

**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): August 7, 2019

Dynavax Technologies Corporation
(Exact name of registrant as specified in its charter)

Commission File Number: 001-34207

Delaware
(State or other jurisdiction
of incorporation)

33-0728374
(IRS Employer
Identification No.)

2100 Powell Street, Suite 900
Emeryville, CA 94608
(Address of principal executive offices, including zip code)

(510) 848-5100
(Registrant's telephone number, including area code)

(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:

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

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

Title of each class:	Trading symbol(s):	Name of each exchange on which registered:
Common Stock, \$0.001 par value	DVAX	The Nasdaq Stock Market LLC

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

Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01 Entry into a Material Definitive Agreement.

On August 7, 2019, Dynavax Technologies Corporation (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Cowen and Company, LLC and William Blair & Company, L.L.C., as representatives of the several underwriters named therein (the “Underwriters”), relating to the issuance and sale in an underwritten public offering of 18,525,000 shares of common stock of the Company, par value \$0.001 per share (“Common Stock”), 4,840 shares of newly designated non-voting Series B Convertible Preferred Stock of the Company, par value \$0.001 per share (“Series B Stock”), and warrants to purchase an aggregate of 5,841,250 shares of Common Stock (“Warrants”). Each share of Common Stock is being sold together with a Warrant to purchase 0.25 of a share of Common Stock, at a combined price to the public of \$3.00 per share of Common Stock and accompanying Warrant. Each share of Series B Stock is being sold together with Warrants to purchase 250 shares of Common Stock, at a combined price to the public of \$3,000.00 per share of Series B Stock and accompanying Warrants. The net proceeds to the Company from the offering are expected to be approximately \$65.5 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company and excluding any proceeds that the Company may receive upon exercise of the Warrants. The offering is expected to close on or about August 12, 2019, subject to customary closing conditions.

All of the Warrants being sold in the offering will have an exercise price of \$4.50 per share of Common Stock, subject to proportional adjustments in the event of stock splits or combinations or similar events. The warrants will be immediately exercisable upon issuance and will expire on the 30-month anniversary of the date of issuance. However, the holder will be prohibited, pursuant to the terms and conditions of the Warrants, from exercising Warrants for shares of Common Stock if, as a result of such exercise, the holder, together with its affiliates and attribution parties, would beneficially own more than 4.99% of the total number of shares of Common Stock then issued and outstanding, which percentage may be changed at the holders’ election to a higher or lower percentage (not to exceed 19.99%) upon 61 days’ notice to the Company.

The securities to be offered and sold in the offering will be issued pursuant to a shelf registration statement on Form S-3 that automatically became effective upon filing with the Securities Exchange Commission (“SEC”) on August 8, 2017 and accompanying prospectus (Registration Statement No. 333-219781) and a prospectus supplement thereunder.

A copy of the Underwriting Agreement is attached as Exhibit 1.1 to this report and is incorporated herein by reference. The foregoing description of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit. The foregoing description of the Warrants does not purport to be complete and is qualified in its entirety by reference to the full text of the form of Warrant, a copy of which is filed as Exhibit 4.1 to this report and is incorporated herein by reference.

A copy of the legal opinion and consent of Cooley LLP relating to the legality of the issuance and sale of the securities in the offerings is attached as Exhibit 5.1 hereto.

Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

On August 8, 2019, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (the “Certificate of Designation”) with the Secretary of State of the State of Delaware with respect to the Series B Stock.

The rights, preferences and privileges of the Series B Stock are set forth in the Certificate of Designation. Each share of Series B Stock is convertible into 1,000 shares of Common Stock at the holder’s option. However, the holder will be prohibited, subject to certain exceptions, from converting shares of Series B Stock into shares of Common Stock if, as a result of such conversion, the holder, together with its affiliates and attribution parties, would beneficially own more than 4.99% of the total number of shares of Common Stock then issued and outstanding, which percentage may be changed at the holders’ election to a higher or lower percentage (not to exceed 19.99%) upon 61 days’ notice to the Company. Shares of Series B Stock will generally have no voting rights, except as required by law and except that the consent of holders of a majority of the outstanding shares of Series B Stock will be required to amend the terms of the Series B Stock or take certain other actions with respect to the Series B Stock. Shares of Series B Stock will be entitled to receive dividends equal to (on an as-if-converted-to-Common Stock basis), and in the same form and manner as, dividends actually paid on shares of Common Stock.

A copy of the Certificate of Designation is attached hereto as Exhibit 3.1 and is incorporated herein by reference. The foregoing description of the rights, preferences and privileges of the Series B Stock is qualified in its entirety by reference to such exhibit.

Item 8.01 Other Events.

On August 7, 2019, the Company issued a press release announcing the commencement of the offering and on August 8, 2019 the Company issued a press release announcing that the Company had priced the offering. Copies of these press releases are attached as Exhibits 99.1 and 99.2 hereto, respectively, and are incorporated herein by reference.

Forward-Looking Statements

Statements contained in this report regarding matters that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including, without limitation, statements about the Company’s expectations with respect to the completion, timing and size of the public offering and the expected net proceeds from the offering. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as “believes,” “anticipates,” “plans,” “expects,” “intends,” “will,” “goal,” “potential” and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon the Company’s current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the public offering. Additional factors that could cause actual results to differ materially from those stated or implied by our forward-looking statements are disclosed in the Company’s filings with the SEC, including in the section captioned “Risk Factors” in the Company’s quarterly report on Form 10-Q for the quarterly period ended June 30, 2019. All forward-looking statements contained in this report speak only as of the date on which they were made. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Item 9.01 Financial Statements and Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated April 7, 2019, by and among Dynavax Technologies Corporation, Cowen and Company, LLC and William Blair & Company, L.L.C., as representatives of the several underwriters named therein.</u>
3.1	<u>Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock of the Company.</u>
4.1	<u>Form of Warrant to Purchase Common Stock.</u>
5.1	<u>Opinion of Cooley LLP.</u>
23.1	<u>Consent of Cooley LLP (included in Exhibit 5.1).</u>
99.1	<u>Press release, dated August 7, 2019.</u>
99.2	<u>Press release, dated August 8, 2019.</u>

SIGNATURES

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

Dynavax Technologies Corporation

Date: August 8, 2019

By: /s/ STEVEN N. GERSTEN .

Steven N. Gersten
Senior Vice President

18,525,000 Shares of Common Stock

4,840 Shares of Series B Convertible Preferred Stock

Warrants to Purchase 5,841,250 Shares of Common Stock

DYNAVAX TECHNOLOGIES CORPORATION

UNDERWRITING AGREEMENT

August 7, 2019

COWEN AND COMPANY, LLC
WILLIAM BLAIR & COMPANY, L.L.C.
As Representatives of the several Underwriters

c/o COWEN AND COMPANY, LLC
599 Lexington Avenue
25th Floor
New York, NY 10022

c/o WILLIAM BLAIR & COMPANY, L.L.C.
150 North Riverside Plaza
Chicago, Illinois 60606

Ladies and Gentlemen:

1. *INTRODUCTORY.* Dynavax Technologies Corporation, a Delaware corporation (the “**Company**”), proposes to sell, pursuant to the terms of this Agreement, to the several underwriters named in Schedule A hereto (the “**Underwriters**,” or, each, an “**Underwriter**”), (i) an aggregate of 18,525,000 shares of common stock, \$0.001 par value per share (the “**Common Stock**”), of the Company (the “**Common Shares**”) and warrants to purchase an aggregate of 4,631,250 shares of Common Stock (the “**Warrants**”) in the form attached hereto as Exhibit I and (ii) an aggregate of 4,840 shares of the Company’s Series B Convertible Preferred Stock, \$0.001 par value per share (the “**Preferred Stock**”, and together with the Common Shares, the “**Stock**”) and Warrants to purchase an aggregate of 1,210,000 shares of Common Stock. The shares of Common Stock underlying the Warrants are hereinafter referred to as the “**Warrant Shares**”. The shares of Common Stock issuable upon conversion of the Preferred Stock are hereinafter referred to as the “**Conversion Shares**”, and together with the Warrant Shares, the “**Underlying Shares**”. Cowen and Company, LLC and William Blair & Company, L.L.C. are acting as the representatives of the several Underwriters and in such capacity are hereinafter referred to as the “**Representatives**.”

An “automatic shelf registration statement” as defined in Rule 405 of the rules and regulations (the “**Rules and Regulations**”) promulgated under the Securities Act of 1933, as amended (the “**Securities Act**”) on Form S-3 (File No. 333-219781) in respect of the Stock and Warrants has been filed with the Securities and Exchange Commission (the “**Commission**”) not earlier than three (3) years prior to the date hereof; such registration statement, and any post-effective amendment thereto, became effective on filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) of the Rules and Regulations has been received by the Company (the prospectus filed as part of such automatic shelf registration statement in the

form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the “**Base Prospectus**”). Such automatic shelf registration statement, including all exhibits thereto, but excluding Form T-1, and including any prospectus supplement relating to the Stock and Warrants that is filed with the Commission and deemed by virtue of Rule 430B of the Rules and Regulations to be part of such automatic shelf registration statement, are hereinafter collectively called the “**Registration Statement**.” The preliminary prospectus supplement dated August 7, 2019 describing the Stock and Warrants and the offering thereof, together with the Base Prospectus, is called the “**Preliminary Prospectus**,” and the Preliminary Prospectus and any other preliminary prospectus supplement to the Base Prospectus that describes the Stock and Warrants and the offering thereof and is used prior to the filing of the Prospectus (as defined below), together with the Base Prospectus, is called a “**preliminary prospectus**.” As used herein, the term “**Prospectus**” shall mean the final prospectus supplement to the Base Prospectus that describes the Stock and Warrants and the offering thereof (the “**Final Prospectus Supplement**”), together with the Base Prospectus, in the form first used by the Underwriters to confirm sales of the Stock and Warrants or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act. 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. As used herein, the terms “**Registration Statement**,” “**Rule 462(b) Registration Statement**,” “**Preliminary Prospectus**,” “**preliminary prospectus**,” “**Base Prospectus**,” “**Time of Sale Disclosure Package**” and “**Prospectus**” shall include the documents incorporated or deemed to be incorporated by reference therein. All references in this Agreement to amendments or supplements to the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Disclosure Package or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Exchange Act**”) which is or is deemed to be incorporated by reference in the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, such preliminary prospectus, the Base Prospectus, the Time of Sale Disclosure Package or the Prospectus, as the case may be. All references in this Agreement to the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any other preliminary prospectus, the Base Prospectus or the Prospectus, or any amendments or supplements to any of the foregoing, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“**EDGAR**”).

As used herein, “**Applicable Time**” is 7:15 p.m. (New York time) on August 7, 2019. As used herein, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, and “**Time of Sale Disclosure Package**” means the preliminary prospectus, as amended or supplemented immediately prior to the Applicable Time, together with the free writing prospectuses, if any, identified in Schedule B hereto, the information identified on Schedule C hereto, and each “road show” (as defined in Rule 433 under the Securities Act), if any, related to the offering of the Stock and Warrants contemplated hereby that is a “written communication” (as defined in Rule 405 under the Securities Act) (each such road show, a “**Road Show**”).

All references in this Agreement to financial statements and schedules and other information which are “**contained**,” “**included**” or “**stated**” in the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Disclosure Package or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Disclosure Package or the Prospectus, as the case may be.

The Company hereby confirms its agreements with the Underwriters as follows:

2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company represents and warrants to the several Underwriters, as of the date hereof and as of the Closing Date (as defined below), and agrees with the several Underwriters, that:

(a) *Compliance with Registration Requirements.* The Registration Statement (including, for avoidance of doubt, any Rule 462(b) Registration Statement) 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, if any. No stop order suspending the effectiveness of the Registration Statement (including, for avoidance of doubt, any Rule 462(b) Registration Statement) is in effect and no proceedings for such purpose have been instituted or are pending or, to the Company's knowledge, are contemplated or threatened by the Commission.

