion of counsel for the Underwriters, the Prospectus is no longer required by law to be delivered (assuming the absence of Rule 172 under the Securities Act), in connection with sales by an Underwriter or dealer (the **"Prospectus Delivery Period"**), prior to amending or supplementing the Registration Statement including any Rule 462(b) Registration Statement), the Time of Sale Disclosure Package or the Prospectus, the Company shall furnish to the Representative for review a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Representative or counsel to the Underwriters reasonably object. Subject to this Section 4(a)(i), immediately following execution of this Agreement, the Company will prepare the Prospectus containing the Rule 430B Information and other selling terms of the Securities, the plan of distribution thereof and such other information as may be required by the Securities Act or the Rules and Regulations or as the Representative and the Company may deem appropriate, and if requested by the Representative, an issuer free writing prospectus containing the selling terms of the Securities and such other information as the Company and the Representative may deem appropriate, and will file or transmit for filing with the Commission, in accordance with Rule 424(b) or Rule 433, as the case may be, copies of the Prospectus and each issuer free writing prospectus.

(ii) Notification of Certain Commission Actions. After the date of this Agreement, the Company shall promptly advise the Representative in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any Preliminary Prospectus, the Time of Sale Disclosure Package or the Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective, (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order preventing or suspending its use or the use of any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus, or (E) of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order as soon as reasonably practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A and 430B, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b), Rule 433 or Rule 462 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or Rule 164(b)).

(iii) *Continued Compliance with Securities Laws.* (A) During the Prospectus Delivery Period, the Company will comply as far as it is able with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Time of Sale Disclosure Package and the Prospectus. If during such period any event occurs as a result of which the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) would include an 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 then existing, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Representative or counsel to the Underwriters to amend the Registration Statement or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act or to file under the Exchange Act any document which would be deemed to be incorporated by reference in the Prospectus in order to comply with the Securities Act or the Exchange Act, the Company promptly will (x) notify you of such untrue statement or omission, (y) amend the Registration Statement or supplement the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) or file such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance, and (z) notify you when any amendment to the Registration Statement is filed or becomes effective or when any supplement to the Prospectus (or, if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) is filed.

(B) If at any time following issuance of an issuer free writing prospectus there occurred or occurs an event or development as a result of which such issuer free writing prospectus conflicted or would conflict with the information contained in the Registration Statement, the Preliminary Prospectus or the Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company (x) has promptly notified or promptly will notify the Representative of such conflict, untrue statement or omission, (y) has promptly amended or will promptly amend or supplement, at its own expense, such issuer free writing prospectus to eliminate or correct such conflict, untrue statement or omission, and (2) has notified or promptly will notify you when such amendment or supplement was or is filed with the Commission where so required to be filed by the Rules and Regulations.

(C) If immediately prior to the third anniversary of the initial effective date of the Registration Statement, any of the Securities remain unsold by the Underwriters, the Company will prior to that third anniversary file, if it has not already done so, a new shelf registration statement relating to the Securities, in a form satisfactory to the Representative, will use its best efforts to cause such registration statement to be declared effective within 180 days after that third anniversary, and will take all other action necessary or appropriate to permit the public offering and sale of the Securities to continue as contemplated in the expired registration statement relating to the Securities. References herein to the Registration Statement shall include such new shelf registration statement.

(iv) Blue Sky Qualifications. The Company shall take or cause to be taken all necessary action to qualify the Securities for sale under the securities laws of such jurisdictions as you reasonably designate and to continue such qualifications in effect so long as required for the distribution of the Securities, except that the Company shall not be required in connection therewith to qualify as a foreign corporation, subject itself to taxation or to execute a general consent to service of process in any state.

(v) Provision of Documents. The Company will furnish, at its own expense, to the Underwriters and counsel for the Underwriters copies of the Registration Statement (which will include three complete manually signed copies of the Registration Statement and all consents and exhibits filed therewith), and to the Underwriters and any dealer each Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as you may from time to time reasonably request.

(vi) Rule 158. During a period of three years from the date hereof, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, the Company will make generally available to its security holders as soon as practicable, but in no event later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(vii) Payment and Reimbursement of Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (A) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriters of the Securities, (B) all expenses and fees (including, without limitation, fees and expenses of the Company's accountants and counsel but, except as otherwise provided below, not including fees of the Underwriters' counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Securities, each Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus and any amendment thereof or supplement thereto, and the printing, delivery, and shipping of this Agreement and other underwriting documents, including Blue Sky Memoranda (covering the states and other applicable jurisdictions), (C) the fees and expenses of any transfer agent or registrar, (D) the filing fees and fees and disbursements of Underwriters' counsel incident to any required review and approval by FINRA of the terms of the sale of the Securities (such fees not to exceed \$25,000), (E) listing fees, if any, (F) the cost and expenses of the Company relating to investor presentations or any "roadshow" undertaken in connection with marketing of the Securities, and (G) all other costs and expenses of the Company incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein. If this Agreement is terminated by the Representative pursuant to Section 9 hereof or if the sale of the Securities provided for herein

is not consummated by reason of any failure, refusal or inability on the part of the Company to perform any agreement on its or their part to be performed, or because any other condition of the Underwriters' obligations hereunder required to be fulfilled by the Company is not fulfilled, the Company will reimburse the several Underwriters for all reasonable out-of-pocket accountable disbursements (including but not limited to fees and disbursements of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges) incurred by the Underwriters in connection with their investigation, preparing to market and marketing the Securities or in contemplation of performing their obligations hereunder.

(viii) Use of Proceeds. The Company will apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Time of Sale Disclosure Package and in the Prospectus.

(ix) Company Lock Up. The Company will not, without the prior written consent of Piper Jaffray & Co., from the date of execution of this Agreement and continuing to and including the date 90 days after the date of the Prospectus (the "**Lock-Up Period**"), (A) offer, pledge, announce the intention to sell, 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 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 (B) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (A) or (B) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, except (1) to the Underwriters pursuant to this Agreement, (2) the issuance by the Company of shares of Common Stock upon the exercise of any warrants disclosed in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus; (3) the issuance by the Company of shares of Common Stock or securities exercisable for or convertible into shares of Common Stock pursuant to the Company's equity incentive plans in effect on the date hereof and described in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus; (4) the filing of a registration statement on Form S-8 with respect to the Company's equity incentive plans in effect on the date hereof and described in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus or (5) the entry into any agreement providing for the issuance of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement; provided that any issuances pursuant this clause (5) shall not exceed, in the aggregate, five percent of total issued and outstanding shares of Common Stock on the date of this Agreement, including the Shares (but excluding the Warrant Shares) to be issued pursuant to this Agreement. The Company agrees not to accelerate the vesting of any option or warrant or the lapse of any repurchase right prior to the expiration of the Lock-Up Period.

(x) Stockholder Lock-Ups. The Company has caused to be delivered to you prior to the date of this Agreement a letter, in the form of Exhibit C hereto (the "**Lock-Up Agreement**"), from each individual or entity listed on Schedule IV. The Company will enforce the terms of each Lock-Up Agreement and issue stop-transfer instructions to the transfer agent for the Common Stock with respect to any transaction or contemplated transaction that would constitute a breach of or default under the applicable Lock-Up Agreement.

(xi) No Market Stabilization or Manipulation. The Company has not taken and will not take, directly or indirectly, any action designed to or which might reasonably be expected to cause or result in, or which has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities or the Warrant Shares.

(xii) SEC Reports. During the Prospectus Delivery Period, the Company will file on a timely basis with the Commission such periodic and special reports as required by the Rules and Regulations.

(xiii) Internal Controls. The Company and its subsidiaries will maintain such controls and other procedures, including without limitation those required by Sections 302 and 906 of the Sarbanes-Oxley Act and the applicable regulations thereunder, that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and its principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, to ensure that material information relating to Company, including its subsidiaries, is made known to them by others within those entities.

(xiv) Sarbanes-Oxley. The Company and its subsidiaries will comply with all applicable provisions of the Sarbanes-Oxley Act.

(xv) Free Writing Prospectuses. The Company represents and agrees that, unless it obtains the prior written consent of the Representative, and each Underwriter severally represents and agrees that, unless it obtains the prior written consent of the Company and the Representative, it has not made and will not make any offer relating to the Securities or the Warrant Shares that would constitute an issuer free writing prospectus or that would otherwise constitute a free writing prospectus required to be filed with the Commission; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the free writing prospectuses included in Schedule II. Any such free writing prospectus consented to by the Company and the Representative is hereinafter referred to as a "**Permitted Free Writing Prospectus**." The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an issuer free writing prospectus, and has complied and will comply with the requirements of Rules 164 and 433 of the Rules and Regulations applicable to any Permitted Free Writing Prospectus. The Company agrees not to take any action that would result in the Company being required to file with the Commission under Rule 433(d) a free

writing prospectus prepared by or on behalf of the Company that otherwise would not be required to be filed by the Company thereunder, but for the action of the Company. Each Underwriter severally represents and agrees that, (A) unless it obtains the prior written consent of the Company and the Representative, it has not distributed, and will not distribute any Written Testing-the-Waters Communication other than those listed on Schedule V, and (B) any Testing-the-Waters Communication undertaken by it was with entities that are qualified institutional buyers with the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act.

(xvi) Emerging Growth Company. The Company will promptly notify the Representative if the Company ceases to be an Emerging Growth Company at any time prior to the later of (A) completion of the distribution of Securities within the meaning of the Securities Act and (B) completion of the 90-day Lock-Up Period referenced in Section 4(a)(ix) hereof.

5. **Conditions of Underwriters' Obligations.** The obligations of the several Underwriters hereunder are subject to the accuracy, as of the date hereof and at the Closing Date (as if made at the Closing Date), of and compliance with all representations, warranties and agreements of the Company contained herein, to the performance by the Company of their respective obligations hereunder and to the following additional conditions:

(a) Required Filings; Absence of Certain Commission Actions. If filing of the Prospectus, or any amendment or supplement thereto, or any issuer free writing prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such issuer free writing prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or Rule 164(b)); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462(b) Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; any request of the Commission for additional information (to be included in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, any issuer free writing prospectus or otherwise) shall have been complied with to your satisfaction.

(b) Continued Compliance with Securities Laws. No Underwriter shall have advised the Company that (i) the Registration Statement or any amendment thereof or supplement thereto contains an untrue statement of a material fact which, in your opinion, is material or omits to state a material fact which, in your opinion, is required to be stated therein or necessary to make the statements therein not misleading, or (ii) the Time of Sale Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any issuer free writing prospectus contains an untrue statement of fact which, in your opinion, is material, or omits to state a fact which, in your opinion, is material and is required to be stated therein, or necessary to make the statements therein, in light of the circumstances under which they are made, not misleading.

(c) *Absence of Certain Events*. Except as contemplated in the Time of Sale Disclosure Package and in the Prospectus, subsequent to the respective dates as of which information is given in the Time of Sale Disclosure Package, neither the Company nor any of its subsidiaries shall have incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions, or declared or paid any dividends or made any distribution of any kind with respect to its capital stock; and there shall not have been any change in the capital stock (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the vesting of restricted stock units or the exercise of outstanding options or warrants or conversion of convertible securities), or any material change in the short-term or long-term debt of the Company (other than as a result of the conversion of convertible securities), or any issuance of options, warrants, convertible securities or other rights to purchase the capital stock of the Company or any of its subsidiaries, or any Material Adverse Effect or any development involving a prospective Material Adverse Effect (whether or not arising in the ordinary course of business), or any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, incurred by the Company or any subsidiary, the effect of which, in any such case described above, in your judgment, makes it impractical or inadvisable to offer or deliver the Securities on the terms and in the manner contemplated in the Time of Sale Disclosure Package and in the Prospectus.

(d) *No Downgrade*. On or after the Time of Sale (i) no downgrading shall have occurred in the rating accorded any of the Company's securities by any "nationally recognized statistical organization," as that term is defined by the Commission for purposes of Rule 436(g)(2) under the Securities Act, and (ii) no such organization shall have publicly announced that it has under surveillance or review, with possible negative implications, its rating of any of the Company's securities or;

(e) *Opinion of Company Counsel*. On the Closing Date, there shall have been furnished to you, as Representative of the several Underwriters, the opinion of Cooley LLP, counsel for the Company, dated the Closing Date and addressed to you in form and substance satisfactory to you.

(f) *Opinion of Company Intellectual Property Counsel*. On the Closing Date, there shall have been furnished to you, as Representative of the several Underwriters, the opinion of Cooley LLP, the Company's intellectual property counsel, with respect to intellectual property matters, dated the Closing Date and addressed to you in form and substance satisfactory to you.

(g) *Opinion of Underwriters' Counsel*. On the Closing Date, there shall have been furnished to you, as Representative of the several Underwriters, such opinion or opinions from Latham & Watkins LLP, counsel for the several Underwriters, dated the Closing Date and addressed to you, with respect to the formation of the Company, the validity of the Securities, the Registration Statement, the Time of Sale Disclosure Package, the Prospectus and other related matters as you reasonably may request, and such counsel shall have received such papers and information as they request to enable them to pass upon such matters.

(h) *Comfort Letter*. On the date hereof, on the effective date of any post-effective amendment to the Registration Statement filed after the date hereof and on the Closing Date you, as Representative of the several Underwriters, shall have received an accountant's "comfort" letter of Ernst & Young LLP, dated such date and addressed to you, in form and substance satisfactory to you.

(i) Officers' Certificate. On the Closing Date, there shall have been furnished to you, as Representative of the Underwriters, a certificate, dated the Closing Date and addressed to you, signed by the chief executive officer and by the chief financial officer of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct as if made at and as of the Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;

(ii) No stop order or other order suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof or the qualification of the Securities for offering or sale nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus, has been issued, and no proceeding for that purpose has been instituted or, to the best of their knowledge, is contemplated by the Commission or any state or regulatory body; and

(iii) Affirms the accuracy of the matters set forth in subsection (C) of this Section 5.

(j) Chief Financial Officer's Certificate. On the date hereof and on the Closing Date, the Representative shall have received a certificate executed by the Chief Financial Officer of the Company, dated as of such date, in form and substance satisfactory to the Representative.

(k) Lock-Up Agreement. The Underwriters shall have received all of the Lock-Up Agreements referenced in Section 4 and the Lock-Up Agreements shall remain in full force and effect.

(l) FINRA No Objections. FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(m) Other Documents. The Company shall have furnished to you and counsel for the Underwriters such additional documents, certificates and evidence as you or they may have reasonably requested.

(n) Exchange Listing. The Securities (and the Warrant Shares underlying the Warrants and the Pre-Funded Warrants) to be delivered on the Closing Date have been approved for listing on the Nasdaq Global Market, subject to official notice of issuance.

(o) Warrant Shares. The Company shall, at all times while any Warrants or Pre-Funded Warrants are outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of such Warrants or Pre-Funded Warrants, the number of Warrant Shares that are issuable and deliverable upon the exercise of the then-outstanding Warrants and Pre-Funded Warrants from time to time.

All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof only if they are reasonably satisfactory in form and substance to you and counsel for the Underwriters. The Company will furnish you with such conformed copies of such opinions, certificates, letters and other documents as you shall reasonably request.

6. *Indemnification and Contribution.*

(a) *Indemnification by the Company.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Securities Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon: (i) an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the 430A Information and any other information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to the Rules and Regulations, if applicable, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto, any issuer free writing prospectus, any issuer information that the Company has filed or is required to file pursuant to Rule 433(d) of the Rules and Regulations, any roadshow materials, or any Testing-the-Waters Communication (ii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, or (iii) any investigation or proceeding by any governmental authority, commenced or threatened (whether or not any Underwriter is a target of or party to such investigation or proceeding), and will reimburse each Underwriter for any documented legal or other expenses reasonably incurred by it in connection with investigating or defending against such loss, claim, damage, liability or action as such expenses are incurred; *provided, however*, that the Company will not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by you, or by any Underwriter through you, specifically for use in the preparation thereof; it being understood and agreed that the only information furnished by an Underwriter consists of the information described as such in Section 6(f).

(b) *[Reserved.]*

(c) *Indemnification by the Underwriters.* Each Underwriter will, severally and not jointly, indemnify and hold harmless the Company, its affiliates, directors and officers and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which the Company may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as

such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto, or any issuer free writing prospectus, or any issuer information that the Company has filed or is required to file pursuant to Rule 433(d) of the Rules and Regulations, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company by you, or by such Underwriter through you, specifically for use in the preparation thereof (it being understood and agreed that the only information furnished by an Underwriter consists of the information described as such in Section 6(f)), and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending against any such loss, claim, damage, liability or action as such expenses are incurred.

(d) Notice and Procedures. Promptly after receipt by an indemnified party under subsection (a) or (c) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure (through the forfeiture of substantive rights or defenses). In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof other than reasonable costs of investigation; *provided, however*, that if, in the sole judgment of the Representative, it is advisable for the Underwriters to be represented as a group by separate counsel, the Representative shall have the right to employ a single counsel (in addition to local counsel) to represent the Representative and all Underwriters who may be subject to liability arising from any claim in respect of which indemnity may be sought by the Underwriters under subsection (a) of this Section 6, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the Underwriters as incurred. An indemnifying party shall not be obligated under any settlement agreement relating to any action under this Section 6 to which it has not agreed in writing. In addition, no indemnifying party shall, without the prior written consent of the indemnified party (which consent shall not be unreasonably withheld or delayed), effect any settlement of any pending or threatened proceeding unless such settlement includes an unconditional release of such indemnified party for all liability on claims that are the subject matter of such proceeding and does not include a statement as to, or an admission of, fault, culpability or a failure to act by or on behalf of an indemnified party. Notwithstanding the foregoing, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel pursuant to this Section 6(d), such indemnifying party agrees that it shall be liable for any settlement effected

without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) Contribution; Limitations on Liability; Non-Exclusive Remedy. If the indemnification provided for in this Section 6 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (c) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (c) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Securities or (ii) if the allocation provided by clause (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 (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other 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 Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault 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 the Underwriters and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this subsection (e) were to be determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to in the first sentence of this subsection (e). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (e) shall be deemed to include any documented legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim which is the subject of this subsection (e). Notwithstanding the provisions of this subsection (e), no Underwriter shall be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the Securities purchased by it hereunder 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 Underwriters' obligations in this subsection (e) to contribute are several in proportion to their respective underwriting obligations and not joint. The remedies provided for in this Section 6 are not exclusive and shall not limit any rights or remedies that might otherwise be available to any indemnified party at law or in equity.

(f) Information Provided by the Underwriters. The Underwriters severally confirm and the Company acknowledges that the statements with respect to the public offering of the Securities by the Underwriters set forth in paragraphs five and thirteen through seventeen under the

caption “Underwriting” in the Time of Sale Disclosure Package and in the Prospectus are correct and constitute the only information concerning such Underwriters furnished in writing to the Company by or on behalf of the Underwriters specifically for inclusion in the Registration Statement, any Preliminary Prospectus, the Time of Sale Disclosure Package, the Prospectus or any issuer free writing prospectus.

7. ***Representations and Agreements to Survive Delivery.*** All representations, warranties, and agreements of the Company herein or in certificates delivered pursuant hereto, including but not limited to the agreements of the several Underwriters and the Company contained in Section 6 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of any Underwriter or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriters hereunder and any termination of this Agreement.

8. ***Substitution of Underwriters.***

(a) ***Obligation to Purchase Under Certain Circumstances.*** If any Underwriter or Underwriters shall fail to take up and pay for the amount of Securities agreed by such Underwriter or Underwriters to be purchased hereunder, upon tender of such Securities in accordance with the terms hereof, and the amount of Securities not purchased does not aggregate more than 10% of the total amount of Securities set forth in Schedule I hereto, the remaining Underwriters shall be obligated to take up and pay for (in proportion to their respective underwriting obligations hereunder as set forth in Schedule I hereto except as may otherwise be determined by you) the Securities that the withdrawing or defaulting Underwriters agreed but failed to purchase.

(b) ***Termination Under Certain Circumstances.*** If any Underwriter or Underwriters shall fail to take up and pay for the amount of Securities agreed by such Underwriter or Underwriters to be purchased hereunder, upon tender of such Securities in accordance with the terms hereof, and the amount of Securities not purchased aggregates more than 10% of the total amount of Securities set forth in Schedule I hereto, and arrangements satisfactory to you for the purchase of such Securities by other persons are not made within 36 hours thereafter, this Agreement shall terminate. In the event of any such termination the Company shall not be under any liability to any Underwriter (except to the extent provided in Section 4(a)(vii) and Section 6 hereof) nor shall any Underwriter (other than an Underwriter who shall have failed, otherwise than for some reason permitted under this Agreement, to purchase the amount of Securities agreed by such Underwriter to be purchased hereunder) be under any liability to the Company (except to the extent provided in Section 6 hereof).

(c) ***Postponement of Closing.*** If Securities to which a default relates are to be purchased by the non-defaulting Underwriters or by any other party or parties, the Representative or the Company shall have the right to postpone the Closing Date for not more than seven business days in order that the necessary changes in the Registration Statement, in the Time of Sale Disclosure Package, in the Prospectus or in any other documents, as well as any other arrangements, may be effected. As used herein, the term “Underwriter” includes any person substituted for an Underwriter under this Section 8.

(d) No Relief from Liability. No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability, if any, in respect of such default.

9. Termination of this Agreement.

(a) Right to Terminate. You, as Representative of the several Underwriters, shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date if (i) the Company shall have failed, refused or been unable, at or prior to the Closing Date, to perform any agreement on its part to be performed hereunder, (ii) any condition of the Underwriters' obligations hereunder is not fulfilled, (iii) trading in the Company's Common Stock shall have been suspended by the Commission or The Nasdaq Stock Market or trading in securities generally on the Nasdaq Stock Market or New York Stock Exchange shall have been suspended, (iv) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the Nasdaq Stock Market or New York Stock Exchange, by such Exchange or by order of the Commission or any other Governmental Authority having jurisdiction, (v) a banking moratorium shall have been declared by federal or New York state authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States, or (vi) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States, any declaration by the United States of a national emergency or war, any change in financial markets, any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions, or any other calamity or crisis that, in your judgment, is material and adverse and makes it impractical or inadvisable to proceed with the completion of the sale of and payment for the Securities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 4(a)(vii), and Section 6 hereof shall at all times be effective and shall survive such termination.

(b) Notice of Termination. If you elect to terminate this Agreement as provided in this Section, the Company shall be notified promptly by you by telephone, confirmed by letter.

10. Default by the Company.

(a) Default by the Company. If the Company shall fail at the Closing Date to sell and deliver the number of Securities which it is obligated to sell hereunder, then this Agreement shall terminate without any liability on the part of any Underwriter or, except as provided in Section 4(a)(vii) and Section 6 hereof, any non-defaulting party.

(b) No Relief from Liability. No action taken pursuant to this Section shall relieve the Company so defaulting from liability, if any, in respect of such default.