Each preliminary prospectus and the Prospectus when filed complied or will comply in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Stock and Warrants. Each of the Registration Statement (including, for avoidance of doubt, any Rule 462(b) Registration Statement) and any post-effective amendment thereto, at the time it became effective and at all subsequent times during which a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with any sale of Stock and Warrants by any Underwriter or a dealer (such times, the "**Prospectus Delivery Period**"), complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, the Time of Sale Disclosure Package (including any preliminary prospectus wrapper) did not, and at the time of the sale of the Stock and Warrants and at the Closing Date (as defined in Section 3), the Time of Sale Disclosure Package, as then amended or supplemented by the Company, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus (including any Prospectus wrapper), as then amended or supplemented, as of the date of the Final Prospectus Supplement and at all subsequent times during the Prospectus Delivery Period, did not and will 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. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or any preliminary prospectus, the Prospectus or the Time of Sale Disclosure Package, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by the Representatives to the Company consists of the information described in Section 17 below. There are no contracts or other documents required to be described in the Time of Sale Disclosure Package or the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required.

The Company is not an "ineligible issuer" in connection with the offering of the Stock and Warrants pursuant to Rules 164, 405 and 433 under the Securities Act. At the time of the filing of the Registration Statement, at the time of the most recent amendment thereto for the purpose of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment, an incorporated report filed pursuant to Section 1 or 15(d) of the Exchange Act or form of prospectus), and at the time the Company or any person acting on its behalf

(within the meaning, for this clause only, of Rule 163(c) of the Rules and Regulations) made any offer relating to the Stock and Warrants in reliance on the exemption of Rule 163 of the Rules and Regulations, the Company was a “well-known seasoned issuer” as defined in Rule 405 of the Rules and Regulations. Each free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act including timely filing with the Commission or retention where required and legending, and each such free writing prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Stock and Warrants did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Prospectus or any preliminary prospectus. Except for the free writing prospectuses, if any, identified in Schedule B hereto, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior consent, prepare, use or refer to, any free writing prospectus.

(b) *Offering Materials Furnished to Underwriters.* If so requested by the Representatives, the Company has delivered to the Representatives one manually signed copy of each of the Registration Statement (including exhibits thereto), each amendment thereto and each consent and certificate of experts filed as a part thereof.

(c) *Distribution of Offering Material By the Company.* The Company has not distributed and will not distribute, prior to the completion of the Underwriters’ distribution of the Stock and Warrants, any offering material in connection with the offering and sale of the Stock and Warrants other than a preliminary prospectus, the Time of Sale Disclosure Package, the Prospectus, any free writing prospectus reviewed and consented to by the Representatives, or the Registration Statement.

(d) *The Underwriting Agreement and the Warrants.* This Agreement has been duly authorized, executed and delivered by, and is a valid and binding agreement of, the Company, enforceable against the Company in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable law and except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

(e) *Authorization of the Stock and Warrants.* The Stock has been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of the Stock is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Stock. The Conversion Shares have been duly authorized and reserved for issuance pursuant to the terms of the Preferred Stock, and when issued by the Company upon valid conversion of the Preferred Stock in accordance with the terms of the Preferred Stock, will be duly and validly issued, fully paid and nonassessable and free of any preemptive rights, rights of first refusal or other similar rights. The Warrants have been duly authorized, and when executed and delivered by the Company, will constitute valid and binding obligations of the Company enforceable in accordance with their terms, except that such enforcement may be subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws, now or hereafter in effect, affecting creditors’ rights generally. The Warrant Shares have been duly authorized and reserved for issuance pursuant to the terms of the Warrants, and when issued by the Company upon valid exercise of the Warrants in accordance with the terms of the Warrants, will be duly and validly issued, fully paid and nonassessable and free of any preemptive rights, rights of first refusal or other similar rights.

(f) *No Applicable Registration or Other Similar Rights.* There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement.

(g) *No Material Adverse Change.* Except as otherwise disclosed in the Time of Sale Disclosure Package, subsequent to the respective dates as of which information is given in the Time of Sale Disclosure Package: (i) there has been no material adverse change, or any development that could reasonably be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, operations or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity (any such change is called a “**Material Adverse Change**”); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, not in the ordinary course of business nor entered into any material transaction or agreement not in the ordinary course of business; and (iii) there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other subsidiaries, its subsidiaries on any class of capital stock or repurchase or redemption by the Company or its subsidiaries of any class of capital stock.

(h) *Independent Accountants.* Ernst & Young LLP, who have expressed their opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission and incorporated by reference into the Registration Statement, the Preliminary Prospectus, the Prospectus and Time of Sale Disclosure Package (each, an “**Applicable Prospectus**” and collectively, the “**Applicable Prospectuses**”), are (i) independent registered public accountants as required by the Securities Act and the Exchange Act, (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the Public Company Accounting Oversight Board (“**PCAOB**”) whose registration has not been suspended or revoked and, to the Company’s knowledge, who has not requested such registration to be withdrawn.

(i) *Preparation of the Financial Statements and Data.* The financial statements filed with the Commission and incorporated by reference into the Registration Statement, the Preliminary Prospectus, the Time of Sale Disclosure Package and the Prospectus present fairly the consolidated financial position of the Company and its subsidiaries as of and at the dates indicated and the results of their operations, stockholders’ equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with generally accepted accounting principles in the United States applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. No other financial statements or supporting schedules are required to be included in the Registration Statement or any Applicable Prospectus. The financial data set forth in each Applicable Prospectus fairly present the information set forth therein on a basis consistent with that of the audited financial statements incorporated by reference in the Registration Statement and each Applicable Prospectus. The financial data set forth in the Registration Statement and the Base Prospectus under the caption “Ratio of Earnings to Fixed Charges and Ratio of Combined Fixed Charges and Preferred Stock Dividends to Earnings” and in Exhibit 12.1 to the Registration Statement under the caption “Statement of Computation of Ratio of Earnings to Fixed Charges” have been calculated in compliance with Item 503(d) of Regulation S-K under the Securities Act. To the Company’s knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement and included in any Applicable Prospectus.

(j) *Company's Accounting System.* The Company and its subsidiaries make and keep accurate books and records and maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied 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; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company is unaware of any material weakness in the Company's internal control over financial reporting (whether or not remediated) as of December 31, 2018 or at any time since such date; since December 31, 2018, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(k) *Incorporation and Good Standing of the Company and its Subsidiaries.* Each of the Company and each of its subsidiaries has been duly incorporated or organized, as the case may be, and is validly existing as a corporation or other entity, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in each Applicable Prospectus and, in the case of the Company, to enter into and perform its obligations under this Agreement, except where the failure to be in good standing would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. Each of the Company and each of its subsidiaries is duly qualified as a foreign corporation or other entity, as applicable, to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. Except as otherwise disclosed in the Time of Sale Disclosure Package or the Applicable Prospectus, all of the issued and outstanding capital stock or other equity or ownership interests of each of the Company's subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company (directly or through the Company's other subsidiaries) free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. The Company does not own or control, directly or indirectly, any corporation, association or other entity, and the Company does not have any "subsidiary" (as defined in Rule 405 under the Securities Act), other than Dynavax GmbH.

(l) *Capitalization and Other Capital Stock Matters.* The authorized, issued and outstanding capital stock of the Company is as set forth in each Applicable Prospectus (other than for subsequent issuances, if any, pursuant to employee benefit plans described in the Time of Sale Disclosure Package or upon the exercise of outstanding options or warrants described in each Applicable Prospectus). The capital stock of the Company (including the Stock and the Underlying Shares) and the Warrants conform in all material respects to the description thereof contained in the Time of Sale Disclosure Package. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with federal and state securities laws. None of the outstanding shares of Common Stock was issued in violation of any preemptive rights, rights of

first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or its subsidiaries other than those accurately described in each Applicable Prospectus. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in each Applicable Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights.

(m) *Stock Exchange Listing*. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed on the Nasdaq Capital 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 Capital Market, nor has the Company received any notification that the Commission or the Nasdaq Capital Market is contemplating terminating such registration or listing.

(n) *Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required*. Neither the Company nor any of its subsidiaries is in violation of its charter or by-laws, or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) ("**Default**") under any indenture, mortgage, loan or credit agreement, note, contract or other agreement, franchise, lease or other instrument to which the Company or any of its subsidiaries is a party or by which either of them may be bound (including, without limitation, any credit agreement, indenture, pledge agreement, security agreement or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness of the Company or any of its subsidiaries), or to which any of the property or assets of the Company or any of its subsidiaries is subject (each, an "**Existing Instrument**"), except for such Defaults as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. The Company's execution, delivery and performance of this Agreement and the Warrant Agreement, consummation of the transactions contemplated hereby, thereby and by each Applicable Prospectus and the issuance and sale of the Stock and Warrants (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by-laws, or similar organizational documents, as applicable, of the Company or any of its subsidiaries, (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) 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, or require the consent of any other party to, any Existing Instrument and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its subsidiaries, except, in the case of clauses (ii) and (iii), for such breaches, Defaults, results or violations as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and the Warrants and consummation of the transactions contemplated hereby, thereby and by each Applicable Prospectus, except such as have been obtained or made or will be made by the Company under the Securities Act or that may be required under applicable state securities or blue sky laws and from the Financial Industry Regulatory Authority, Inc. ("**FINRA**"). As used herein, a "**Debt Repayment Triggering Event**" means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(o) *No Material Actions or Proceedings.* Except as otherwise disclosed in the Time of Sale Disclosure Package, there are no legal or governmental actions, suits or proceedings pending or, to the Company's knowledge, threatened (i) against or affecting the Company or any of its subsidiaries, (ii) which have as the subject thereof any officer or director of, or property owned or leased by, the Company or any of its subsidiaries or (iii) relating to environmental or discrimination matters, where in any such case (A) there is (in the case of pending actions, suits or proceedings, to the Company's knowledge) a substantial likelihood that such action, suit or proceeding will be determined adversely to the Company, any of its subsidiaries or such officer or director, (B) any such action, suit or proceeding, if so determined adversely, would reasonably be expected to result in a Material Adverse Change or adversely affect the consummation of the transactions contemplated by this Agreement or (C) any such action, suit or proceeding is or would be material in the context of the sale of shares of Common Stock. No material labor dispute with the employees of the Company or any of its subsidiaries, or, to the Company's knowledge, with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or (in the case of labor disputes with the employees of the Company or any of its subsidiaries, to the Company's knowledge) is threatened or imminent.

(p) *Intellectual Property Rights.* Except as otherwise disclosed in the each Applicable Prospectus, the Company and each of its subsidiaries own or possess (or can acquire on reasonable terms) sufficient trademarks, trade names, patent rights, copyrights, domain names, licenses, approvals, trade secrets and other similar rights (collectively, "**Intellectual Property Rights**") reasonably necessary to conduct their businesses as now conducted, except to the extent the failure to own, possess or acquire on reasonable terms would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change, and except as disclosed in each Applicable Prospectus, (i) there are no third parties who have or, to the Company's knowledge, will be able to establish rights to any Intellectual Property Rights; (ii) to the Company's knowledge, there is no infringement by third parties of any Intellectual Property Rights; (iii) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any Intellectual Property Rights, and the Company is unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim; (iv) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity, enforceability or scope of any Intellectual Property Rights, and the Company is unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim; and (v) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company or any of its subsidiaries infringes or otherwise violates, or would, upon the commercialization of products or services described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus as under development and as currently configured, infringe or violate, any currently issued patent, trademark, tradename, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim. None of the technology employed by the Company or any of its subsidiaries has been obtained or is being used by the Company or any of its subsidiaries in violation of any contractual obligation binding on the Company or any of its subsidiaries or, to the Company's knowledge, any of its or its subsidiaries' officers, directors or employees or otherwise in violation of the rights of any persons, except in each case for such violations as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change.