11. **Notices**. Except as otherwise provided herein, all communications hereunder shall be in writing and, if to the Underwriters, shall be mailed via overnight delivery service or hand delivered via courier to the Representative c/o Piper Jaffray & Co., U.S. Bancorp Center, 800 Nicollet Mall, Minneapolis, Minnesota 55402, Attention: Equity Capital Markets, with a copy to Piper Jaffray General Counsel at 800 Nicollet Mall, Minneapolis, MN 55402 and LegalCapMarkets@pjc.com; if to the Company, shall be mailed or delivered to it at Aptevo Therapeutics Inc., 2401 4th Avenue, Suite

1050, Seattle, Washington 98121, Attention: Jeff Lamothe, with a copy to Cooley LLP, 1700 Seventh Avenue, Suite 1900, Seattle, WA 98101, Attention: Alan Hambelton), or in each case to such other address as the person to be notified may have requested in writing. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

12. **Persons Entitled to Benefit of Agreement.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 6. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Securities from any of the several Underwriters.

13. **Absence of Fiduciary Relationship.** The Company acknowledges and agrees that: (a) the Representative has been retained solely to act as an underwriter in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and the Representative has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Representative has advised or are advising the Company on other matters; (b) the price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Representative and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Representative and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Representative has no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; (d) it has been advised that the Representative is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Representative and the other Underwriters, and not on behalf of the Company; (e) it, he or she waives to the fullest extent permitted by law, any claims it may have against the Representative for breach of fiduciary duty or alleged breach of fiduciary duty in respect of any of the transactions contemplated by this Agreement and agrees that the Representative shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

14. **Governing Law; Waiver of Jury Trial.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

15. **Counterparts.** This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

16. **General Provisions.** This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Signature Page Follows]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the several Underwriters in accordance with its terms.

Very truly yours,

APTEVO THERAPEUTICS INC.

By /s/ Marvin L. White
Name: Marvin L. White
Title: President and Chief Executive Officer

Confirmed as of the date first
above mentioned, on behalf of
itself and the other several
Underwriters named in Schedule I
hereto.

PIPER JAFFRAY & CO.

By /s/ Neil Riley
Managing Director
Neil Riley

SCHEDULE I

<u>Underwriter</u>	<u>Number of Shares and Warrants</u>	<u>Number of Pre-Funded Warrants and Warrants</u>
Piper Jaffray & Co.	19,850,000	2,150,000
Total	<u>19,850,000</u>	<u>2,150,000</u>

SCHEDULE II

Certain Permitted Free Writing Prospectuses

None.

SCHEDULE III

Pricing Information

Number of Shares to be issued: 19,850,000

Number of Pre-Funded Warrants to be issued: 2,150,000

Number of Warrants to be issued: 22,000,000

Combined public offering price per Share and Warrant: \$1.00

Combined public offering price per Pre-Funded Warrant and Warrant: \$0.99

SCHEDULE IV

List of Individuals and Entities Executing Lock-Up Agreements

Zsolt Harsanyi
Fuad El-Hibri (on behalf of himself, Intervac, L.L.C. and Biovac, L.L.C.)
Barbara Lopez Kunz
Daniel J. Abdun-Nabi
Grady Grant, III
John Niederhuber
Shawnte Mitchell
Jane Gross
Jeff Lamothe
Randy J. Maddux
Scott C. Stromatt, M.D.
Mike Adelman
Marvin L. White

SCHEDULE V

Written Testing-the-Waters Communications

None.

EXHIBIT A

Form of Warrant

Warrant No. _____

Original Issue Date: _____, 2019

Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”), hereby certifies that, for value received, _____ or its permitted registered assigns (the “*Holder*”), is entitled to purchase from the Company up to a total of _____ shares of common stock, \$0.001 par value per share (the “*Common Stock*”), of the Company (each such share, a “*Warrant Share*” and all such shares, the “*Warrant Shares*”) at an exercise price per share equal to \$1.30 per share (as adjusted from time to time as provided in Section 8 herein, the “*Exercise Price*”), at any time and from time to time through and including 5:30 P.M., New York City time, on March _____, 2024 (the “*Expiration Date*”), and subject to the following terms and conditions:

This Warrant (this “*Warrant*”) is one of a series of similar warrants issued pursuant to the Company’s Registration Statement on Form S-3 (No. 333-221499), as amended. All such Warrants are referred to herein, collectively, as the “*Warrants*.” Broadridge Financial Solutions, Inc. shall serve as warrant agent (the “*Warrant Agent*”) under this Warrant.

1. Registration of Warrants. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the “*Warrant Register*”), in the name of the record Holder (which shall be the initial Holder set forth above or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. Subsequent to the issuance date of this Warrant and while this Warrant is outstanding, the Holder may request a physical Warrant from the Company in accordance with Section 11 of this Warrant and the Company shall deliver such physical Warrant to such Holder within three (3) business day of receipt of such request.

2. Registration of Transfers. The Warrant Agent shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached as Schedule 2 hereto duly completed and signed, to it at the address listed on the signature page hereto. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “*New Warrant*”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant.

3. Exercise and Duration of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by Section 9 of this Warrant at any time and from time to time through and including 5:30 P.M. New York City time, on the Expiration Date. At 5:30 P.M., New York City time, on the Expiration Date, the portion of this Warrant not exercised prior thereto shall be and become void and of no value and this Warrant shall be terminated and no longer outstanding.

(b) The Holder may exercise this Warrant by delivering to the Warrant Agent, with a copy delivered concurrently to the Company, an exercise notice, in the form attached as Schedule 1 hereto (the “*Exercise Notice*”), completed and duly signed (the date on which the Exercise Notice is delivered (as determined in accordance with the notice provisions hereof), an “*Exercise Date*”). Upon delivery of the Exercise Notice, the Holder shall deliver to the Warrant Agent payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice and if a “cashless exercise” may occur at such time pursuant to Section 9 below, in which case no cash payment shall be required) by wire transfer or in good certified check or good bank draft payable to the order of the Warrant Agent as provided on the Exercise Notice. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. No ink original Exercise Notice shall be required, nor shall any medallion guarantee (or any other type of guarantee or notarization) of any Exercise Notice be required, except in the case of a transfer of ownership subject to Section 15(c) hereof. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares (if any).

4. Delivery of Warrant Shares.

(a) The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Company’s transfer agent to the Holder by (i) provided that the Company’s transfer agent is participating in The Depository Trust Company (“DTC”) Fast Automated Securities Transfer Program, by crediting the Holder’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian system, or (ii) if the Company’s transfer agent is not participating in the DTC Fast Automated Securities Transfer Program, or if this Warrant is being exercised via cashless exercise, by issuing and delivering (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, in each case by the date that is one (1) Trading Day after the Exercise Date (the “*Warrant Share Delivery Date*”); provided, that the Holder delivers the payment to the Warrant Agent of the aggregate Exercise Price with respect to the Exercise Notice (other than in the case of a cashless exercise) on the Exercise Date; provided, further, that if the Holder fails to deliver such payment on the Exercise Date, such Warrant Share Delivery Date shall instead become the first Trading Day following the delivery of such payment. Upon the Exercise Date, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares; provided payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received on the Exercise Date. While this Warrant remains outstanding, the Company shall use a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

(b) If by the close of the Warrant Share Delivery Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares (or such number of uncertificated Warrant Shares) in the manner required pursuant to Section 4(a), and if after such second (2nd) Trading Day and prior to the receipt of such Warrant Shares, the Holder (or a broker on behalf of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “*Buy-In*”), then the Company shall, within two (2) Trading Days after the Holder’s request and in the Holder’s sole discretion, either (1) pay in cash to the Holder an amount equal to the Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company’s obligation to deliver such Warrant Shares shall terminate or (2) promptly honor its obligation to deliver to the Holder a

certificate or certificates representing such Warrant Shares (or such Warrant Shares in uncertificated form) and pay cash to the Holder in an amount equal to the excess (if any) of Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the closing bid price of a share of Common Stock on the Exercise Date.

(c) In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder the Warrant Shares subject to an Exercise Notice by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Exercise Notice), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise.

(d) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 14 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing the Warrant Shares (or uncertificated Warrant Shares) as required pursuant to the terms hereof.

5. Charges, Taxes and Expenses. Issuance and delivery of certificates for Warrant Shares (or uncertificated Warrant Shares) issuable upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates (or uncertificated shares of Common Stock), all of which taxes and expenses shall be paid by the Company; *provided, however,* that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares (or uncertificated Warrant Shares) or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

6. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall instruct the Warrant Agent to issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity, if requested by the Company, but without any requirement to post a surety bond. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to instruct the Warrant Agent to issue the New Warrant.

7. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 8). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

8. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 8.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, (iii) combines its outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of Common Stock any shares of capital of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective upon the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective upon the effective date of such subdivision, combination or reclassification.

(b) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock for no consideration (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph) or (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "*Distributed Property*"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares on such record date without regard to any limitation on exercise contained therein.

(c) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company, directly or indirectly, in one or more related transactions, effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the Company, directly or

indirectly, effects any sale of all or substantially all of its assets or a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any direct or indirect purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by holders of 50% or more of the outstanding Common Stock, or (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 8(a) above) (in any such case, a “*Fundamental Transaction*”), then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the “*Alternate Consideration*”). The Company shall not effect any such Fundamental Transaction unless any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or Person shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. Notwithstanding the foregoing, in the event of a Fundamental Transaction, other than one in which a Successor Entity that is a publicly traded corporation (whose stock is quoted or listed for trading on a national securities exchange, including, but not limited to, the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market) assumes this Warrant such that the Warrant shall be exercisable for the publicly traded common stock of such Successor Entity, at the request of the Holder delivered before the thirtieth (30th) day after such Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the effective date of the Fundamental Transaction), an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the effective date of such Fundamental Transaction, payable in cash; provided, however, that, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 8, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 8 shall be made to the nearest cent or the nearest share, as applicable.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 8, the Company will give written notice thereof to the Warrant Agent, which notice shall set forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver a copy of each such notice to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting to its Common Stock holders of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; *provided, however*, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

9. Payment of Exercise Price. The Holder shall pay the Exercise Price in immediately available funds or, in the event that if, on any Exercise Date there is not an effective registration statement registering, or no current prospectus available for, the resale of the Warrant Shares by the Holder, satisfy its obligation to pay the Exercise Price through a "cashless exercise" in accordance with this Section 9. If the Holder satisfies its obligation to pay the Exercise Price through a "cashless exercise," the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

"X" equals the number of Warrant Shares to be issued to the Holder;

"Y" equals the total number of Warrant Shares with respect to which this Warrant is being exercised;

"A" equals the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice; and

"B" equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, “VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date if a Trading Day (or, if not, the nearest preceding Trading Day) on such Trading Market as reported by Bloomberg L.P., (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the purchasers of a majority in interest of the Warrant Shares then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the Securities Act of 1933, as amended, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. In addition, for purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the original issuance date hereof (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise).

10. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the VWAP) for any such fractional shares.

11. Notices. Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified below prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. All such notices and/or communications shall be sent (i) to the Company at the address, facsimile number or email address listed on the signature page hereto, (ii) to the Holder at the address, facsimile number or email address listed on the Company records, or at such other address, facsimile number or email address as the Company or Holder may designate by two (2) Trading Days’ prior notice to the other Persons in accordance with this Section 11, and (iii) to the Warrant Agent at [●], Attention: [●].

12. Warrant Agent. Upon thirty (30) days’ notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged, any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party, or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business, shall be a successor warrant agent under this Warrant without any further act; provided, that the use of a third-party warrant agent shall not change any terms hereof. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be emailed and mailed (by first class mail, postage prepaid) to the Holder at the Holder’s last address as shown on the Warrant Register.

13. Certain Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the following meanings:

- (a) “*Affiliate*” means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.
- (b) “*Black Scholes Value*” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (iii) the underlying price per share used in such calculation shall be the greater of (a) the highest VWAP during the five (5) Trading Days prior to the closing of the Fundamental Transaction and (b) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.
- (c) “*Commission*” means the United States Securities and Exchange Commission.
- (d) “*Control*” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.
- (e) “*Parent Entity*” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common stock or equivalent equity security is quoted or listed on a Trading Market (or, if so elected by the Holder, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Holder or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.
- (f) “*Person*” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.
- (g) “*Principal Trading Market*” means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date hereof is the Nasdaq Global Market.
- (h) “*Successor Entity*” means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(i) “*Trading Day*” means any day on which the Common Stock is traded on the Principal Trading Market.

(j) “*Trading Market*” means whichever of the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

14. **Limitations on Exercise.** Notwithstanding anything to the contrary contained herein, the number of Warrant Shares that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to ensure that, coincident with or following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the Holder (together with any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder’s for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended, and the applicable regulations of the Commission, including any “group” of which the Holder is a member (the foregoing, “*Attribution Parties*”)) does not exceed the Beneficial Ownership Limitation percent of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise but excluding the number of shares that cannot be issued due to the operation of the limitation in this Section 11 or any other similar limitation on exercise to the extent that it limits the right to acquire underlying securities), it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and that such Holder is solely responsible for any schedules required to be filed in accordance therewith; provided, that this limitation on exercise shall not be applicable to any Person that beneficially owns 10.0% or more of the Company’s outstanding Common Stock immediately following the issuance of this Warrant, excluding DTC or its nominee. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant subject to the Exercise Notice with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) exercise of the remaining, unconverted shares of Warrants beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Holder or any of its Attribution Parties that, in the case of both (A) and (B), are subject to a limitation on conversion or exercise similar to the limitation contained herein. A determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder. For purposes of this Section 11, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Form 10-Q or Form 10-K, as the case may be, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Company’s transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within one Trading Day confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. By written notice to the Company, the Holder may increase or decrease the Beneficial Ownership Limitation to an amount not to exceed 19.99% (or 9.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding; provided, that any notice to increase the Beneficial Ownership Limitation will not be effective until the sixty-first (61st) day after such notice is delivered to the Company.

The “*Beneficial Ownership Limitation*” shall initially be 9.99% (or 4.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding. Any purported delivery to any Holder or the Attribution Parties of a number of shares of Common Stock or any other security upon exercise of the Warrants shall be void and have no effect to the extent, but only to the extent, that before or after such delivery, the Holder and the Attribution Parties would have beneficial ownership of Common Stock or any other such class in excess of the Beneficial Ownership Limitation.

15. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person’s capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person’s capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) The Company covenants that during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the applicable certificates for the Warrant Shares (or uncertificated Warrant Shares) upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Principal Trading Market and such shares shall be listed for trading thereon. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

(ii) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amend its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(iii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant.

(d) Amendment and Waiver. Except as otherwise provided herein, this Warrant may be amended only (i) in writing signed by the Company and the Holder, or their respective successors and assigns, or (ii) if the Company has obtained the written consent of the Holders of Warrants representing no less than a majority of the Warrant Shares obtainable upon exercise of the Warrants then outstanding, and in either case the Company may thereafter take any action herein prohibited, or omit to perform any act herein required to be performed by it, pursuant to the terms of any such amendment. Notwithstanding the foregoing, the number of Warrant Shares subject to this Warrant, the Expiration Date of this Warrant and the Exercise Price of this Warrant may not be amended, and the right to exercise this Warrant, and the exercise procedures set forth herein, may not be amended or waived, without the written consent of the Holder. Further, if any amendment to, or waiver of, this Warrant results in a disproportionate adverse effect to the Holder or any group of holders of warrants, the written consent of the Holder, or group of holders, as the case may be, shall be required to effect such amendment or waiver. The Company shall give prompt written notice to the Holder of any amendment hereto or waiver hereunder that was effected without the Holder's written consent. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any Warrant unless the same consideration (other than the reimbursement of legal fees) also is offered to all other holders of Warrants.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF (OTHER THAN SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW). EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT.

EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON, IN THE CASE OF THE HOLDER, AT THE ADDRESS ON THE COMPANY RECORDS, AND FOR THE COMPANY, AT THE ADDRESS ON THE SIGNATURE PAGE HERETO, AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(g) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(h) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

APTEVO THERAPEUTICS INC.

By: _____
Name: _____
Title: _____

Address:
2401 4th Avenue, Suite 1050
Seattle, Washington 98121

WARRANT AGENT

BROADRIDGE FINANCIAL SOLUTIONS, INC.

By: _____
Name: _____
Title: _____

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. _____ (the “*Warrant*”) issued by Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase _____ Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

☐ Cash Exercise

☐ “Cashless Exercise” under Section 9 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$_____ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

***Checks should be payable to [●]. Originals need to be mailed to [●], Attention: [●]. Wired funds for exercise should be wired to:

[●]

ABA # [●]

ACCT # [●]

ACCT NAME: [●]

ATTN: [●]

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

SCHEDULE 2

FORM OF ASSIGNMENT

[To assign the foregoing Warrant, execute this form and supply the required information. Do not use this form to purchase shares.]

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to:

Name: _____
(Please print)

Address: _____
(Please print)

Phone Number: _____

E-mail Address: _____

Dated: _____
(Signature must conform in all respects to name of holder as specified on the
face of the Warrant)

Address of Transferee

In the presence of:

EXHIBIT B

Form of Pre-Funded Warrant

Warrant No. _____

Original Issue Date: _____, 2019

Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”), hereby certifies that, for value received, _____ or its permitted registered assigns (the “*Holder*”), is entitled to purchase from the Company up to a total of _____ shares of common stock, \$0.001 par value per share (the “*Common Stock*”), of the Company (each such share, a “*Warrant Share*” and all such shares, the “*Warrant Shares*”) at an exercise price per share equal to \$0.01 per share (as adjusted from time to time as provided in Section 8 herein, the “*Exercise Price*”), at any time and from time to time through and including 5:30 P.M., New York City time, on March _____, 2029 (the “*Expiration Date*”), and subject to the following terms and conditions:

This Warrant (this “*Warrant*”) is one of a series of similar warrants issued pursuant to the Company’s Registration Statement on Form S-3 (No. 333-221499), as amended. All such Warrants are referred to herein, collectively, as the “*Warrants*.” Broadridge Financial Solutions, Inc. shall serve as warrant agent (the “*Warrant Agent*”) under this Warrant.

1. Registration of Warrants. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the “*Warrant Register*”), in the name of the record Holder (which shall be the initial Holder set forth above or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. Subsequent to the issuance date of this Warrant and while this Warrant is outstanding, the Holder may request a physical Warrant from the Company in accordance with Section 11 of this Warrant and the Company shall deliver such physical Warrant to such Holder within three (3) business day of receipt of such request.

2. Registration of Transfers. The Warrant Agent shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached as Schedule 2 hereto duly completed and signed, to it at the address listed on the signature page hereto. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “*New Warrant*”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant.

3. Exercise and Duration of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by Section 9 of this Warrant at any time and from time to time through and including 5:30 P.M. New York City time, on the Expiration Date. At 5:30 P.M., New York City time, on the Expiration Date, the portion of this Warrant not exercised prior thereto shall be and become void and of no value and this Warrant shall be terminated and no longer outstanding.

(b) The Holder may exercise this Warrant by delivering to the Warrant Agent, with a copy delivered concurrently to the Company, an exercise notice, in the form attached as Schedule 1 hereto (the “*Exercise Notice*”), completed and duly signed (the date on which the Exercise Notice is delivered (as determined in accordance with the notice provisions hereof), an “*Exercise Date*”). Upon delivery of the Exercise Notice, the Holder shall deliver to the Warrant Agent payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice and if a “cashless exercise” may occur at such time pursuant to Section 9 below, in which case no cash payment shall be required) by wire transfer or in good certified check or good bank draft payable to the order of the Warrant Agent as provided on the Exercise Notice. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. No ink original Exercise Notice shall be required, nor shall any medallion guarantee (or any other type of guarantee or notarization) of any Exercise Notice be required, except in the case of a transfer of ownership subject to Section 15(c) hereof. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares (if any).

4. Delivery of Warrant Shares.

(a) The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Company’s transfer agent to the Holder by (i) provided that the Company’s transfer agent is participating in The Depository Trust Company (“DTC”) Fast Automated Securities Transfer Program, by crediting the Holder’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian system, or (ii) if the Company’s transfer agent is not participating in the DTC Fast Automated Securities Transfer Program, or if this Warrant is being exercised via cashless exercise, by issuing and delivering (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, in each case by the date that is one (1) Trading Day after the Exercise Date (the “*Warrant Share Delivery Date*”); provided, that the Holder delivers the payment to the Warrant Agent of the aggregate Exercise Price with respect to the Exercise Notice (other than in the case of a cashless exercise) on the Exercise Date; provided, further, that if the Holder fails to deliver such payment on the Exercise Date, such Warrant Share Delivery Date shall instead become the first Trading Day following the delivery of such payment. Upon the Exercise Date, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares; provided payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received on the Exercise Date. While this Warrant remains outstanding, the Company shall use a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

(b) If by the close of the Warrant Share Delivery Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares (or such number of uncertificated Warrant Shares) in the manner required pursuant to Section 4(a), and if after such second (2nd) Trading Day and prior to the receipt of such Warrant Shares, the Holder (or a broker on behalf of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “*Buy-In*”), then the Company shall, within two (2) Trading Days after the Holder’s request and in the Holder’s sole discretion, either (1) pay in cash to the Holder an

amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company's obligation to deliver such Warrant Shares shall terminate or (2) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares (or such Warrant Shares in uncertificated form) and pay cash to the Holder in an amount equal to the excess (if any) of Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the closing bid price of a share of Common Stock on the Exercise Date.

(c) In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder the Warrant Shares subject to an Exercise Notice by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Exercise Notice), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise.

(d) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 14 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing the Warrant Shares (or uncertificated Warrant Shares) as required pursuant to the terms hereof.

5. Charges, Taxes and Expenses. Issuance and delivery of certificates for Warrant Shares (or uncertificated Warrant Shares) issuable upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates (or uncertificated shares of Common Stock), all of which taxes and expenses shall be paid by the Company; *provided, however*, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares (or uncertificated Warrant Shares) or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

6. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall instruct the Warrant Agent to issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity, if requested by the Company, but without any requirement to post a surety bond. Applicants for a New Warrant under

such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to instruct the Warrant Agent to issue the New Warrant.

7. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 8). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

8. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 8.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, (iii) combines its outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of Common Stock any shares of capital of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective upon the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective upon the effective date of such subdivision, combination or reclassification.

(b) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock for no consideration (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph) or (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "*Distributed Property*"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares on such record date without regard to any limitation on exercise contained therein.

(c) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company, directly or indirectly, in one or more related transactions, effects any merger or consolidation of the

Company with or into another Person, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the Company, directly or indirectly, effects any sale of all or substantially all of its assets or a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any direct or indirect purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by holders of 50% or more of the outstanding Common Stock, or (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 8(a) above) (in any such case, a “*Fundamental Transaction*”), then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the “*Alternate Consideration*”). The Company shall not effect any such Fundamental Transaction unless any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or Person shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. Notwithstanding the foregoing, in the event of a Fundamental Transaction, other than one in which a Successor Entity that is a publicly traded corporation (whose stock is quoted or listed for trading on a national securities exchange, including, but not limited to, the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market) assumes this Warrant such that the Warrant shall be exercisable for the publicly traded common stock of such Successor Entity, at the request of the Holder delivered before the thirtieth (30th) day after such Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the effective date of the Fundamental Transaction), an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the effective date of such Fundamental Transaction, payable in cash; provided, however, that, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 8, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 8 shall be made to the nearest cent or the nearest share, as applicable.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 8, the Company will give written notice thereof to the Warrant Agent, which notice shall set forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver a copy of each such notice to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting to its Common Stock holders of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; *provided, however*, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

9. Payment of Exercise Price. The Holder shall pay the Exercise Price in immediately available funds or, in the event that if, on any Exercise Date there is not an effective registration statement registering, or no current prospectus available for, the resale of the Warrant Shares by the Holder, satisfy its obligation to pay the Exercise Price through a "cashless exercise" in accordance with this Section 9. If the Holder satisfies its obligation to pay the Exercise Price through a "cashless exercise," the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

"X" equals the number of Warrant Shares to be issued to the Holder;

"Y" equals the total number of Warrant Shares with respect to which this Warrant is being exercised;

"A" equals the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice; and

"B" equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, “VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date if a Trading Day (or, if not, the nearest preceding Trading Day) on such Trading Market as reported by Bloomberg L.P., (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the purchasers of a majority in interest of the Warrant Shares then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the Securities Act of 1933, as amended, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. In addition, for purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the original issuance date hereof (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise).

10. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the VWAP) for any such fractional shares.

11. Notices. Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified below prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. All such notices and/or communications shall be sent (i) to the Company at the address, facsimile number or email address listed on the signature page hereto, (ii) to the Holder at the address, facsimile number or email address listed on the Company records, or at such other address, facsimile number or email address as the Company or Holder may designate by two (2) Trading Days’ prior notice to the other Persons in accordance with this Section 11, and (iii) to the Warrant Agent at [●], Attention: [●].

12. Warrant Agent. Upon thirty (30) days’ notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged, any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party, or any corporation to which the Company or any new warrant agent transfers

substantially all of its corporate trust or shareholders services business, shall be a successor warrant agent under this Warrant without any further act; provided, that the use of a third-party warrant agent shall not change any terms hereof. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be emailed and mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

13. Certain Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the following meanings:

- (a) "*Affiliate*" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.
- (b) "*Black Scholes Value*" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (iii) the underlying price per share used in such calculation shall be the greater of (a) the highest VWAP during the five (5) Trading Days prior to the closing of the Fundamental Transaction and (b) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.
- (c) "*Commission*" means the United States Securities and Exchange Commission.
- (d) "*Control*" (including the terms "controlling", "controlled by" or "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.
- (e) "*Parent Entity*" of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common stock or equivalent equity security is quoted or listed on a Trading Market (or, if so elected by the Holder, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Holder or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.
- (f) "*Person*" means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.
- (g) "*Principal Trading Market*" means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date hereof is the Nasdaq Global Market.

(h) “*Successor Entity*” means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(i) “*Trading Day*” means any day on which the Common Stock is traded on the Principal Trading Market.

(j) “*Trading Market*” means whichever of the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

14. Limitations on Exercise. Notwithstanding anything to the contrary contained herein, the number of Warrant Shares that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to ensure that, coincident with or following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the Holder (together with any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder’s for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended, and the applicable regulations of the Commission, including any “group” of which the Holder is a member (the foregoing, “*Attribution Parties*”)) does not exceed the Beneficial Ownership Limitation percent of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise but excluding the number of shares that cannot be issued due to the operation of the limitation in this Section 11 or any other similar limitation on exercise to the extent that it limits the right to acquire underlying securities), it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and that such Holder is solely responsible for any schedules required to be filed in accordance therewith; provided, that this limitation on exercise shall not be applicable to any Person that beneficially owns 10.0% or more of the Company’s outstanding Common Stock immediately following the issuance of this Warrant, excluding DTC or its nominee. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant subject to the Exercise Notice with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) exercise of the remaining, unconverted shares of Warrants beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Holder or any of its Attribution Parties that, in the case of both (A) and (B), are subject to a limitation on conversion or exercise similar to the limitation contained herein. A determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder. For purposes of this Section 11, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Form 10-Q or Form 10-K, as the case may be, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Company’s transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within one Trading Day confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. By written notice to the Company, the Holder may increase or decrease the Beneficial Ownership Limitation to an amount not to exceed 19.99% (or 9.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding; provided, that any notice to increase the Beneficial Ownership Limitation will not be effective until the sixty-first (61st) day after such notice is delivered to the Company.

The “*Beneficial Ownership Limitation*” shall initially be 9.99% (or 4.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding. Any purported delivery to any Holder or the Attribution Parties of a number of shares of Common Stock or any other security upon exercise of the Warrants shall be void and have no effect to the extent, but only to the extent, that before or after such delivery, the Holder and the Attribution Parties would have beneficial ownership of Common Stock or any other such class in excess of the Beneficial Ownership Limitation.

15. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person’s capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person’s capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) The Company covenants that during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the applicable certificates for the Warrant Shares (or uncertificated Warrant Shares) upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Principal Trading Market and such shares shall be listed for trading thereon. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

(ii) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amend its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount

payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(iii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant.

(d) Amendment and Waiver. Except as otherwise provided herein, this Warrant may be amended only (i) in writing signed by the Company and the Holder, or their respective successors and assigns, or (ii) if the Company has obtained the written consent of the Holders of Warrants representing no less than a majority of the Warrant Shares obtainable upon exercise of the Warrants then outstanding, and in either case the Company may thereafter take any action herein prohibited, or omit to perform any act herein required to be performed by it, pursuant to the terms of any such amendment. Notwithstanding the foregoing, the number of Warrant Shares subject to this Warrant, the Expiration Date of this Warrant and the Exercise Price of this Warrant may not be amended, and the right to exercise this Warrant, and the exercise procedures set forth herein, may not be amended or waived, without the written consent of the Holder. Further, if any amendment to, or waiver of, this Warrant results in a disproportionate adverse effect to the Holder or any group of holders of warrants, the written consent of the Holder, or group of holders, as the case may be, shall be required to effect such amendment or waiver. The Company shall give prompt written notice to the Holder of any amendment hereto or waiver hereunder that was effected without the Holder's written consent. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any Warrant unless the same consideration (other than the reimbursement of legal fees) also is offered to all other holders of Warrants.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF (OTHER THAN SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW). EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH

RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON, IN THE CASE OF THE HOLDER, AT THE ADDRESS ON THE COMPANY RECORDS, AND FOR THE COMPANY, AT THE ADDRESS ON THE SIGNATURE PAGE HERETO, AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(g) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(h) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

APTEVO THERAPEUTICS INC.

By: _____
Name: _____
Title: _____

Address:
2401 4th Avenue, Suite 1050
Seattle, Washington 98121

WARRANT AGENT

BROADRIDGE FINANCIAL SOLUTIONS, INC.

By: _____
Name: _____
Title: _____

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. _____ (the “*Warrant*”) issued by Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase _____ Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

☐ Cash Exercise

☐ “Cashless Exercise” under Section 9 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$_____ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

***Checks should be payable to [●]. Originals need to be mailed to [●], Attention: [●]. Wired funds for exercise should be wired to:

[●]

ABA # [●]

ACCT # [●]

ACCT NAME: [●]

ATTN: [●]

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

SCHEDULE 2

FORM OF ASSIGNMENT

[To assign the foregoing Warrant, execute this form and supply the required information. Do not use this form to purchase shares.]

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to:

Name: _____
(Please print)

Address: _____
(Please print)

Phone Number: _____

E-mail Address: _____

Dated: _____
(Signature must conform in all respects to name of holder as specified on the
face of the Warrant)

Address of Transferee

In the presence of: _____

EXHIBIT C

Form of Lock-Up Agreement

March __, 2019

Piper Jaffray & Co.

As representative of the underwriters named
in Schedule I to the Underwriting Agreement referred to below

c/o Piper Jaffray & Co.

800 Nicollet Mall, Suite 800
Minneapolis, MN 55402

Dear Ladies and Gentlemen:

As an inducement to the underwriters (the **“Underwriters”**) to execute an underwriting agreement (the **“Underwriting Agreement”**) providing for a public offering (the **“Offering”**) of common stock (the **“Common Stock”**) of Aptevo Therapeutics Inc. and any successor (by merger or otherwise) thereto (the **“Company”**), the undersigned, by executing this lock-up agreement (the **“Agreement”**), hereby agrees that without, in each case, the prior written consent of Piper Jaffray & Co. (**“Piper Jaffray”**) during the period specified in the second succeeding paragraph (the **“Lock-Up Period”**), the undersigned will not: (1) offer, pledge, announce the intention to sell, 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, make any short sale or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into, exercisable or exchangeable for or that represent the right to receive Common Stock (including without limitation, Common Stock which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant) whether now owned or hereafter acquired (the **“Undersigned’s Securities”**); (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Undersigned’s Securities, 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; (3) make any demand for or exercise any right with respect to, the registration of any Common Stock or any security convertible into or exercisable or exchangeable for Common Stock; or (4) publicly disclose the intention to do any of the foregoing.

The undersigned agrees that the foregoing restrictions preclude the undersigned from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned’s Securities even if such Securities would be disposed of by someone other than the undersigned. Such prohibited hedging

or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put or call option) with respect to any of the Undersigned's Securities or with respect to any security that includes, relates to, or derives any significant part of its value from the Undersigned's Securities.

The Lock-Up Period will commence on the date of this Agreement and continue and include the date that is 90 days after the date of the final prospectus used to sell Common Stock in the Offering pursuant to the Underwriting Agreement.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Securities:

- (i) as a *bona fide* gift or gifts;
- (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned;
- (iii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (1) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned or (2) to limited partners, limited liability company members or stockholders of the undersigned;
- (iv) if the undersigned is a trust, to the beneficiary of such trust;
- (v) by testate succession or intestate succession;
- (vi) by operation of law, including pursuant to a qualified domestic relations order or in connection with a divorce settlement;
- (vii) pursuant to the Underwriting Agreement;
- (viii) sales to the Company pursuant to agreements under which the Company, (1) upon termination of employment, has the option to repurchase such shares of Common Stock or any securities convertible into or exercisable or exchangeable for the Common Stock, (2) is required to repurchase shares of Common Stock or any securities convertible into or exercisable or exchangeable for the Common Stock or (3) has a right of first refusal with respect to transfers of such shares of Common Stock or any securities convertible into or exercisable or exchangeable for the Common Stock upon termination of service of the undersigned; and
- (ix) the transfer of shares of Common Stock or any securities convertible into or exercisable or exchangeable for the Common Stock pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the Board of Directors of the Company and made to all holders of shares of Common Stock involving a Change of Control;

provided, in the case of clauses (i)-(vi), that (x) such transfer shall not involve a disposition for value, (y) the transferee agrees in writing with the Underwriters to be bound by the terms of this Agreement, and (z) no filing by any party under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), shall be required or shall be made voluntarily in

connection with such transfer. For purposes of this Agreement, “immediate family” shall mean any relationship by blood, marriage, domestic partnership or adoption, nor more remote than first cousin and “Change of Control” shall mean 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 Offering), of the Company’s voting securities if, after such transfer, such person or group of affiliated persons would hold more than 50% of the outstanding voting securities of the Company (or the surviving entity).

In addition, the foregoing restrictions shall not apply to (i) the exercise of stock options or vesting or settlement of restricted stock units granted pursuant to the Company’s equity incentive plans in place as of the date of the final prospectus used to sell Common Stock in the Offering pursuant to the Underwriting Agreement (including, in each case, by way of “net” or “cashless” exercise and/or to cover withholding tax obligations in connection with such exercise, vesting or settlement); *provided* that it shall apply to any of the Undersigned’s Securities issued upon such exercise, or (ii) the establishment of any contract, instruction or plan (a “**Plan**”) that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) under the Exchange Act; *provided* that no sales of the Undersigned’s Securities shall be made pursuant to such a Plan prior to the expiration of the Lock-Up Period, and such a Plan may only be established if no public announcement of the establishment or existence thereof and no filing with the Securities and Exchange Commission or other regulatory authority in respect thereof or transactions thereunder or contemplated thereby, by the undersigned, the Company or any other person, shall be required, and no such announcement or filing is made voluntarily, by the undersigned, the Company or any other person, prior to the expiration of the Lock-Up Period.