(q) *Clinical Trials*. The clinical and pre-clinical trials conducted by or on behalf of or sponsored by the Company or its subsidiaries, or in which the Company or its subsidiaries have participated, that are described in the Time of Sale Disclosure Package or the results of which are referred to in the Time of Sale Disclosure Package, as applicable, and are intended to be submitted to Regulatory Authorities as a basis for product approval, were and, if still pending, are being conducted by the Company or, to the knowledge of the Company on behalf of the Company, in all material respects in accordance with the medical and scientific research procedures described in the applicable trial protocols and all applicable statutes, rules and regulations of the United States Food and Drug Administration 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. The descriptions in the Time of Sale Disclosure Package of the results of such studies and tests are accurate and complete in all material respects and fairly present the data derived from such trials. The Company has no knowledge of any other clinical trials the results of which reasonably call into question the results described or referred to in the Time of Sale Disclosure Package. The Company and its subsidiaries have operated and are currently in compliance with all applicable statutes, rules and regulations of the Regulatory Authorities, except as would not reasonably be expected to have a Material Adverse Effect. In the last two years, neither the Company nor any of its subsidiaries has received any written notices, correspondence or other written communication from the Regulatory Authorities or any other governmental agency requiring or threatening the premature termination or suspension of any clinical or pre-clinical trials that are described in the Time of Sale Disclosure Package or the results of which are referred to in the Time of Sale Disclosure Package, and, to the Company’s knowledge, there are no reasonable grounds for same.

(r) *All Necessary Permits, Etc.* The Company and each of its subsidiaries possess such valid and current certificates, authorizations or permits issued by the appropriate state, federal or foreign regulatory agencies or bodies necessary to conduct their respective businesses as currently conducted by them and described in the Time of Sale Disclosure Package; and neither the Company nor any of its subsidiaries has received, or has any reason to believe that it will receive, any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Change.

(s) *Title to Properties*. Except as otherwise disclosed in the Time of Sale Disclosure Package, the Company and each of its subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 2(h) above (or elsewhere in any Applicable Prospectus), in each case that are material to the business of the Company and its subsidiaries taken as a whole and in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects, except such as do not materially and adversely affect the value of such property and assets and do not materially interfere with the use made or proposed to be made of such property and assets by the Company or any of its subsidiaries. To the Company’s knowledge, the real property, improvements, equipment and personal property held under lease by the Company or any of its subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company or any of its subsidiaries.

(t) *Tax Law Compliance*. The Company and its consolidated subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns (or have properly requested extensions thereof) and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 2(h) above in respect of all federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company or its consolidated subsidiaries has not been finally determined.

(u) *Company Not an “Investment Company”*. The Company is not, and will not, either after receipt of payment for the Stock and Warrants or after the application of the proceeds therefrom as described under “Use of Proceeds” in each Applicable Prospectus, be, required to register as an “investment company” or an entity “controlled” by an “investment company” under the Investment Company Act of 1940, as amended (the “**Investment Company Act**”), and will, during the Prospectus Delivery Period, conduct its business in a manner so that it will not become subject to the Investment Company Act.

(v) *Insurance*. Except as otherwise disclosed in the Time of Sale Disclosure Package, each of the Company and each of its subsidiaries is insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are reasonably adequate and customary for their businesses as currently conducted and described in the Time of Sale Disclosure Package, including, but not limited to, policies covering real and personal property owned or leased by the Company and its subsidiaries against theft, damage, destruction and acts of vandalism and policies covering the Company and its subsidiaries for product liability claims and clinical trial liability claims. The Company has no reason to believe that it or its subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Change. During the past three years, neither of the Company nor any of its subsidiaries has been denied any insurance coverage material to the Company or such subsidiary, respectively, which it has sought or for which it has applied.

(w) *No Price Stabilization or Manipulation; Compliance with Regulation M*. The Company has not taken, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Common Stock or any other “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) whether to facilitate the sale or resale of the Stock and Warrants or otherwise, and has taken no action which would directly or indirectly violate Regulation M. The Company acknowledges that the Underwriters may engage in passive market making transactions in the Common Stock on the Nasdaq Capital Market in accordance with Regulation M.

(x) *Related Party Transactions*. There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in any Applicable Prospectus which have not been described as required.

(y) *S-3 Eligibility*. At the time the Registration Statement was originally declared effective, the Company met the then applicable requirements for use of Form S-3 under the Securities Act (without reliance on General Instruction I.B.6 of Form S-3).

(z) *Exchange Act Compliance*. The documents incorporated or deemed to be incorporated by reference in the Prospectus, at the time they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at the time the Registration Statement and any amendments thereto became effective and at the Closing Date, will 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.

(aa) *FINRA Matters*. All of the information provided to the Underwriters or to counsel for the Underwriters by the Company, its officers and directors and, to the Company's knowledge, the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rule 5110 or Conduct Rule 2720 of the National Association of Securities Dealers, Inc. (the "NASD"), is true, complete and correct. In accordance with FINRA Conduct Rule 5110(b)(7)(C)(i), the Stock and Warrants have been registered with the Commission on Form S-3 under the Securities Act pursuant to the standards for such Form S-3 in effect prior to October 21, 1992.

(bb) *Parties to Lock-Up Agreements*. Each of the Company's directors and executive officers has executed and delivered to the Representatives a lock-up agreement in the form of Exhibit II hereto. Schedule D hereto contains a true, complete and correct list of all directors and executive officers of the Company. If any additional persons shall become directors or executive officers of the Company prior to the end of the Company Lock-up Period (as defined below), the Company shall cause each such person, prior to or contemporaneously with their appointment or election as a director or executive officer of the Company, to execute and deliver to the Representatives an agreement in the form attached hereto as Exhibit II.

(cc) *Statistical and Market-Related Data*. The statistical, demographic and market-related data included in the Registration Statement and each Applicable Prospectus are based on or derived from sources that the Company believes to be reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources.

(dd) *No Unlawful Contributions or Other Payments*. Neither the Company nor any of its subsidiaries nor, to the Company's knowledge, any employee or agent of the Company or any of its subsidiaries, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement and each Applicable Prospectus.

(ee) *Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting*. The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) the Company's principal executive officer and principal financial officer have concluded to be effective at the reasonable assurance level. Based on the most recent evaluation of its disclosure controls and procedures (in accordance with Rule 13a-15(b)), the Company is not aware of (x) any material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information or (y) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

(ff) *Compliance with Environmental Laws.* Except as described in each Applicable Prospectus and except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change, (i) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, “**Hazardous Materials**”) or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, “**Environmental Laws**”), (ii) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (iii) there are no pending or threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (iv) there are, to the Company’s knowledge, no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(gg) *ERISA Compliance.* The Company and its subsidiaries and any “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “**ERISA**”)) established or maintained by the Company, and of its subsidiaries or their ERISA Affiliates (as defined below) are in compliance in all material respects with ERISA. “**ERISA Affiliate**” means, with respect to the Company or any of its subsidiaries, any member of any group of organizations described in Sections 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “**Code**”) of which the Company or any of its subsidiaries is a member. No “reportable event” (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company, any of its subsidiaries or any of their ERISA Affiliates. No “employee benefit plan” established or maintained by the Company, any of its subsidiaries or any of their ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA). Neither the Company nor any of its subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each “employee benefit plan” established or maintained by the Company, any of its subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would reasonably be expected to result in the loss of such qualification.

(hh) *Brokers.* Except as contemplated by this Agreement, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder’s fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(ii) *No Outstanding Loans or Other Extensions of Credit.* Since the adoption of Section 13(k) of the Exchange Act, neither the Company nor any of its subsidiaries has extended or maintained credit, arranged for the extension of credit, or renewed any extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company or any of its subsidiaries except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

(jj) *Dividend Restrictions*. None of the subsidiaries of the Company is currently prohibited or restricted, directly or indirectly, from paying dividends to the Company, or from making any other distribution with respect to such subsidiary's equity securities or from repaying to the Company or any other subsidiary any amounts that may from time to time become due under any loans or advances to such subsidiary from the Company or from transferring any property or assets to the Company or any other subsidiary.

(kk) *Foreign Corrupt Practices Act*. Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, employee, agent, affiliate or other person acting on behalf of the Company or any subsidiary, has (i) used any corporate funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity, (ii) made any direct or indirect unlawful payment to foreign or domestic government officials or employees, political parties or campaigns, political party officials, or candidates for political office from corporate funds, (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, or any applicable anti-corruption laws, rules, or regulation of any other jurisdiction in which the Company or any subsidiary conducts business, or (iv) made any other unlawful bribe, rebate, payoff, influence payment, kickback, or other unlawful payment to any person.

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

(mm) *OFAC*. (A) Neither the Company nor any of its subsidiaries, nor any director, officer or employee thereof, nor, to the knowledge of the Company, any agent, affiliate, representative or other person acting on behalf of the Company or any of its subsidiaries, is an individual or entity ("**Person**") that is, or is owned or controlled by a Person that is: (i) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control ("**OFAC**"), the United Nations Security Council ("**UNSC**"), the European Union ("**EU**"), Her Majesty's Treasury ("**HMT**"), or other relevant sanctions authority (collectively, "**Sanctions**"), nor (ii) located, organized or resident in a country or territory that is the subject of a U.S. government embargo (including, without limitation, Cuba, Iran, North Korea, Sudan, Syria and the Crimea).

(B) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person: (i) to fund or facilitate any activities or business of or with any Person that, at the time of such funding or facilitation, is the subject of Sanctions, or in any country or territory that, at the time of such funding or facilitation, is the subject of a U.S. government embargo; or (ii) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(C) For the past five (5) years, the Company and its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any direct or indirect dealings or transactions with any Person that at the time of the dealing or transaction is or was the subject of Sanctions or any country or territory that, at the time of the dealing or transaction is or was the subject of a U.S. government embargo.

(nn) *Privacy Laws*. The Company and its subsidiaries are, and at all prior times were, in material compliance with all applicable data privacy and security laws and regulations, including, without limitation, the Health Insurance Portability and Accountability Act (“**HIPAA**”), as amended by the Health Information Technology for Economic and Clinical Health Act (the “**HITECH Act**”) (42 U.S.C. Section 17921 et seq.); and the Company and its subsidiaries have taken all necessary actions to comply with the European Union General Data Protection Regulation (“**GDPR**”) (EU 2016/679) (collectively, “**Privacy Laws**”). To ensure compliance with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling and analysis of Personal Data (the “**Policies**”). The Company provides accurate notice of its Policies to its customers, employees, third party vendors and representatives. The Policies provide accurate and sufficient notice of the Company’s then-current privacy practices relating to its subject matter and such Policies do not contain any material omissions of the Company’s then-current privacy practices. “**Personal Data**” means (i) a natural persons’ name, street address, telephone number, email address, photograph, social security number, bank information, or customer or account number; (ii) any information which would qualify as “personally identifying information” under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; (iv) “personal data” as defined by GDPR; and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person’s health or sexual orientation. None of such disclosures made or contained in any of the Policies have been inaccurate, misleading, deceptive or in violation of any Privacy Laws or Policies in any material respect. The execution, delivery and performance of this Agreement will not result in a breach of any Privacy Laws or Policies. Neither the Company nor any of its subsidiaries, (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposed any obligation or liability under any Privacy Law.

(oo) *IT Systems*. (i)(x) To the Company’s knowledge, there has been no security breach or other material compromise of or relating to any of the Company’s and its subsidiaries’ information technology and computer systems, networks, hardware, software, sensitive data (including any of the confidential and proprietary data of their respective customers, employees, suppliers, vendors and any other third party data maintained by or on behalf of the Company and its subsidiaries), equipment or technology (collectively, “**IT Systems and Data**”), and (y) the Company and its subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in any security breach or other material compromise of their IT Systems and Data, (ii) the Company and its subsidiaries have complied, and are presently in material compliance with, all applicable laws, statutes or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority and all internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the implementation of commercially reasonable measures designed to protect such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, have a Material Adverse Change; and (iii) the Company and its subsidiaries have implemented backup and disaster recovery technology consistent with commonly accepted industry standards and practices.

3. *PURCHASE, SALE AND DELIVERY OF OFFERED SECURITIES*. 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 sell to the Underwriters, and the Underwriters agree, severally and not jointly, to purchase from the Company the respective numbers of shares of Stock and Warrants set forth opposite the names of the Underwriters in Schedule A hereto.

The purchase price per share to be paid by the Underwriters to the Company for (a) each Common Share and the accompanying Warrant to purchase 0.25 shares of Common Stock will be \$2.82 and (b) each share of Preferred Stock and the accompanying Warrant to purchase 250 shares of Common Stock will be \$2,820.00 (each such price in (a) and (b), a “**Purchase Price**”).

The Company will deliver the Stock and Warrants to the Representatives for the respective accounts of the several Underwriters, through the facilities of The Depository Trust Company, issued in such names and in such denominations as the Representatives may direct by notice in writing to the Company given at or prior to 12:00 Noon, New York time, on the second (2nd) full business day preceding the Closing Date against payment of the aggregate Purchase Prices therefor by wire transfer in federal (same day) funds to an account at a bank specified by the Company payable to the order of the Company for the Stock and Warrants sold by them all at the offices of Goodwin Procter LLP, 620 Eighth Avenue, New York, NY 10018. Time shall be of the essence, and delivery at the time and place specified pursuant to this Agreement is a further condition of the obligations of each Underwriter hereunder. The time and date of the delivery and closing shall be at 9:00 A.M., New York time, on August 12, 2019, in accordance with Rule 15c6-1 of the Exchange Act. The time and date of such payment and delivery are herein referred to as the “**Closing Date**”. The Closing Date and the location of delivery of, and the form of payment for, the Stock and Warrants may be varied by agreement between the Company and the Representatives.

The several Underwriters propose to offer the Stock and Warrants for sale upon the terms and conditions set forth in the Prospectus.

4. FURTHER AGREEMENTS OF THE COMPANY. The Company agrees with the several Underwriters:

(a) To prepare the Rule 462(b) Registration Statement, if necessary, in a form approved by the Representatives and file such Rule 462(b) Registration Statement with the Commission by 10:00 P.M., New York time, on the date hereof, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Rules and Regulations; to prepare the Prospectus in a form approved by the Representatives containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rules 430B or 430C under the Securities Act and to file such Prospectus pursuant to Rule 424(b) under the Securities Act not later than the second business (2nd) day following the execution and delivery of this Agreement or, if applicable, such earlier time as may be required under the Securities Act; to notify the Representatives immediately of the Company's intention to file or prepare any supplement or amendment to any Registration Statement or to the Prospectus and to make no amendment or supplement to the Registration Statement, the Time of Sale Disclosure Package or to the Prospectus to which the Representatives shall reasonably object by notice to the Company after a reasonable period to review; to advise the Representatives, promptly after it receives notice thereof, of the time when any amendment to any Registration Statement has been filed or becomes effective or any supplement to the Time of Sale Disclosure Package or the Prospectus or any amended Prospectus has been filed and to furnish the Underwriters with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rules 433(d) or 163(b)(2) under the Securities Act, as the case may be; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Securities Act) is required in connection with the offering or sale of the Stock and Warrants; to advise the Representatives, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any free writing prospectus, the Time of Sale Disclosure Package or the Prospectus, of the suspension of the qualification of the Stock and Warrants for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement, the Time of Sale Disclosure Package or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any free writing prospectus, the Time of Sale Disclosure Package or the Prospectus or suspending any such qualification, and promptly to use its best efforts to obtain the withdrawal of such order.

(b) The Company represents and agrees that, unless it obtains the prior consent of the Representatives, and each Underwriter represents and agrees that, unless it obtains the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Stock and Warrants that would constitute a "free writing prospectus" as defined in Rule 405 under the Securities Act unless the prior written consent of the Representatives has been received; *provided* that the prior written consent of the Representatives hereto shall be deemed to have been given in respect of the free writing prospectuses included in Schedule B hereto. The Company represents that it has treated and agrees that it will comply with the requirements of Rules 164 and 433 under the Securities Act applicable to any free writing prospectus, including the requirements relating to timely filing with the Commission, legending and record keeping and will not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder.

(c) The Company will prepare a final term sheet (the “**Final Term Sheet**”) reflecting the final terms of the Stock and Warrants, in form and substance satisfactory to the Representatives, and shall file such Final Term Sheet as a free writing prospectus pursuant to Rule 433 under the Securities Act on the date hereof; *provided* that the Company shall provide the Representatives with copies on any such Final Term Sheet a reasonable amount of time prior to such proposed filing and will not use or file any such document to which the Representatives or counsel to the Underwriters shall reasonably object.

(d) If at any time prior to the date when a prospectus relating to the Stock and Warrants is required to be delivered (or in lieu thereof, the notice referred to in Rule 173(a) under the Securities Act) any event occurs or condition exists as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact, or omit to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made when the Prospectus is delivered (or in lieu thereof, the notice referred to in Rule 173(a) under the Securities Act), not misleading, or if it is necessary at any time to amend or supplement the Registration Statement or the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus to comply with the Securities Act or the Exchange Act, that the Company will promptly notify the Representatives thereof and upon their request will prepare an appropriate amendment or supplement or upon its request make an appropriate filing pursuant to Section 13 or 14 of the Exchange Act in form and substance reasonably satisfactory to the Representatives which will correct such statement or omission or effect such compliance and will use its reasonable best efforts to have any amendment to the Registration Statement declared effective as soon as possible. The Company will furnish without charge to each Underwriter and to any dealer in securities as many copies as the Representatives may from time to time reasonably request of such amendment or supplement. In case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Securities Act) relating to the Stock and Warrants, the Company upon the request of the Representatives and at the expense of such Underwriter will prepare promptly an amended or supplemented Prospectus as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Securities Act and deliver to such Underwriter as many copies as such Underwriter may reasonably request of such amended or supplemented Prospectus complying with Section 10(a)(3) of the Securities Act.

(e) If the Time of Sale Disclosure Package is being used to solicit offers to buy the Stock and Warrants at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur as a result of which, in the judgment of the Company or in the reasonable opinion of the Underwriters, it becomes necessary to amend or supplement the Time of Sale Disclosure Package in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, or to make the statements therein not conflict with the information contained or incorporated by reference in the Registration Statement then on file and not superseded or modified, or if it is necessary at any time to amend or supplement the Time of Sale Disclosure Package to comply with any law, the Company promptly will either (i) prepare, file with the Commission (if required) and furnish to the Underwriters and any dealers an appropriate amendment or supplement to the Time of Sale Disclosure Package or (ii) prepare and file with the Commission an appropriate filing under the Exchange Act which shall be incorporated by reference in the Time of Sale Disclosure Package so that the Time of Sale Disclosure Package as so amended or supplemented will not, in the light of the circumstances then prevailing, be misleading or conflict with the Registration Statement then on file, or so that the Time of Sale Disclosure Package will comply with law.

(f) If at any time following issuance of a free writing prospectus there occurred or occurs an event or development as a result of which such free writing prospectus conflicted or will conflict with the information contained in the Registration Statement, Time of Sale Disclosure Package or Prospectus, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof and not superseded or modified or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances prevailing at the subsequent time, not misleading, the Company has promptly notified or will promptly notify the Representatives so that any use of the free writing prospectus may cease until it is amended or supplemented and has promptly amended or will promptly amend or supplement, at its own expense, such free writing prospectus to eliminate or correct such conflict, untrue statement or omission. The foregoing sentence does not apply to statements in or omissions from any free writing prospectus in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriters' Information (as defined in [Section 17](#)).

(g) Upon the request of the Representatives, to furnish promptly to the Representatives and to counsel for the Underwriters a signed copy of the Registration Statement as originally filed with the Commission, and of each amendment thereto filed with the Commission, including all consents and exhibits filed therewith.

(h) Upon the request of the Representatives, to the extent not available on EDGAR, to deliver promptly to the Representatives in New York City such number of the following documents as the Representatives shall reasonably request: (i) conformed copies of the Registration Statement as originally filed with the Commission (in each case excluding exhibits), (ii) each Preliminary Prospectus, (iii) any free writing prospectus, (iv) the Prospectus (the delivery of the documents referred to in clauses (i), (ii), (iii) and (iv) of this paragraph (h) to be made not later than 10:00 A.M., New York time, on the business day following the execution and delivery of this Agreement), (v) conformed copies of any amendment to the Registration Statement (excluding exhibits), (vi) any amendment or supplement to the Time of Sale Disclosure Package or the Prospectus (the delivery of the documents referred to in clauses (v) and (vi) of this paragraph (h) to be made not later than 10:00 A.M., New York City time, on the business day following the date of such amendment or supplement) and (vii) any document incorporated by reference in the Time of Sale Disclosure Package or the Prospectus (excluding exhibits thereto) (the delivery of the documents referred to in clause (vii) of this paragraph (h) to be made not later than 10:00 A.M., New York City time, on the business day following the date of such document).

(i) To make generally available to its stockholders as soon as practicable, but in any event not later than sixteen (16) months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Securities Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Securities Act (including, at the option of the Company, Rule 158).

(j) To take promptly from time to time such actions as the Representatives may reasonably request to qualify the Stock and Warrants for offering and sale under the securities or Blue Sky laws of such jurisdictions (domestic or foreign) as the Representatives may designate and to continue such qualifications in effect, and to comply with such laws, for so long as required to permit the offer and sale of Stock and Warrants in such jurisdictions; *provided* that the Company and its subsidiaries shall not be obligated to qualify as foreign corporations in any jurisdiction in which they are not so qualified or to file a general consent to service of process in any jurisdiction.

(k) Upon request, during the period of five (5) years from the date hereof, to the extent not available on EDGAR, to deliver to each of the Underwriters, (i) as soon as they are available, copies of all reports or other communications furnished to stockholders generally, and (ii) as soon as they are available, copies of any reports and financial statements furnished or filed with the Commission or any national securities exchange on which the Common Stock is listed. However, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act and is timely filing reports with the Commission on EDGAR, it is not required to furnish such reports or statements to the Underwriters.

(l) During the period commencing on and including the date hereof and ending on and including the 90th day following the date of this Agreement (as the same may be extended as described below, the “**Lock-Up Period**”), the Company will not, without the prior written consent of the Representatives (which consent may be withheld at the sole discretion of the Representatives), directly or indirectly, sell (including, without limitation, any short sale), offer, contract or grant any option to sell, pledge, transfer or establish an open “put equivalent position” within the meaning of Rule 16a-1(h) under the Exchange Act, or otherwise dispose of or transfer, or announce the offering of, or file any registration statement under the Securities Act in respect of, any Common Stock, options, rights or warrants to acquire Common Stock or securities exchangeable or exercisable for or convertible into Common Stock (other than as contemplated by this Agreement with respect to the Stock and Warrants) or publicly announce the intention to do any of the foregoing; provided, however, that the Company may (i) issue Common Stock and options to purchase Common Stock, shares of Common Stock underlying options granted and other securities, each pursuant to any director or employee stock option plan, stock ownership plan or dividend reinvestment plan of the Company in effect on the date hereof and described in the Time of Sale Disclosure Package; (ii) issue Common Stock pursuant to the conversion of securities or the exercise of warrants, which securities or warrants are outstanding on the date hereof and described in the Time of Sale Disclosure Package; (iii) adopt a new equity incentive plan, and file a registration statement on Form S-8 under the Securities Act to register the offer and sale of securities to be issued pursuant to such new equity incentive plan, and issue securities pursuant to such new equity incentive plan (including, without limitation, the issuance of shares of Common Stock upon the exercise of options or other securities issued pursuant to such new equity incentive plan), provided that (1) such new equity incentive plan satisfies the transaction requirements of General Instruction A.1 of Form S-8 under the Securities Act and (2) this clause (iii) shall not be available unless each recipient of shares of Common Stock, or securities exchangeable or exercisable for or convertible into Common Stock, pursuant to such new equity incentive plan shall be contractually prohibited from selling, offering, disposing of or otherwise transferring any such shares or securities during the remainder of the Lock-Up Period; or (iv) issue Common Stock to one or more counterparties in connection with the consummation, by the Company, of one or more strategic partnerships, joint ventures, collaborations or acquisitions or licenses of any business products or technology, provided that (1) the aggregate number of shares of Common Stock that may be issued pursuant to this clause (iv) shall not exceed five percent (5%) of the number of shares of Common Stock outstanding immediately after the closing of the sale of the Stock and Warrants to the Underwriters pursuant to this Agreement, and (2) this clause (iv) shall not be available unless each recipient of such Common Stock shall have, prior to, or concurrently with, the entry of a definitive agreement in connection with the applicable partnership, joint venture, collaboration, acquisition or license, agreed in writing not to sell, offer, dispose of or otherwise transfer any such Common Stock (or engage in any short sales of Common Stock prior to the issuance of such Common Stock) during the remainder, if any, of the Lock-Up Period without the prior written consent of the Representatives (which consent may be withheld at the sole discretion of Representatives). In addition, notwithstanding anything to the contrary contained in this Section 4(l), the Company shall be permitted to file any necessary amendments and effect a registration statement on Form S-3 in order to provide for continuous registration of the Warrant Shares.