In furtherance of the foregoing, the Company and its transfer agent and registrar are hereby authorized to decline to make any transfer of shares of Common Stock if such transfer would constitute a violation or breach of this Agreement.

The undersigned hereby represents and warrants that the undersigned (i) has full power and authority to enter into this Agreement and that upon request, the undersigned will execute any additional documents reasonably necessary to ensure the validity or enforcement of this Agreement, and (ii) now has, and except as contemplated by this Agreement, for the duration of this Agreement will have, good and marketable title to the Undersigned’s Securities, free and clear of all liens, encumbrances, and claims whatsoever. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that this Agreement shall automatically terminate and the undersigned shall be released from all obligations under this Agreement if (i) the Company notifies the Underwriters that it does not intend to proceed with the Offering, (ii) the Underwriting Agreement does not become effective, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Common Stock to be sold thereunder, or (iii) the Offering is not completed by May 31, 2019.

The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Offering in reliance upon this Agreement.

This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

Very truly yours,

Printed Name of Holder

By: _____

APTEVO THERAPEUTICS INC.

WARRANT TO PURCHASE COMMON STOCK

Warrant No. _____

Original Issue Date: March 11, 2019

Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”), hereby certifies that, for value received, _____ or its permitted registered assigns (the “*Holder*”), is entitled to purchase from the Company up to a total of _____ shares of common stock, \$0.001 par value per share (the “*Common Stock*”), of the Company (each such share, a “*Warrant Share*” and all such shares, the “*Warrant Shares*”) at an exercise price per share equal to \$1.30 per share (as adjusted from time to time as provided in Section 8 herein, the “*Exercise Price*”), at any time and from time to time through and including 5:30 P.M., New York City time, on March 11, 2024 (the “*Expiration Date*”), and subject to the following terms and conditions:

This Warrant (this “*Warrant*”) is one of a series of similar warrants issued pursuant to the Company’s Registration Statement on Form S-3 (No. 333-221499), as amended. All such Warrants are referred to herein, collectively, as the “*Warrants*.” Broadridge Corporate Issuer Solutions, Inc. shall serve as warrant agent (the “*Warrant Agent*”) under this Warrant.

1. Registration of Warrants. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the “*Warrant Register*”), in the name of the record Holder (which shall be the initial Holder set forth above or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. Subsequent to the issuance date of this Warrant and while this Warrant is outstanding, the Holder may request a physical Warrant from the Company in accordance with Section 11 of this Warrant and the Company shall deliver such physical Warrant to such Holder within three (3) business day of receipt of such request.

2. Registration of Transfers. The Warrant Agent shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached as Schedule 2 hereto duly completed and signed, to it at the address listed on the signature page hereto. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “*New Warrant*”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant.

3. Exercise and Duration of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by Section 9 of this Warrant at any time and from time to time through and including 5:30 P.M. New York City time, on the Expiration Date. At 5:30 P.M., New York City time, on the Expiration Date, the portion of this Warrant not exercised prior thereto shall be and become void and of no value and this Warrant shall be terminated and no longer outstanding.

(b) The Holder may exercise this Warrant by (i) delivering to the Warrant Agent, an exercise notice, in the form attached as Schedule 1 hereto (the “*Exercise Notice*”), completed and duly signed or (ii) through the procedures established by The Depository Trust Company (“*DTC*”) (the date on which the Exercise Notice is delivered (as determined in accordance with the notice provisions hereof) or such DTC procedures are completed, as applicable, an “*Exercise Date*”). If the Holder exercises this Warrant pursuant to clause (i) of this Section 3(b), upon delivery of the Exercise Notice, the Holder shall deliver to the Warrant Agent payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice and if a “cashless exercise” may occur at such time pursuant to Section 9 below, in which case no cash payment shall be required) by wire transfer or in good certified check or good bank draft payable to the order of the Warrant Agent as provided on the Exercise Notice. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. If the Holder exercises this Warrant pursuant to clause (ii) of this Section 3(b), no ink original Exercise Notice shall be required, nor shall any medallion guarantee (or any other type of guarantee or notarization) of any Exercise Notice be required, except in the case of a transfer of ownership subject to Section 15(c) hereof. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares (if any).

4. Delivery of Warrant Shares.

(a) The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Company’s transfer agent to the Holder by (i) provided that the Company’s transfer agent is participating in DTC’s Fast Automated Securities Transfer Program, by crediting the Holder’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian system, or (ii) if the Company’s transfer agent is not participating in the DTC Fast Automated Securities Transfer Program, or if this Warrant is being exercised via cashless exercise, by book-entry in the name of the Holder or its designee, in each case by the date that is two (2) Trading Days after the Exercise Date (the “*Warrant Share Delivery Date*”); provided, that the Holder delivers the payment to the Warrant Agent of the aggregate Exercise Price with respect to the Exercise Notice (other than in the case of a cashless exercise) on the Exercise Date; provided, further, that if the Holder fails to deliver such payment on the Exercise Date, such Warrant Share Delivery Date shall instead become the first Trading Day following the delivery of such payment. Upon the Exercise Date, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares; provided payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received on the Exercise Date. While this Warrant remains outstanding, the Company shall use a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

(b) If by the close of the Warrant Share Delivery Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares (or such number of uncertificated Warrant Shares) in the manner required pursuant to Section 4(a), and if after such second (2nd) Trading Day and prior to the receipt of such Warrant Shares, the Holder (or a broker on behalf of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “*Buy-In*”), then the Company shall, within two (2) Trading Days after the Holder’s request and in the Holder’s sole discretion, either (1) pay in cash to the Holder an amount equal to the Holder’s total purchase price

(including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point the Company's obligation to deliver such Warrant Shares shall terminate or (2) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares (or such Warrant Shares in uncertificated form) and pay cash to the Holder in an amount equal to the excess (if any) of Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the closing bid price of a share of Common Stock on the Exercise Date.

(c) In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder the Warrant Shares subject to an Exercise Notice by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Exercise Notice), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise.

(d) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 14 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing the Warrant Shares (or uncertificated Warrant Shares) as required pursuant to the terms hereof.

5. Charges, Taxes and Expenses. Issuance and delivery of certificates for Warrant Shares (or uncertificated Warrant Shares) issuable upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates (or uncertificated shares of Common Stock), all of which taxes and expenses shall be paid by the Company; *provided, however*, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares (or uncertificated Warrant Shares) or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

6. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall instruct the Warrant Agent to issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity, if requested by the Company. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to instruct the Warrant Agent to issue the New Warrant.

7. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 8). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

8. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 8.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, (iii) combines its outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of Common Stock any shares of capital of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective upon the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective upon the effective date of such subdivision, combination or reclassification.

(b) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock for no consideration (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph) or (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "*Distributed Property*"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares on such record date without regard to any limitation on exercise contained therein.

(c) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company, directly or indirectly, in one or more related transactions, effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the Company, directly or indirectly, effects any sale of all or substantially all of its assets or a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any direct or indirect purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by holders of 50% or more of the outstanding Common Stock, or

(iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 8(a) above) (in any such case, a “*Fundamental Transaction*”), then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the “*Alternate Consideration*”). The Company shall not effect any such Fundamental Transaction unless any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or Person shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. Notwithstanding the foregoing, in the event of a Fundamental Transaction, other than one in which a Successor Entity that is a publicly traded corporation (whose stock is quoted or listed for trading on a national securities exchange, including, but not limited to, the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market) assumes this Warrant such that the Warrant shall be exercisable for the publicly traded common stock of such Successor Entity, at the request of the Holder delivered before the thirtieth (30th) day after such Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the effective date of the Fundamental Transaction), an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the effective date of such Fundamental Transaction, payable in cash; provided, however, that, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 8, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 8 shall be made to the nearest cent or the nearest share, as applicable.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 8, the Company will give written notice thereof to the Warrant Agent, which notice shall set forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver a copy of each such notice to the Holder and to the Company’s transfer agent.

(g) **Notice of Corporate Events.** If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting to its Common Stock holders of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; *provided, however*, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

9. **Payment of Exercise Price.** The Holder shall pay the Exercise Price in immediately available funds or, in the event that if, on any Exercise Date there is not an effective registration statement registering, or no current prospectus available for, the resale of the Warrant Shares by the Holder, satisfy its obligation to pay the Exercise Price through a “cashless exercise” in accordance with this Section 9. If the Holder satisfies its obligation to pay the Exercise Price through a “cashless exercise,” the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

“X” equals the number of Warrant Shares to be issued to the Holder;

“Y” equals the total number of Warrant Shares with respect to which this Warrant is being exercised;

“A” equals the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice; and

“B” equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, “VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date if a Trading Day (or, if not, the nearest preceding Trading Day) on such Trading Market as reported by Bloomberg L.P., (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the purchasers of a majority in interest of the Warrant Shares then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the Securities Act of 1933, as amended, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. In addition, for purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant

Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the original issuance date hereof (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise).

10. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the VWAP) for any such fractional shares.

11. Notices. Any and all notices or other communications or deliveries hereunder (other than an Exercise Notice pursuant to Section 3(b)(i)) shall be in writing and shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified below prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. Any Exercise Notice pursuant to Section 3(b)(i) shall be deemed given and effective on (i) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (ii) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. All such notices and/or communications shall be sent (i) to the Company at the address, facsimile number or email address listed on the signature page hereto, (ii) to the Holder at the address, facsimile number or email address listed on the Company records, or at such other address, facsimile number or email address as the Company or Holder may designate by two (2) Trading Days’ prior notice to the other Persons in accordance with this Section 11, and (iii) to the Warrant Agent at Broadridge Corporate Issuer Solutions, Inc., 51 Mercedes Way, Edgewood, New York 11717, Attention: IWS.

12. Warrant Agent. Upon thirty (30) days’ notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged, any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party, or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business, shall be a successor warrant agent under this Warrant without any further act; provided, that the use of a third-party warrant agent shall not change any terms hereof. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be emailed and mailed (by first class mail, postage prepaid) to the Holder at the Holder’s last address as shown on the Warrant Register.

13. Certain Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the following meanings:

(a) “*Affiliate*” means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

(b) “*Black Scholes Value*” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing

purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (iii) the underlying price per share used in such calculation shall be the greater of (a) the highest VWAP during the five (5) Trading Days prior to the closing of the Fundamental Transaction and (b) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(c) “*Commission*” means the United States Securities and Exchange Commission.

(d) “*Control*” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

(e) “*Parent Entity*” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common stock or equivalent equity security is quoted or listed on a Trading Market (or, if so elected by the Holder, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Holder or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(f) “*Person*” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

(g) “*Principal Trading Market*” means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date hereof is the Nasdaq Global Market.

(h) “*Successor Entity*” means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(i) “*Trading Day*” means any day on which the Common Stock is traded on the Principal Trading Market.

(j) “*Trading Market*” means whichever of the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

14. Limitations on Exercise. Notwithstanding anything to the contrary contained herein, the number of Warrant Shares that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to ensure that, coincident with or following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the Holder (together with any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder’s for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended, and the applicable regulations of the Commission, including any “group” of which the Holder is a member (the foregoing, “*Attribution Parties*”)) does not exceed the Beneficial Ownership Limitation percent of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise but excluding the number of shares that cannot be issued due to the operation of the limitation in this Section 11 or any other similar limitation on exercise to the extent that it limits the right to acquire underlying securities), it being

acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and that such Holder is solely responsible for any schedules required to be filed in accordance therewith; provided, that this limitation on exercise shall not be applicable to any Person that beneficially owns 10.0% or more of the Company's outstanding Common Stock immediately following the issuance of this Warrant, excluding DTC or its nominee. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant subject to the Exercise Notice with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) exercise of the remaining, unconverted shares of Warrants beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Holder or any of its Attribution Parties that, in the case of both (A) and (B), are subject to a limitation on conversion or exercise similar to the limitation contained herein. A determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder. For purposes of this Section 11, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Form 10-Q or Form 10-K, as the case may be, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within one Trading Day confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. By written notice to the Company, the Holder may increase or decrease the Beneficial Ownership Limitation to an amount not to exceed 19.99% (or 9.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding; provided, that any notice to increase the Beneficial Ownership Limitation will not be effective until the sixty-first (61st) day after such notice is delivered to the Company.