(m) To supply the Representatives with copies of all correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Stock and Warrants under the Securities Act or any of the Registration Statement, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto or document incorporated by reference therein.

(n) Prior to the Closing Date, not to issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its condition, financial or otherwise, or earnings, business affairs or business prospects (except for routine oral marketing communications in the ordinary course of business and consistent with the past practices of the Company and of which the Representatives are notified), without the prior written consent of the Representatives, unless in the judgment of the Company and its counsel, and after notification to the Representatives, such press release or communication is required by law.

(o) Prior to the Closing Date, other than Stock and Warrants purchased in connection with the offering contemplated by this Agreement, the Company will not, and will use its reasonable best efforts to cause its affiliated purchasers (as defined in Regulation M under the Exchange Act) not to, either alone or with one or more other persons, bid for or purchase, for any account in which it or any of its affiliated purchasers has a beneficial interest, any Stock and Warrants, or attempt to induce any person to purchase any Stock and Warrants; and not to, and to use its reasonable best efforts to cause its affiliated purchasers not to, make bids or purchase for the purpose of creating actual, or apparent, active trading in or of raising the price of the Stock and Warrants.

(p) To maintain, at its expense, a registrar and transfer agent for the Stock.

(q) To apply the net proceeds from the sale of the Stock and Warrants as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus under the heading "Use of Proceeds," and except as disclosed in the Time of Sale Disclosure Package, the Company does not intend to use any of the proceeds from the sale of the Stock and Warrants hereunder to repay any outstanding debt owed to any affiliate of any Underwriter. The Company shall manage its affairs and investments in such a manner as not to be or become an "investment company" within the meaning of the Investment Company Act and the rules and regulations thereunder.

(r) To pay the required Commission filing fees relating to the Stock and Warrants within the time required by Rule 456(b)(1) of the Rules and Regulations without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) of the Rules and Regulations.

(s) To use its reasonable best efforts to list, subject to notice of issuance, and to maintain the listing of the Common Shares and Underlying Shares on the Nasdaq Capital Market or another national securities exchange.

(t) To reserve and keep available at all times a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Underlying Shares.

(u) To use its reasonable efforts to do and perform all things required to be done or performed under this Agreement by the Company prior to the Closing Date and to satisfy all conditions precedent to the delivery of the Stock and Warrants.

5. *PAYMENT OF EXPENSES.* The Company agrees to pay, or reimburse if paid by any Underwriter, whether or not the transactions contemplated hereby are consummated or this Agreement is terminated: (a) the costs incident to the authorization, issuance, sale, preparation and delivery of the Stock and Warrants and any taxes payable in that connection; (b) the costs incident to the registration of the Stock and Warrants under the Securities Act; (c) the costs incident to the preparation, printing and distribution of the Registration Statement, the Base Prospectus, any Preliminary Prospectus, any free writing prospectus, the Time of Sale Disclosure Package, the Prospectus, any amendments, supplements and exhibits thereto or any document incorporated by reference therein and the costs of printing, reproducing and distributing this Agreement and any closing documents by mail, telex or other means of communications; (d) the fees and expenses (including related fees and expenses of counsel for the Underwriters) incurred in connection with securing any required review by FINRA of the terms of the sale of the Stock and Warrants and any filings made with FINRA in connection with the transactions contemplated herein (not to exceed \$5,000 in the aggregate); (e) any applicable listing or other fees; (f) the fees and expenses (including related fees and expenses of counsel to the Underwriters) of qualifying the Stock and Warrants under the securities laws of the several jurisdictions as provided in Section 4(j)) and of preparing, printing and distributing wrappers, and Blue Sky Memoranda (not to exceed \$10,000 in the aggregate); (g) the cost of preparing and printing stock certificates; (h) all fees and expenses of the registrar and transfer agent of the Stock; (i) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Stock and Warrants, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the officers of the Company and such consultants, including the cost of any aircraft chartered in connection with the road show, and (j) all other costs and expenses incident to the offering of the Stock and Warrants or the performance of the obligations of the Company under this Agreement (including, without limitation, the fees and expenses of the Company's counsel and the Company's independent accountants; *provided that*, except to the extent otherwise provided in this Section 5 and in Sections 9 and 10 hereof, the Underwriters shall pay their own costs and expenses, including the fees and expenses of their counsel, any transfer taxes on the resale of any Stock and Warrants by them and the expenses of advertising any offering of the Stock and Warrants made by the Underwriters.

6. *CONDITIONS OF UNDERWRITERS' OBLIGATIONS.* The respective obligations of the several Underwriters hereunder are subject to the accuracy, when made and as of the Applicable Time and on the Closing Date, of the representations and warranties of the Company contained herein, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder, and to each of the following additional terms and conditions:

(a) The Registration Statement has become effective under the Securities Act, and no stop order suspending the effectiveness of the Registration Statement or any part thereof, preventing or suspending the use of any Base Prospectus, any Preliminary Prospectus, any free writing prospectus, the Time of Sale Disclosure Package, the Prospectus or any part thereof shall have been issued and no proceedings for that purpose or pursuant to Section 8A under the Securities Act shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) of the Rules and Regulations shall have been received, and all requests for additional information on the part of the Commission (to be included or incorporated by

reference in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Representatives; the Rule 462(b) Registration Statement, if any, any Preliminary Prospectus, each free writing prospectus and the Prospectus shall have been filed with, the Commission within the applicable time period prescribed for such filing by, and in compliance with, the Securities Act and in accordance with Section 4(a), and the Rule 462(b) Registration Statement, if any, shall have become effective immediately upon its filing with the Commission; and FINRA shall have raised no objection to the fairness and reasonableness of the terms of this Agreement or the transactions contemplated hereby.

(b) None of the Underwriters shall have discovered and disclosed to the Company on or prior to the Closing Date that the Registration Statement or any amendment or supplement thereto contains an untrue statement of a fact which, in the opinion of counsel for the Underwriters, is material or omits to state any fact which, in the opinion of such counsel, is material and is required to be stated therein or is necessary to make the statements therein not misleading, or that the Time of Sale Disclosure Package, any free writing prospectus or the Prospectus or any amendment or supplement thereto contains an untrue statement of fact which, in the opinion of such counsel, is material or omits to state any fact which, in the opinion of such counsel, is material and is necessary in order to make the statements, in the light of the circumstances in which they were made, not misleading.

(c) All corporate proceedings and other legal matters incident to the authorization, form and validity of each of this Agreement, the Certificate of Designations (as defined below), the Stock, the Warrants, the Underlying Shares, the Registration Statement, the Time of Sale Disclosure Package, each free writing prospectus and the Prospectus and all other legal matters relating to this Agreement and the transactions contemplated hereby shall be reasonably satisfactory in all material respects to counsel for the Underwriters, and the Company shall have furnished to such counsel all documents and information that they may reasonably request to enable them to pass upon such matters.

(d) On the Closing Date, the Representatives shall have received the opinion letter and negative assurance letter of Cooley LLP, counsel for the Company, dated as of such date, in form and substance reasonably satisfactory to the Representatives.

(e) On the Closing Date, the Representatives shall have received the opinion of the Senior Vice President, Chief Financial Officer and Chief Business Officer of the Company, dated as of such date, in form and substance reasonably satisfactory to the Representatives.

(f) On the Closing Date the Representatives shall have received the opinion and negative assurance letter of Goodwin Procter LLP, counsel for the Underwriters in connection with the offer and sale of the Stock and Warrants, in form and substance satisfactory to the Underwriters, dated as of such date.

(g) At the time of the execution of this Agreement, the Representatives shall have received from Ernst & Young LLP a letter, addressed to the Underwriters, executed and dated such date, in form and substance satisfactory to the Representatives (i) confirming that they are an independent registered accounting firm with respect to the Company and its subsidiaries within the meaning of the Securities Act and the rules and regulations of the PCAOB and (ii) stating the conclusions and findings of such firm, of the type ordinarily included in accountants' "comfort letters" to underwriters, with respect to the financial statements and certain financial information contained or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus.

(h) On the effective date of any post-effective amendment to the Registration Statement and on the Closing Date, the Representatives shall have received a letter (the “**bring-down letter**”) from Ernst & Young LLP addressed to the Underwriters and dated such date confirming, as of the date of the bring-down letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Time of Sale Disclosure Package and the Prospectus, as the case may be, as of a date not more than three (3) business days prior to the date of the bring-down letter), the conclusions and findings of such firm, of the type ordinarily included in accountants’ “comfort letters” to underwriters, with respect to the financial information and other matters covered by its letter delivered to the Representatives concurrently with the execution of this Agreement pursuant to paragraph (f) of this Section 6.

(i) The Company shall have furnished to the Representatives a certificate, dated the Closing Date, of its Chief Executive Officer stating on behalf of the Company, that (i) no stop order suspending the effectiveness of the Registration Statement (including, for avoidance of doubt, any Rule 462(b) Registration Statement), or any post-effective amendment thereto, shall be in effect and no proceedings for such purpose shall have been instituted or, to their knowledge, threatened by the Commission, (ii) for the period from and including the date of this Agreement through and including such date, there has not occurred any Material Adverse Change, (iii) the representations, warranties and covenants of the Company set forth in Section 2 of this Agreement are true and correct with the same force and effect as though expressly made on and as of such date, and (iv) the Company has complied with all the agreements hereunder and satisfied all the conditions on its part to be performed or satisfied hereunder at or prior to such date.

(j) Since the date of the latest audited financial statements included in the Time of Sale Disclosure Package or incorporated by reference in the Time of Sale Disclosure Package as of the date hereof, (i) neither the Company nor any of its subsidiaries shall have 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, otherwise than as set forth in the Time of Sale Disclosure Package, and (ii) there shall not have been any change in the capital stock or long-term debt of the Company or any of its subsidiaries, or any change, or any development involving a prospective change, in or affecting the business, general affairs, management, financial position, stockholders’ equity or results of operations of the Company and its subsidiaries, otherwise than as set forth in the Time of Sale Disclosure Package, the effect of which, in any such case described in clause (i) or (ii) of this paragraph (j), is, in the judgment of the Representatives, so material and adverse as to make it impracticable or inadvisable to proceed with the sale or delivery of the Stock and Warrants on the terms and in the manner contemplated in the Time of Sale Disclosure Package.

(k) No action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would prevent the issuance or sale of the Stock and Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Stock and Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company.

(l) Subsequent to the execution and delivery of this Agreement (i) no downgrading shall have occurred in the Company’s corporate credit rating or the rating accorded the Company’s debt securities by any “nationally recognized statistical rating 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 (other than an announcement with positive implications of a possible upgrading), the Company’s corporate credit rating or the rating of any of the Company’s debt securities.

(m) Subsequent to the execution and delivery of this Agreement there shall not have occurred any of the following: (i) trading in any of the Company's securities shall have been suspended or materially limited by the Commission or by the Nasdaq Capital Market, or trading in securities generally on the New York Stock Exchange, Nasdaq Global Select Market, Nasdaq Global Market, Nasdaq Capital Market or the NYSE American LLC or in the over-the-counter market, or trading in any securities of the Company on any exchange or in the over-the-counter market, shall have been suspended or materially limited, or minimum or maximum prices or maximum range for prices shall have been established on any such exchange or such market by the Commission, by such exchange or market or by any other regulatory body or governmental authority having jurisdiction, (ii) a banking moratorium shall have been declared by Federal or state authorities or a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, (iii) the United States shall have become engaged in hostilities, or the subject of an act of terrorism, or there shall have been an outbreak of or escalation in hostilities involving the United States, or there shall have been a declaration of a national emergency or war by the United States or (iv) there shall have occurred such a material adverse change in general economic, political or financial conditions (or the effect of international conditions on the financial markets in the United States shall be such) as to make it, in the judgment of the Representatives, impracticable or inadvisable to proceed with the sale or delivery of the Stock and Warrants on the terms and in the manner contemplated in the Time of Sale Disclosure Package and the Prospectus.

(n) The Company shall have filed a Notification: Listing of Additional Shares in respect of both the Common Shares and the Underlying Shares with the Nasdaq Capital Market and shall have received no objection thereto from the Nasdaq Capital Market.

(o) The Representatives shall have received on and as of the Closing Date satisfactory evidence of the good standing of the Company in its jurisdiction of incorporation and its good standing as foreign entities in such other jurisdictions as the Representatives may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate authorities of such jurisdictions.

(p) The Representatives shall have received the written agreements, substantially in the form of Exhibit II hereto, of the executive officers and directors of the Company listed in Schedule D to this Agreement.

(q) The Company shall have furnished to the Representatives a certificate, dated the Closing Date, of its Secretary.

(r) The Company shall have furnished to the Representatives a certificate, dated the Closing Date, of its Chief Financial Officer, substantially in the form of Exhibit III hereto.

(s) On or prior to the Closing Date, the Company shall have furnished to the Representatives such further certificates and documents as the Representatives may reasonably request and are customary for the type of offering contemplated by this Agreement.

(t) Prior to the Closing Date, the Company shall have filed with the Secretary of State of the State of Delaware the Certificate of Designation of Preferences, Rights and Limitations of the Preferred Stock (the "**Certificate of Designations**"), substantially in the form of Exhibit IV hereto.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. INDEMNIFICATION AND CONTRIBUTION.

(a) The Company shall indemnify and hold harmless each Underwriter, its affiliates, directors, officers, managers, members, employees, representatives and agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the “**Underwriter Indemnified Parties**,” and each an “**Underwriter Indemnified Party**”) against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), joint or several, to which such Underwriter Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (A) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, or (B) the omission or alleged omission to state in any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, and shall reimburse each Underwriter Indemnified Party promptly upon demand for any legal fees or other expenses reasonably incurred by that Underwriter Indemnified Party in connection with investigating, or preparing to defend, or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding, as such fees and expenses are incurred; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, expense or liability arises out of or is based upon an untrue statement or alleged untrue statement in, or omission or alleged omission from any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein made in reliance upon and in conformity with written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriter’s Information (as defined in Section 17).

The indemnity agreement in this Section 7(a) is not exclusive and is in addition to each other liability which the Company might have under this Agreement or otherwise, and shall not limit any rights or remedies which may otherwise be available under this Agreement, at law or in equity to any Underwriter Indemnified Party.

(b) Each Underwriter, severally and not jointly, shall indemnify and hold harmless the Company and its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the “**Company Indemnified Parties**” and each a “**Company Indemnified Party**”) against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), joint or several, to which such Company Indemnified Party may become subject, under the Securities Act or

otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, or (ii) the omission or alleged omission to state in any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, but in each case only to the extent that the 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 through the Representatives by or on behalf of that Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriter's Information as defined in Section 17, and shall reimburse the Company Indemnified Parties for any legal or other expenses reasonably incurred by such party in connection with investigating or preparing to defend or defending against or appearing as third party witness in connection with any such loss, claim, damage, liability, action, investigation or proceeding, as such fees and expenses are incurred. This indemnity agreement is not exclusive and will be in addition to any liability which the Underwriters might otherwise have and shall not limit any rights or remedies which may otherwise be available under this Agreement, at law or in equity to the Company Indemnified Parties.

(c) Promptly after receipt by an indemnified party under this Section 7 of notice of the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against an indemnifying party under this Section 7, notify such indemnifying party in writing of the commencement of that action; *provided, however*, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 7 except to the extent it has been materially prejudiced by such failure; and, *provided, further*, that the failure to notify an indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 7. If any such action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense of such action with counsel reasonably satisfactory to the indemnified party (which counsel shall not, except with the written consent of the indemnified party, be counsel to the indemnifying party). After notice from the indemnifying party to the indemnified party of its election to assume the defense of such action, except as provided herein, the indemnifying party shall not be liable to the indemnified party under Section 7 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense of such action other than reasonable costs of investigation; *provided, however*, that any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense of such action but the fees and expenses of such counsel (other than reasonable costs of investigation) shall be at the expense of such indemnified party unless (i) the employment thereof has been specifically authorized in writing by the Company in the case of a claim for indemnification under Section 7(a) or the Representatives in the case of a claim for indemnification under Section 7(b), (ii) such indemnified party shall have been advised by its counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party, or (iii) the indemnifying party has failed to assume the defense of such action and employ counsel reasonably satisfactory to the indemnified party within a reasonable period of time after notice of the commencement of the action or the indemnifying party does not diligently defend the action after assumption of the defense, in which case, if such indemnified party notifies the indemnifying party in writing that it

elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of (or, in the case of a failure to diligently defend the action after assumption of the defense, to continue to defend) such action on behalf of such indemnified party and the indemnifying party shall be responsible for legal or other expenses subsequently incurred by such indemnified party in connection with the defense of such action; *provided, however*, that the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys at any time for all such indemnified parties (in addition to any local counsel), which firm shall be designated in writing by the Representatives if the indemnified parties under this Section 7 consist of any Underwriter Indemnified Party or by the Company if the indemnified parties under this Section 7 consist of any Company Indemnified Parties. Subject to this Section 7(c), the amount payable by an indemnifying party under Section 7 shall include, but not be limited to, (x) reasonable legal fees and expenses of counsel to the indemnified party and any other expenses in investigating, or preparing to defend or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any action, investigation, proceeding or claim, and (y) all amounts paid in settlement of any of the foregoing. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of judgment with respect to any pending or threatened action or any claim whatsoever, in respect of which indemnification or contribution could be sought under this Section 7 (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party in form and substance reasonably satisfactory to such indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party. Subject to the provisions of the following sentence, no indemnifying party shall be liable for settlement of any pending or threatened action or any claim whatsoever that is effected without its written consent (which consent shall not be unreasonably withheld or delayed), but if settled with its written consent, if its consent has been unreasonably withheld or delayed or if there be a judgment for the plaintiff in any such matter, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, if at any time an indemnified party shall have requested that an indemnifying party reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 7(a) effected without its written consent if (i) such settlement is entered into more than forty-five (45) days after receipt by such indemnifying party of the request for reimbursement, (ii) such indemnifying party shall have received notice of the terms of such settlement at least thirty (30) days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under Section 7(a) or 7(b), then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid, payable or otherwise incurred by such indemnified party as a result of such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof), as incurred, (i) in such proportion as shall be 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 Stock and Warrants, or (ii) if the allocation provided by clause (i) of this Section 7(d) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) of this Section 7(d) but also the relative fault of the Company on the one hand and the Underwriters on the other

with respect to the statements, omissions, acts or failures to act which resulted in such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof) 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 with respect to such offering shall be deemed to be in the same proportion as the total net proceeds from the offering of the Stock and Warrants purchased under this Agreement (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters with respect to the Stock and Warrants purchased under this Agreement, in each case as set forth in the table on the cover page of the Prospectus. The relative fault of the Company on the one hand and the Underwriters on the other 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 on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement, omission, act or failure to act; *provided* that the parties hereto agree that the written information furnished to the Company through the Representatives by or on behalf of the Underwriters for use in any Preliminary Prospectus, any free writing prospectus, the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, consists solely of the Underwriter's Information as defined in Section 17.

(e) The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to Section 7(d) above were to be determined by pro rata allocation or by any other method of allocation which does not take into account the equitable considerations referred to Section 7(d) above. The amount paid or payable by an indemnified party as a result of the loss, claim, damage, expense, liability, action, investigation or proceeding referred to in Section 7(d) above shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating, preparing to defend or defending against or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding. Notwithstanding the provisions of this Section 7, no Underwriters shall be required to contribute any amount in excess of the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Stock and Warrants exceeds the amount of any damages which the Underwriter has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement, omission or alleged omission, act or alleged act or failure to act or alleged failure to act. 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 to contribute as provided in this Section 7 are several in proportion to their respective underwriting obligations and not joint.

8. **TERMINATION.** The obligations of the Underwriters hereunder may be terminated by the Representatives, in their absolute discretion by notice given to the Company prior to delivery of and payment for the Stock and Warrants if, prior to that time, any of the events described in Sections 6(j), 6(l) or 6(m) have occurred or if the Underwriters shall decline to purchase the Stock and Warrants for any reason permitted under this Agreement.

9. **REIMBURSEMENT OF UNDERWRITERS' EXPENSES.** Notwithstanding anything to the contrary in this Agreement, if (a) this Agreement shall have been terminated pursuant to Section 8 or 10, (b) the Company shall fail to tender the Stock and Warrants for delivery to the Underwriters for any reason not permitted under this Agreement, (c) the Underwriters shall decline to purchase the Stock and Warrants for any reason permitted under this Agreement or (d) the sale of the Stock and Warrants is not consummated because any condition to the obligations of the Underwriters set forth herein is not satisfied or because of

the refusal, inability or failure on the part of the Company to perform any agreement herein or to satisfy any condition or to comply with the provisions hereof prior to the Closing Date, then in addition to the payment of amounts in accordance with Section 5, the Company shall reimburse the Underwriters for the fees and expenses of Underwriters' counsel and for such other out-of-pocket expenses as shall have been reasonably actually incurred by them in connection with this Agreement and the proposed purchase of the Stock and Warrants, including, without limitation, travel and lodging expenses of the Underwriters, and upon demand the Company shall pay the full amount thereof to the Representatives; *provided* that if this Agreement is terminated pursuant to Section 10 by reason of the default of one or more Underwriters, the Company shall not be obligated to reimburse any defaulting Underwriter on account of expenses to the extent incurred by such defaulting Underwriter, provided that the foregoing shall not limit any reimbursement obligation of the Company to any non-defaulting Underwriter under this Section 9.

10. *SUBSTITUTION OF UNDERWRITERS*. If any Underwriter or Underwriters shall default in its or their obligations to purchase shares of Stock and Warrants hereunder on any Closing Date and the aggregate number of shares which such defaulting Underwriter or Underwriters agreed but failed to purchase does not exceed ten percent (10%) of the total number of shares to be purchased by all Underwriters on the Closing Date, the other Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the shares which such defaulting Underwriter or Underwriters agreed but failed to purchase on the Closing Date. If any Underwriter or Underwriters shall so default and the aggregate number of shares with respect to which such default or defaults occur is more than ten percent (10%) of the total number of shares to be purchased by all Underwriters on the Closing Date and arrangements satisfactory to the Representatives and the Company for the purchase of such shares by other persons are not made within forty-eight (48) hours after such default, this Agreement shall terminate.

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the shares of Stock and Warrants of a defaulting Underwriter or Underwriters on the Closing Date as provided in this Section 10, (i) the Company shall have the right to postpone the Closing Date for a period of not more than five (5) full business days in order that the Company may effect whatever changes may thereby be made necessary in the Registration Statements or the Prospectus, or in any other documents or arrangements, and the Company agrees promptly to file any amendments to the Registration Statements or supplements to the Prospectus which may thereby be made necessary, and (ii) the respective numbers of shares to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or the other Underwriters for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of any non-defaulting Underwriter or the Company, except that the representations, warranties, covenants, indemnities, agreements and other statements set forth in Section 2, the obligations with respect to expenses to be paid or reimbursed to non-defaulting Underwriters pursuant to Sections 5 and 9 and the provisions of Section 7 and Sections 11 through 21, inclusive, shall not terminate and shall remain in full force and effect, and provided that any such termination shall not relieve a defaulting Underwriter from liability for its default.