The "*Beneficial Ownership Limitation*" shall initially be 9.99% (or 4.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding. Any purported delivery to any Holder or the Attribution Parties of a number of shares of Common Stock or any other security upon exercise of the Warrants shall be void and have no effect to the extent, but only to the extent, that before or after such delivery, the Holder and the Attribution Parties would have beneficial ownership of Common Stock or any other such class in excess of the Beneficial Ownership Limitation.

15. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) The Company covenants that during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the applicable certificates for the Warrant Shares (or uncertificated Warrant Shares) upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Principal Trading Market and such shares shall be listed for trading thereon. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

(ii) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amend its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(iii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant.

(d) Amendment and Waiver. Except as otherwise provided herein, this Warrant may be amended only (i) in writing signed by the Company and the Holder, or their respective successors and assigns, or (ii) if the Company has obtained the written consent of the Holders of Warrants representing no less than a majority of the Warrant Shares obtainable upon exercise of the Warrants then outstanding, and in either case the Company may thereafter take any action herein prohibited, or omit to perform any act herein required to be performed by it, pursuant to the terms of any such amendment. Notwithstanding the foregoing, the number of Warrant Shares subject to this Warrant, the Expiration Date of this Warrant and the Exercise Price of this Warrant may not be amended, and the right to exercise this Warrant, and the exercise procedures set forth herein, may not be amended or waived, without the written consent of the Holder. Further, if any amendment to, or waiver of, this Warrant results in a disproportionate adverse

effect to the Holder or any group of holders of warrants, the written consent of the Holder, or group of holders, as the case may be, shall be required to effect such amendment or waiver. The Company shall give prompt written notice to the Holder of any amendment hereto or waiver hereunder that was effected without the Holder's written consent. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any Warrant unless the same consideration (other than the reimbursement of legal fees) also is offered to all other holders of Warrants.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF (OTHER THAN SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW). EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON, IN THE CASE OF THE HOLDER, AT THE ADDRESS ON THE COMPANY RECORDS, AND FOR THE COMPANY, AT THE ADDRESS ON THE SIGNATURE PAGE HERETO, AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(g) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(h) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

APTEVO THERAPEUTICS INC.

By: _____
Name:
Title:

Address:
2401 4th Avenue, Suite 1050
Seattle, Washington 98121

WARRANT AGENT

**BROADRIDGE CORPORATE ISSUER SOLUTIONS,
INC.**

By: _____
Name:
Title:

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. _____ (the “*Warrant*”) issued by Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase _____ Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

☐ Cash Exercise

☐ “Cashless Exercise” under Section 9 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ _____ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

*** Checks should be payable to Broadridge Corporate Issuer Solutions, Inc. Originals need to be mailed to Broadridge Corporate Issuer Solutions, Inc., 51 Mercedes Way, Edgewood, NY 11717, ATTN: IWS . Wired funds for exercise should be wired to:

ABA/Routing number: 121000248

Bank: Wells Fargo

420 Montgomery Street

San Francisco, CA 94104 United States

Beneficiary Account Name: Broadridge Corporate Issuer Solutions

Account Number: 4124218686

Reference: Warrants

For Further Credit Name: APTEVO THERAPEUTICS INC

For Further Credit Account Number: 4622299238

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

SCHEDULE 2

FORM OF ASSIGNMENT

[To assign the foregoing Warrant, execute this form and supply the required information. Do not use this form to purchase shares.]

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to:

Name: _____
(Please print)

Address: _____
(Please print)

Phone Number: _____

E-mail Address: _____

Dated: _____
(Signature must conform in all respects to name of holder as
specified on the face of the Warrant)

Address of Transferee

In the presence of: _____

APTEVO THERAPEUTICS INC.

WARRANT TO PURCHASE COMMON STOCK

Warrant No. _____

Original Issue Date: March 11, 2019

Aptevo Therapeutics Inc., a Delaware corporation (the “Company”), hereby certifies that, for value received, _____ or its permitted registered assigns (the “Holder”), is entitled to purchase from the Company up to a total of _____ shares of common stock, \$0.001 par value per share (the “Common Stock”), of the Company (each such share, a “Warrant Share” and all such shares, the “Warrant Shares”) at an exercise price per share equal to \$0.01 per share (as adjusted from time to time as provided in Section 8 herein, the “Exercise Price”), at any time and from time to time through and including 5:30 P.M., New York City time, on March 11, 2029 (the “Expiration Date”), and subject to the following terms and conditions:

This Warrant (this “Warrant”) is one of a series of similar warrants issued pursuant to the Company’s Registration Statement on Form S-3 (No. 333-221499), as amended. All such Warrants are referred to herein, collectively, as the “Warrants.” Broadridge Corporate Issuer Solutions, Inc. shall serve as warrant agent (the “Warrant Agent”) under this Warrant.

1. Registration of Warrants. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the “Warrant Register”), in the name of the record Holder (which shall be the initial Holder set forth above or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. Subsequent to the issuance date of this Warrant and while this Warrant is outstanding, the Holder may request a physical Warrant from the Company in accordance with Section 11 of this Warrant and the Company shall deliver such physical Warrant to such Holder within three (3) business day of receipt of such request.

2. Registration of Transfers. The Warrant Agent shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached as Schedule 2 hereto duly completed and signed, to it at the address listed on the signature page hereto. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “New Warrant”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant.

3. Exercise and Duration of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by Section 9 of this Warrant at any time and from time to time through and including 5:30 P.M. New York City time, on the Expiration Date. At 5:30 P.M., New York City time, on the Expiration Date, the portion of this Warrant not exercised prior thereto shall be and become void and of no value and this Warrant shall be terminated and no longer outstanding.

(b) The Holder may exercise this Warrant by (i) delivering to the Warrant Agent, an exercise notice, in the form attached as Schedule 1 hereto (the “*Exercise Notice*”), completed and duly signed or (ii) through the procedures established by The Depository Trust Company (“*DTC*”) (the date on which the Exercise Notice is delivered (as determined in accordance with the notice provisions hereof) or such DTC procedures are completed, as applicable, an “*Exercise Date*”). If the Holder exercises this Warrant pursuant to clause (i) of this Section 3(b), upon delivery of the Exercise Notice, the Holder shall deliver to the Warrant Agent payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice and if a “cashless exercise” may occur at such time pursuant to Section 9 below, in which case no cash payment shall be required) by wire transfer or in good certified check or good bank draft payable to the order of the Warrant Agent as provided on the Exercise Notice. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. If the Holder exercises this Warrant pursuant to clause (ii) of this Section 3(b), no ink original Exercise Notice shall be required, nor shall any medallion guarantee (or any other type of guarantee or notarization) of any Exercise Notice be required, except in the case of a transfer of ownership subject to Section 15(c) hereof. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares (if any).

4. Delivery of Warrant Shares.

(a) The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Company’s transfer agent to the Holder by (i) provided that the Company’s transfer agent is participating in DTC’s Fast Automated Securities Transfer Program, by crediting the Holder’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian system, or (ii) if the Company’s transfer agent is not participating in the DTC Fast Automated Securities Transfer Program, or if this Warrant is being exercised via cashless exercise, by book-entry in the name of the Holder or its designee, in each case by the date that is two (2) Trading Days after the Exercise Date (the “*Warrant Share Delivery Date*”); provided, that the Holder delivers the payment to the Warrant Agent of the aggregate Exercise Price with respect to the Exercise Notice (other than in the case of a cashless exercise) on the Exercise Date; provided, further, that if the Holder fails to deliver such payment on the Exercise Date, such Warrant Share Delivery Date shall instead become the first Trading Day following the delivery of such payment. Upon the Exercise Date, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares; provided payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received on the Exercise Date. While this Warrant remains outstanding, the Company shall use a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

(b) If by the close of the Warrant Share Delivery Date, the Company fails to deliver to the Holder a certificate representing the required number of Warrant Shares (or such number of uncertificated Warrant Shares) in the manner required pursuant to Section 4(a), and if after such second (2nd) Trading Day and prior to the receipt of such Warrant Shares, the Holder (or a broker on behalf of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “*Buy-In*”), then the Company shall, within two (2) Trading Days after the Holder’s request and in the Holder’s sole discretion, either (1) pay in cash to the Holder an amount equal to the Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased, at which point

the Company's obligation to deliver such Warrant Shares shall terminate or (2) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares (or such Warrant Shares in uncertificated form) and pay cash to the Holder in an amount equal to the excess (if any) of Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In over the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the closing bid price of a share of Common Stock on the Exercise Date.

(c) In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder the Warrant Shares subject to an Exercise Notice by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Exercise Notice), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise.

(d) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 14 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing the Warrant Shares (or uncertificated Warrant Shares) as required pursuant to the terms hereof.

5. Charges, Taxes and Expenses. Issuance and delivery of certificates for Warrant Shares (or uncertificated Warrant Shares) issuable upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates (or uncertificated shares of Common Stock), all of which taxes and expenses shall be paid by the Company; *provided, however,* that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares (or uncertificated Warrant Shares) or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

6. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall instruct the Warrant Agent to issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity, if requested by the Company. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to instruct the Warrant Agent to issue the New Warrant.

7. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 8). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

8. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 8.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, (iii) combines its outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of Common Stock any shares of capital of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective upon the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective upon the effective date of such subdivision, combination or reclassification.

(b) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock for no consideration (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph) or (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "*Distributed Property*"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares on such record date without regard to any limitation on exercise contained therein.

(c) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company, directly or indirectly, in one or more related transactions, effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the Company, directly or indirectly, effects any sale of all or substantially all of its assets or a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any direct or indirect purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by holders of 50% or more of the outstanding Common Stock, or (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification,

reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 8(a) above) (in any such case, a “*Fundamental Transaction*”), then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the “*Alternate Consideration*”). The Company shall not effect any such Fundamental Transaction unless any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or Person shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. Notwithstanding the foregoing, in the event of a Fundamental Transaction, other than one in which a Successor Entity that is a publicly traded corporation (whose stock is quoted or listed for trading on a national securities exchange, including, but not limited to, the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market) assumes this Warrant such that the Warrant shall be exercisable for the publicly traded common stock of such Successor Entity, at the request of the Holder delivered before the thirtieth (30th) day after such Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the effective date of the Fundamental Transaction), an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the effective date of such Fundamental Transaction, payable in cash; provided, however, that, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 8, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 8 shall be made to the nearest cent or the nearest share, as applicable.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 8, the Company will give written notice thereof to the Warrant Agent, which notice shall set forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver a copy of each such notice to the Holder and to the Company’s transfer agent.

(g) **Notice of Corporate Events.** If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting to its Common Stock holders of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice of such transaction at least ten (10) Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; *provided, however*, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

9. **Payment of Exercise Price.** The Holder shall pay the Exercise Price in immediately available funds or, in the event that if, on any Exercise Date there is not an effective registration statement registering, or no current prospectus available for, the resale of the Warrant Shares by the Holder, satisfy its obligation to pay the Exercise Price through a “cashless exercise” in accordance with this Section 9. If the Holder satisfies its obligation to pay the Exercise Price through a “cashless exercise,” the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

“X” equals the number of Warrant Shares to be issued to the Holder;

“Y” equals the total number of Warrant Shares with respect to which this Warrant is being exercised;

“A” equals the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice; and

“B” equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, “VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date if a Trading Day (or, if not, the nearest preceding Trading Day) on such Trading Market as reported by Bloomberg L.P., (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the purchasers of a majority in interest of the Warrant Shares then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the Securities Act of 1933, as amended, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. In addition, for purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the original issuance date hereof (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise).

10. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the VWAP) for any such fractional shares.

11. Notices. Any and all notices or other communications or deliveries hereunder (other than an Exercise Notice pursuant to Section 3(b)(i)) shall be in writing and shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified below prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. Any Exercise Notice pursuant to Section 3(b)(i) shall be deemed given and effective on (i) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (ii) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery. All such notices and/or communications shall be sent (i) to the Company at the address, facsimile number or email address listed on the signature page hereto, (ii) to the Holder at the address, facsimile number or email address listed on the Company records, or at such other address, facsimile number or email address as the Company or Holder may designate by two (2) Trading Days' prior notice to the other Persons in accordance with this Section 11, and (iii) to the Warrant Agent at Broadridge Corporate Issuer Solutions, Inc., 51 Mercedes Way, Edgewood, New York 11717, Attention: IWS.

12. Warrant Agent. Upon thirty (30) days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged, any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party, or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business, shall be a successor warrant agent under this Warrant without any further act; provided, that the use of a third-party warrant agent shall not change any terms hereof. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be emailed and mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

13. Certain Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the following meanings:

(a) "*Affiliate*" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

(b) "*Black Scholes Value*" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing

purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (iii) the underlying price per share used in such calculation shall be the greater of (a) the highest VWAP during the five (5) Trading Days prior to the closing of the Fundamental Transaction and (b) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(c) “*Commission*” means the United States Securities and Exchange Commission.

(d) “*Control*” (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

(e) “*Parent Entity*” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common stock or equivalent equity security is quoted or listed on a Trading Market (or, if so elected by the Holder, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Holder or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(f) “*Person*” means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

(g) “*Principal Trading Market*” means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date hereof is the Nasdaq Global Market.

(h) “*Successor Entity*” means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(i) “*Trading Day*” means any day on which the Common Stock is traded on the Principal Trading Market.

(j) “*Trading Market*” means whichever of the New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

14. Limitations on Exercise. Notwithstanding anything to the contrary contained herein, the number of Warrant Shares that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to ensure that, coincident with or following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the Holder (together with any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder’s for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended, and the applicable regulations of the Commission, including any “group” of which the Holder is a member (the foregoing, “*Attribution Parties*”)) does not exceed the Beneficial Ownership Limitation percent of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise but excluding the number of shares that cannot be issued due to the operation of the limitation in this Section 11 or any other similar limitation on exercise to the extent that it limits the right to acquire underlying securities), it being

acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and that such Holder is solely responsible for any schedules required to be filed in accordance therewith; provided, that this limitation on exercise shall not be applicable to any Person that beneficially owns 10.0% or more of the Company's outstanding Common Stock immediately following the issuance of this Warrant, excluding DTC or its nominee. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant subject to the Exercise Notice with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) exercise of the remaining, unconverted shares of Warrants beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Holder or any of its Attribution Parties that, in the case of both (A) and (B), are subject to a limitation on conversion or exercise similar to the limitation contained herein. A determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder. For purposes of this Section 11, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Form 10-Q or Form 10-K, as the case may be, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within one Trading Day confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. By written notice to the Company, the Holder may increase or decrease the Beneficial Ownership Limitation to an amount not to exceed 19.99% (or 9.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding; provided, that any notice to increase the Beneficial Ownership Limitation will not be effective until the sixty-first (61st) day after such notice is delivered to the Company.

The "*Beneficial Ownership Limitation*" shall initially be 9.99% (or 4.99% if elected by a prospective Holder prior to the issuance of any Warrants) of the number of shares of the Common Stock then outstanding. Any purported delivery to any Holder or the Attribution Parties of a number of shares of Common Stock or any other security upon exercise of the Warrants shall be void and have no effect to the extent, but only to the extent, that before or after such delivery, the Holder and the Attribution Parties would have beneficial ownership of Common Stock or any other such class in excess of the Beneficial Ownership Limitation.

15. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) The Company covenants that during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the applicable certificates for the Warrant Shares (or uncertificated Warrant Shares) upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Principal Trading Market and such shares shall be listed for trading thereon. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

(ii) Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amend its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant.

(iii) Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant.

(d) Amendment and Waiver. Except as otherwise provided herein, this Warrant may be amended only (i) in writing signed by the Company and the Holder, or their respective successors and assigns, or (ii) if the Company has obtained the written consent of the Holders of Warrants representing no less than a majority of the Warrant Shares obtainable upon exercise of the Warrants then outstanding, and in either case the Company may thereafter take any action herein prohibited, or omit to perform any act herein required to be performed by it, pursuant to the terms of any such amendment. Notwithstanding the foregoing, the number of Warrant Shares subject to this Warrant, the Expiration Date of this Warrant and the Exercise Price of this Warrant may not be amended, and the right to exercise this Warrant, and the exercise procedures set forth herein, may not be amended or waived, without the written consent of the Holder. Further, if any amendment to, or waiver of, this Warrant results in a disproportionate adverse

effect to the Holder or any group of holders of warrants, the written consent of the Holder, or group of holders, as the case may be, shall be required to effect such amendment or waiver. The Company shall give prompt written notice to the Holder of any amendment hereto or waiver hereunder that was effected without the Holder's written consent. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any Warrant unless the same consideration (other than the reimbursement of legal fees) also is offered to all other holders of Warrants.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF (OTHER THAN SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW). EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON, IN THE CASE OF THE HOLDER, AT THE ADDRESS ON THE COMPANY RECORDS, AND FOR THE COMPANY, AT THE ADDRESS ON THE SIGNATURE PAGE HERETO, AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(g) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(h) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

APTEVO THERAPEUTICS INC.

By: _____
Name:
Title:

Address:
2401 4th Avenue, Suite 1050
Seattle, Washington 98121

WARRANT AGENT

**BROADRIDGE CORPORATE ISSUER SOLUTIONS,
INC.**

By: _____
Name:
Title:

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. _____ (the “*Warrant*”) issued by Aptevo Therapeutics Inc., a Delaware corporation (the “*Company*”). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase _____ Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

☐ Cash Exercise

☐ “Cashless Exercise” under Section 9 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ _____ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

***Checks should be payable to Broadridge Corporate Issuer Solutions, Inc. Originals need to be mailed to Broadridge Corporate Issuer Solutions, Inc., 51 Mercedes Way, Edgewood, NY 11717, ATTN: IWS . Wired funds for exercise should be wired to:

ABA/Routing number: 121000248

Bank: Wells Fargo

420 Montgomery Street

San Francisco, CA 94104 United States

Beneficiary Account Name: Broadridge Corporate Issuer Solutions

Account Number: 4124218686

Reference: Warrants

For Further Credit Name: APTEVO THERAPEUTICS INC

For Further Credit Account Number: 4622299238

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

SCHEDULE 2

FORM OF ASSIGNMENT

[To assign the foregoing Warrant, execute this form and supply the required information. Do not use this form to purchase shares.]

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to:

Name:

(Please print)

Address:

(Please print)

Phone Number:

E-mail Address:

Dated: _____

(Signature must conform in all respects to name of holder as specified on the face of the Warrant)

Address of Transferee

In the presence of:



March 11, 2019

Aptevo Therapeutics Inc.
2401 4th Avenue, Suite 1050
Seattle, WA 98121

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the offering by Aptevo Therapeutics, Inc., a Delaware corporation (the “**Company**”), of up to (i) 19,850,000 shares (the “**Shares**”) of common stock of the Company, par value \$0.001 per share (the “**Common Stock**”), (ii) warrants (the “**Purchase Warrants**”) to purchase up to 22,000,000 shares of Common Stock (the “**Purchase Warrant Shares**”) and (iii) pre-funded warrants (the “**Pre-Funded Warrants**”) and together with the Purchase Warrants, the “**Warrants**”) to purchase up to 2,150,000 shares of Common Stock (the “**Pre-Funded Warrant Shares**”) and together with the Purchase Warrant Shares, the “**Warrant Shares**”) pursuant to a Registration Statement on Form S-3 (Registration No. 333-221499) (the “**Registration Statement**”), filed with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Act**”), the prospectus included within the Registration Statement (the “**Base Prospectus**”), and the prospectus supplement dated March 7, 2019, filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations of the Act (together with the Base Prospectus, the “**Prospectus**”). The Shares, the Warrants and the Warrant Shares are to be sold by the Company as described in the Registration Statement and the Prospectus.

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the form of Purchase Warrant and form of Pre-Funded Warrant to be filed as an exhibit to a current report of the Company on Form 8-K, the Company’s certificate of incorporation and bylaws, as currently in effect, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought to independently verify such matters.

Our opinion herein is expressed solely with respect to the General Corporation Law of the State of Delaware and, as to the Warrants constituting valid and binding obligations of the Company, the laws of the State of New York. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

With regard to our opinion concerning the Warrants constituting valid and binding obligations of the Company:

(i) Our opinion is subject to, and may be limited by, (a) applicable bankruptcy, reorganization, insolvency, moratorium, fraudulent conveyance, debtor and creditor, and similar laws which relate to or affect creditors’ rights generally, and (b) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law.

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(ii) Our opinion is subject to the qualification that the availability of specific performance, an injunction or other equitable remedies is subject to the discretion of the court before which the request is brought.

(iii) We express no opinion as to any provision of the Warrants that: (a) provides for liquidated damages, buy-in damages, monetary penalties, prepayment or make-whole payments or other economic remedies to the extent such provisions may constitute unlawful penalties, (b) relates to advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitations, trial by jury, or procedural rights, (c) restricts non-written modifications and waivers, (d) provides for the payment of legal and other professional fees where such payment is contrary to law or public policy, (e) relates to exclusivity, election or accumulation of rights or remedies, or (f) provides that provisions of the Warrants are severable to the extent an essential part of the agreed exchange is determined to be invalid and unenforceable.

(iv) We express no opinion as to whether a state court outside of the State of New York or a federal court of the United States would give effect to the choice of New York law provided for in the Warrants. Our opinion, insofar as it relates to the enforceability of the choice of New York law assumes satisfaction of the requirements of Section 5-1401 of the New York General Obligations Law, which permits contracting parties to specify that the law of the State of New York is applicable if such requirements are satisfied.

With respect to the Warrant Shares, we express no opinion to the extent that, notwithstanding its current reservation of shares of Common Stock, future issuances of securities, including the Warrant Shares, of the Company and/or adjustments to outstanding securities, including the Warrants, of the Company may cause the Warrants to be exercisable for more shares of Common Stock than the number that remain authorized but unissued. Further, we have assumed the Exercise Price (as defined in the Warrants) will not be adjusted to an amount below the par value per share of the Common Stock.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Shares, when sold and issued in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable, (ii) provided that the Warrants have been duly executed and delivered by the Company and duly delivered to the purchasers thereof against payment therefor, the Warrants, when sold and issued as contemplated in the Registration Statement and the Prospectus, will be valid and binding obligations of the Company, and (iii) the Warrant Shares, when issued and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus and to the filing of this opinion as an exhibit to a Current Report on Form 8-K to be filed with the Commission for incorporation by reference into the Registration Statement. This opinion is expressed as of the date hereof, and we disclaim any responsibility to advise you of any changes in the facts stated or assumed herein or of any changes in applicable law.

Very truly yours,

COOLEY LLP

By: /s/ Alan D. Hambelton

Alan D. Hambelton

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