11. *ABSENCE OF FIDUCIARY RELATIONSHIP*. The Company acknowledges and agrees that:

- (a) each Underwriter's responsibility to the Company is solely contractual in nature, the Representatives have been retained solely to act as underwriters in connection with the sale of the Stock and Warrants and no fiduciary, advisory or agency relationship between the Company and the Representatives has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Representatives have advised or are advising the Company on other matters;

(b) the price of the Stock and Warrants set forth in this Agreement was established by the Company following discussions and arms-length negotiations with the Representatives, 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 Representatives and their affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Representatives have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) it waives, to the fullest extent permitted by law, any claims it may have against the Representatives for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that the Representatives shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

12. *SUCCESSORS; PERSONS ENTITLED TO BENEFIT OF AGREEMENT.* This Agreement shall inure to the benefit of and be binding upon the several Underwriters, the Company and their respective successors and assigns. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, other than the persons mentioned in the preceding sentence, any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person; except that the representations, warranties, covenants, agreements and indemnities of the Company contained in this Agreement shall also be for the benefit of the Underwriter Indemnified Parties, and the indemnities of the several Underwriters shall be for the benefit of the Company Indemnified Parties. It is understood that each Underwriter's responsibility to the Company is solely contractual in nature and the Underwriters do not owe the Company, or any other party, any fiduciary duty as a result of this Agreement. No purchaser of any of the Stock and Warrants from any Underwriter shall be deemed to be a successor or assign by reason merely of such purchase.

13. *SURVIVAL OF INDEMNITIES, REPRESENTATIONS, WARRANTIES, ETC.* The respective indemnities, covenants, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by them respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter, the Company or any person controlling any of them and shall survive delivery of and payment for the Stock and Warrants. Notwithstanding any termination of this Agreement, including without limitation any termination pursuant to Section 8 or Section 10, the indemnities, covenants, agreements, representations, warranties and other statements forth in Sections 2, 5, 7 and 9 and Sections 11 through 21, inclusive, of this Agreement shall not terminate and shall remain in full force and effect at all times.

14. *RECOGNITION OF THE U.S. SPECIAL RESOLUTION REGIMES.*

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

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

For purposes of this Section 14, (a) “**affiliate**” has the meaning set forth in Rule 405 under the Securities Act, (b) “**BHC Act Affiliate**” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k), (c) “**Covered Entity**” means any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b), (d) “**Default Right**” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable, and (e) “**U.S. Special Resolution Regime**” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

15. **NOTICES.** All statements, requests, notices and agreements hereunder shall be in writing, and:

(a) if to the Underwriters, shall be delivered or sent by mail, telex, facsimile transmission or email to the Representatives: c/o Cowen and Company, LLC, Attention: Head of Equity Capital Markets, Fax: (646) 562-1124 with a copy to the General Counsel, Fax: (646) 562-1861 and c/o William Blair & Company, L.L.C., Attention: Equity Capital Markets, 150 North Riverside Plaza, Chicago, Illinois 60606; and

(b) if to the Company shall be delivered or sent by mail, telex, facsimile transmission or email to Dynavax Technologies Corporation Attention: General Counsel, Fax: (510) 848-1376;

provided, however, that any notice to an Underwriter pursuant to Section 7 shall be delivered or sent by mail, or facsimile transmission to such Underwriter at its address set forth in its acceptance telex to the Representatives, which address will be supplied to any other party hereto by the Representatives upon request. Any such statements, requests, notices or agreements shall take effect at the time of receipt thereof.

15. **DEFINITION OF CERTAIN TERMS.** For purposes of this Agreement, (a) “**business day**” means any day on which the Nasdaq Capital Market is open for trading and (b) “**subsidiary**” has the meaning set forth in Rule 405 under the Securities Act.

16. **GOVERNING LAW AND JURISDICTION.** **This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York, including without limitation Section 5-1401 of the New York General Obligations.** The Company irrevocably (a) submits to the non-exclusive jurisdiction of the Federal and state courts in the Borough of Manhattan in The City of New York for the purpose of any suit, action or other proceeding arising out of this Agreement or the transactions contemplated by this Agreement, the Registration Statement and any Preliminary Prospectus, the Time of Sale Disclosure Package or the Prospectus, (b) agrees that all claims in respect of any such suit, action or proceeding may be heard and determined by any such court, (c) waives to the fullest extent permitted by applicable law, any immunity from the jurisdiction of any such court or from any legal process, (d) agrees not to commence any such suit, action or proceeding other than in such courts, and (e) waives, to the fullest extent permitted by applicable law, any claim that any such suit, action or proceeding is brought in an inconvenient forum.

17. *UNDERWRITERS' INFORMATION.* The parties hereto acknowledge and agree that, for all purposes of this Agreement, the Underwriters' Information consists solely of the following information in the Prospectus: the statements concerning the Underwriters contained in the fourth, seventh through eleventh and fourteenth through nineteenth paragraphs under the heading "Underwriting."

18. *AUTHORITY OF THE REPRESENTATIVES.* In connection with this Agreement, each of Cowen and Company, LLC and William Blair & Company, L.L.C. will act for and on behalf of the several Underwriters, and any action taken under this Agreement by the Representatives, will be binding on all the Underwriters.

19. *PARTIAL UNENFORCEABILITY.* The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision hereof. If any section, paragraph, clause or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

20. *GENERAL.* 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. In this Agreement, the masculine, feminine and neuter genders and the singular and the plural include one another. The section headings in this Agreement are for the convenience of the parties only and will not affect the construction or interpretation of this Agreement. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representatives.

21. *COUNTERPARTS.* This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

[signature page follows]

If the foregoing is in accordance with your understanding of the agreement between the Company and the several Underwriters, kindly indicate your acceptance in the space provided for that purpose below.

Very truly yours,

DYNAVAX TECHNOLOGIES CORPORATION

By: /s/ Michael Ostrach
Name: Michael Ostrach
Title: Chief Financial Officer

Accepted as of
the date first above written:

COWEN AND COMPANY, LLC
Acting on its own behalf and as Representative of the
several Underwriters referred to in the foregoing
Agreement.

COWEN AND COMPANY, LLC

By: /s/ Bill Follis
Name: Bill Follis
Title: Managing Director

WILLIAM BLAIR & COMPANY, L.L.C.
Acting on its own behalf and as Representative of the
several Underwriters referred to in the foregoing
Agreement.

WILLIAM BLAIR & COMPANY, L.L.C.

By: /s/ Steve Maletzky
Name: Steve Maletzky
Title: Partner, Equity Capital Markets

SCHEDULE A

<u>Name</u>	<u>Number of Shares of Common Stock to be Purchased</u>	<u>Number of Warrants to be Purchased With Shares of Common Stock</u>	<u>Number of Shares of Preferred Stock to be Purchased</u>	<u>Number of Warrants to be Purchased with Shares of Preferred Stock</u>
Cowen and Company, LLC	12,967,500	3,241,875	3,388	847,000
William Blair & Company, L.L.C.	5,557,500	1,389,375	1,452	363,000
Total	18,525,000	4,631,250	4,840	1,210,000

SCHEDULE B

None.

SCHEDULE C

Common Stock Public Offering Price: \$3.00 per share of Common Stock and accompanying Warrant to purchase 0.25 shares of Common Stock

Preferred Stock Public Offering Price: \$3,000.00 per share of Preferred Stock and accompanying Warrant to purchase 250 shares of Common Stock

Number of Shares of Common Stock: 18,525,000 shares

Number of Warrants Accompanying Common Stock: Warrants to purchase 4,631,250 shares of Common Stock

Number of Shares of Preferred Stock: 4,480 shares

Number of Warrants Accompanying Preferred Stock: Warrants to purchase 1,210,000 shares of Common Stock

Warrant Exercise Price: \$4.50 per whole share

Underwriting Discount: 6%

SCHEDULE D

Laura Brege
Francis R. Cano
Dennis Carson
Robert Coffman
Robert Janssen
Dave Johnson
Dan Kisner
David Novack
Arnold Oronsky
Michael Ostrach
Peggy Phillips
Natale Ricciardi
Ryan Spencer

Exhibit I

Form of Warrant

Exhibit II

Form of Lock-Up Agreement

Exhibit III

Form of Chief Financial Officer Certificate

Exhibit IV

Form of Certificate of Designations

DYNAVAX TECHNOLOGIES CORPORATION
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B CONVERTIBLE PREFERRED STOCK

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

DYNAVAX TECHNOLOGIES CORPORATION, a Delaware corporation (the "**Corporation**"), in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the "**DGCL**") does hereby certify that, in accordance with Sections 141(c) and 151 of the DGCL, the following resolution was duly adopted by an authorized committee of the Board of Directors of the Corporation as of August 7, 2019:

RESOLVED, that the Board, pursuant to authority expressly vesting in it by the provisions of the Sixth Amended and Restated Certificate of Incorporation of the Corporation, as amended (the "**Certificate of Incorporation**"), hereby authorizes the issuance of a series of Preferred Stock designated as the Series B Convertible Preferred Stock, par value \$0.001 per share, of the Corporation and hereby fixes the designation, number of shares, powers, preferences, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation which are applicable to the Preferred Stock of all classes and series) as follows:

SERIES B CONVERTIBLE PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"**Affiliate**" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"**Attribution Parties**" means, collectively, the following Persons and entities: (i) any direct or indirect Affiliates of the Holder, (ii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iii) any other Persons whose beneficial ownership of the Company's Common Stock would or could be aggregated with the Holder's and the other Attribution Parties for purposes of Section 13(d) or Section 16 of the Exchange Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Beneficial Ownership Limitation.

"**Alternate Consideration**" shall have the meaning set forth in Section 7(b).

"**Beneficial Ownership Limitation**" shall have the meaning set forth in Section 6(c).

“**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

“**Buy-In**” shall have the meaning set forth in Section 6(d)(iii).

“**Commission**” means the Securities and Exchange Commission.

“**Common Stock**” means (i) the Corporation’s Common Stock, par value \$0.001 per share, and (ii) any capital stock into which such Common Stock shall have been changed or any capital stock resulting from a reclassification of such Common Stock.

“**Common Stock Equivalents**” means any securities of the Corporation or the subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“**Conversion Date**” shall have the meaning set forth in Section 6(a).

“**Conversion Price**” shall mean \$3.00, as adjusted pursuant to paragraph 7 hereof. For the avoidance of doubt, the Conversion Price is not akin to the purchase/issuance price of the Series B Preferred Stock.

“**Conversion Ratio**” shall have the meaning set forth in Section 6(b).

“**Conversion Shares**” means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series B Preferred Stock in accordance with the terms hereof.

“**DGCL**” shall mean the Delaware General Corporation Law.

“**Distributions**” shall have the meaning set forth in Section 5(a).

“**DTC**” shall have the meaning set forth in Section 6(a).

“**DWAC Delivery**” shall have the meaning set forth in Section 6(a).

“**Excess Shares**” shall have the meaning set forth in Section 6(c).

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“**Fundamental Transaction**” shall have the meaning set forth in Section 7(b).

“**Group**” means a “group” as that term is used in Section 13(d) of the Exchange Act and as defined in Rule 13d-5 thereunder.

“**Holder**” means any holder of Series B Preferred Stock.

“**Issuance Date**” means the date of the “Closing” as defined in that certain Underwriting Agreement, dated August 7, 2019, by and among the Corporation and the “Underwriters” named therein (the “**Underwriting Agreement**”).

“**Junior Securities**” shall have the meaning set forth in Section 5(a).

“**Notice of Conversion**” shall have the meaning set forth in Section 6(a).

“**Parity Securities**” shall have the meaning set forth in Section 5(a).

“**Person**” means any individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

“**Principal Market**” means the Nasdaq Capital Market.

“**Reported Outstanding Share Number**” shall have the meaning set forth in Section 6(c).

“**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“**Senior Securities**” shall have the meaning set forth in Section 5(a).

“**Series A Junior Preferred Stock**” means the Corporation’s Series A Junior Participating Preferred Stock, par value \$0.001 per share.

“**Series B Preferred Stock Register**” shall have the meaning set forth in Section 2(b).

“**Share Delivery Date**” shall have the meaning set forth in Section 6(d)(i).

“**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, for the Corporation’s primary trading market or quotation system with respect to the Common Stock that is in effect on the date of delivery of an applicable Notice of Conversion.

“**Stated Value**” shall mean \$3,000.00.

“**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

“**Trading Day**” means a day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded.

“**Underwriters**” means Cowen and Company, LLC and William Blair & Company, L.L.C.

Section 2. Designation, Amount and Par Value; Assignment.

a) The series of preferred stock designated by the Certificate of Designation incorporating this resolution (referred to as this “**Certificate of Designation**”) shall be designated as the Corporation’s Series B Convertible Preferred Stock (the “**Series B Preferred Stock**”) and the number of shares so designated shall be 4,840 (which shall not be subject to increase without the written consent of the Holders of a majority of the issued and outstanding Series B Preferred Stock). Each share of Series B Preferred Stock shall have a par value of \$0.001 per share.

b) The Corporation shall register shares of the Series B Preferred Stock, upon records to be maintained by the Corporation for that purpose (the “**Series B Preferred Stock Register**”), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Series B Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall register the transfer of any shares of Series B Preferred Stock in the Series B Preferred Stock Register, upon surrender of the certificates evidencing such shares to be transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate evidencing the shares of Series B Preferred Stock so transferred shall be issued to the transferee and a new certificate evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three Business Days. The provisions of this Certificate of Designation are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends. Holders shall not be entitled to receive any dividends in respect of the Series B Preferred Stock, except to the extent that dividends are paid on the Corporation’s Common Stock, in which case the Holders of the Series B Preferred Stock shall be entitled to participate in such dividends, on an as-converted basis (without regard to any limitations on conversion).

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the DGCL, the Series B Preferred Stock shall have no voting rights. However, as long as any shares of Series B Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock or alter or amend this Certificate, (b) increase the number of authorized shares of Series B Preferred Stock, or (c) enter into any agreement with respect to any of the foregoing.

Section 5. Rank; Liquidation.

a) The Series B Preferred Stock shall rank (i) senior to all of the Series A Junior Preferred Stock; (ii) senior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms junior to any Series B Preferred Stock (collectively with the Series A Junior Preferred Stock, the “**Junior Securities**”); (iii) on parity with the Common

Stock; (iv) on parity with any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms on parity with the Series B Preferred Stock (together with the Common Stock, the "**Parity Securities**"); and (v) junior to any class or series of capital stock of the Corporation hereafter created specifically ranking by its terms senior to any Series B Preferred Stock ("**Senior Securities**"), in each case, as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily (all such distributions being referred to collectively as "**Distributions**").

b) Subject to the prior and superior rights of the holders of any Senior Securities of the Corporation, upon liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, each holder of shares of Series B Preferred Stock shall be entitled to receive, in preference to any distributions of any of the assets or surplus funds of the Corporation to the holders of the Junior Securities and pari passu with any distribution to the holders of Parity Securities, an equivalent amount of Distributions as would be paid on the Common Stock underlying the Series B Preferred Stock, determined on an as-converted basis (without regard to any limitations on conversion), plus an additional amount equal to any dividends declared but unpaid on such shares, before any payments shall be made or any assets distributed to holders of any class of Junior Securities. If, upon any such liquidation, dissolution or winding up of the Corporation, the assets of the Corporation shall be insufficient to pay the holders of shares of the Series B Preferred Stock the amount required under the preceding sentence, then all remaining assets of the Corporation shall be distributed ratably to holders of the shares of the Series B Preferred Stock and Parity Securities.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Series B Preferred Stock shall be convertible, at any time and from time to time from and after the Issuance Date, at the option of the Holder thereof, into a number of shares of Common Stock equal to the Conversion Ratio. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as **Annex A** (a "**Notice of Conversion**"), duly completed and executed. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal at Custodian system (a "**DWAC Delivery**"). The "**Conversion Date**", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by electronic mail or facsimile to, and received during regular business hours by, the Corporation; provided that the original certificate(s) (if any) representing such shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

b) Conversion Ratio. The “**Conversion Ratio**” for each share of Series B Preferred Stock shall be equal to the Stated Value divided by the Conversion Price.

c) Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Series B Preferred Stock and a Holder shall not have the right to convert any portion of the Series B Preferred Stock, to the extent that, immediately prior to or after giving effect to an attempted conversion set forth on an applicable Notice of Conversion, such Holder together with the other Attribution Parties, collectively would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). 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 held by such Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon conversion of the Series B Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) conversion of the remaining, unconverted Series B Preferred Stock 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 Corporation (including, without limitation, any convertible notes or convertible preferred stock or warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section 6(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. To the extent that the limitation contained in this Section 6(c) applies, the determination of whether shares of Series B Preferred Stock may be converted by the Holder (in relation to other securities owned by the Holder together with its Attribution Parties) and of the number of shares of Series B Preferred Stock that may be converted shall be in the sole discretion of the Holder, and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. For purposes of this Section 6(c), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Corporation’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q and Current Reports on Form 8-K or other public filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation, or (C) any other written notice by the Corporation or the transfer agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Corporation receives a Notice of Conversion from a Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Corporation shall notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Notice of Conversion would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 6(c), to exceed the Beneficial Ownership Limitation, the Holder must notify the Corporation of a reduced number of shares of Series B Preferred Stock to be converted pursuant to such Notice of Conversion. For any reason at any time, upon the written or oral request of the Holder, the Corporation shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of

securities of the Corporation, including shares of Series B Preferred Stock, by such Holder or its Attribution Parties since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of Common Stock to the Holder upon conversion of shares of Series B Preferred Stock results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Beneficial Ownership Limitation of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the Exchange Act), the number of shares of Common Stock so issued by which the Holder's and the other Attribution Parties' aggregate beneficial ownership exceeds the Beneficial Ownership Limitation (the "**Excess Shares**") shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Corporation shall return to the Holder the number of shares of Series B Preferred Stock corresponding to such excess. The "**Beneficial Ownership Limitation**" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion (to the extent permitted pursuant to this Section 6(c)). A Holder may, upon providing written notice to the Corporation, elect to increase or decrease the Beneficial Ownership Limitation (not to exceed 19.99%); provided that (i) any increase will not be effective until the sixty-first (61st) day after delivery of such notice to the Corporation, (ii) the Holder may elect, upon delivery of written notice to the Corporation, not to have the right to increase the Beneficial Ownership Limitation from and after such time as may be specified in such notice, and any such election shall be irrevocable, and (iii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Series B Preferred Stock that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable upon conversion of the Series B Preferred Stock in excess of the Beneficial Ownership Limitation shall not be deemed to be beneficially owned by the Holder for any purpose included for purposes of Section 13(d) or Rule 16a-1(a)(1) of the Exchange Act. No prior inability to convert shares of Series B Preferred Stock pursuant to this Section 6(c) shall have any effect on the applicability of the provisions of this Section 6(c) with respect to any subsequent determination of conversion. The provisions of this Section 6(c) shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(c) to the extent necessary to correct this Section 6(c) or any portion of this Section 6(c) which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 6(c) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this Section 6(c) may not be waived and shall apply to a successor holder of Series B Preferred Stock.

d) Mechanics of Conversion

i. Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than the earlier of (x) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, in each case following the applicable Conversion Date, or if the Holder requests the issuance of physical certificate(s), one (1) Trading Day after receipt by the Corporation of the original certificate(s) representing such shares of Series B Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "**Share Delivery Date**"), the Corporation shall (a) deliver, or cause to be delivered, to the converting

Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series B Preferred Stock or (b) in the case of a DWAC Delivery, electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Conversion Notice by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series B Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series B Preferred Stock unsuccessfully tendered for conversion to the Corporation.

ii. **Obligation Absolute.** Subject to Section 6(c) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(d)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series B Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a 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 such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. The Corporation understands that a delay in the delivery of the Conversion Shares after the Share Delivery Date could result in economic loss to the Holder. As compensation to the Holder for such loss, if (i) the Corporation fails to cause the Corporation's transfer agent to transmit to the Holder the Conversion Shares in accordance with the provisions of Section 6(a) above pursuant to a Notice of Conversion on or before the Share Delivery Date (other than a failure caused by incorrect or incomplete information provided by the Holder to the Corporation) and (ii) the Holder has not exercised its Buy-In rights as provided below with respect to such Conversion Shares, the Corporation agrees to pay (as liquidated damages and not as a penalty) to the Holder for late issuance of the Conversion Shares the proportionate amount of \$100 per Trading Day (increasing to \$200 per Trading Day after the tenth (10th) Trading Day) after the Share Delivery Date for each \$10,000 of Conversion Shares covered by the applicable Notice of Conversion that are not timely delivered. For purposes of clarification, if the Corporation is obligated to make payments of liquidated damages pursuant to this Section 6(d)(ii) for late issuance of the Conversion Shares, then it shall not also be obligated to make Buy-In payments as described below with respect to those same Conversion Shares. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief; provided that Holder shall not receive duplicate damages for the Corporation's failure to deliver Conversion Shares within the period specified herein. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law. The Corporation shall pay any payments incurred under this Section 6(d)(ii) in immediately available funds upon demand.

iii. Compensation for Buy-In on Failure to Timely Deliver Shares Upon Conversion. If the Corporation fails to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6(d)(i) (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "**Buy-In**"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount, if any, by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Series B Preferred Stock equal to the number of shares of Series B Preferred Stock submitted for conversion or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to shares of Series B Preferred Stock relating to the applicable Notice of Conversion and the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder \$1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a 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 Corporation's failure to timely deliver shares of Common Stock upon conversion of the shares of Series B Preferred Stock as required pursuant to the terms hereof; provided, however, that the Holder shall not be entitled to both (i) require the reissuance of the shares of Series B Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(d)(i). The Corporation shall pay any payments incurred under this Section 6(d)(iii) in immediately available funds upon demand.

iv. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series B Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the

Holders of the Series B Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series B Preferred Stock (without regard to any limitation on conversion). The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable.

v. Fractional Shares. No fractional shares or scrip representing fractional shares of Common Stock shall be issued upon the conversion of the Series B Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price.

vi. Transfer Taxes. The issuance of certificates for shares of the Common Stock upon conversion of the Series B Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series B Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

e) Status as Stockholder. Upon each Conversion Date, (i) the shares of Series B Preferred Stock being converted shall be deemed converted into shares of Common Stock and (ii) the Holder's rights as a holder of such converted shares of Series B Preferred Stock shall cease and terminate, excepting only the right to receive shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Series B Preferred Stock.

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while Series B Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of Preferred Stock) with respect to the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

b) **Fundamental Transaction.** If, at any time while this Series B Preferred Stock is outstanding, (A) the Corporation, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidates or merges with or into (whether or not the Corporation is the surviving corporation) another Subject Entity, or (ii) sells, assigns, transfers, conveys or otherwise disposes of all or substantially all of the properties or assets of the Corporation or any of its "significant subsidiaries" (as defined in Rule 1-02 of Regulation S-X) to one or more Subject Entities, or (iii) makes, or allows one or more Subject Entities to make, or allows the Corporation to be subject to or have its shares of Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the Exchange Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby all such Subject Entities, individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the Exchange Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganizes, recapitalizes or reclassifies its shares of Common Stock, (B) the Corporation, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, allows any Subject Entity individually or the Subject Entities in the aggregate to be or become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock not held by all such Subject Entities as of the Issuance Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Corporation sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Corporation to surrender

their Common Stock without approval of the stockholders of the Corporation or (C) the Corporation, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, causes the issuance of or enters into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this provision in which case this provision shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this provision to the extent necessary to correct this provision or any portion of this provision which may be defective or inconsistent with the intended treatment of such instrument or transaction (in any such case, a “**Fundamental Transaction**”), then, upon any subsequent conversion of this Series B Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitations on conversion), the same kind and amount 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 one share of Common Stock (the “**Alternate Consideration**”). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series B Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders’ right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(b) and insuring that this Series B Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close.

c) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

d) Notice to the Holders.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Series B Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by electronic mail or facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 2100 Powell Street, Suite 900, Emeryville, CA 94608, Attention: Chief Financial Officer; Facsimile: (510) 848-1327; Email: mostrach@dynavax.com. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by electronic mail, at the email address of such Holder appearing on the books of the Corporation, or if no such email address appears on the books of the Corporation, sent by a nationally recognized overnight courier service addressed to each Holder, at such address delivered by such Holder to the Corporation or as is on the books and records of the Corporation. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via electronic mail with

confirmation at the email address specified in this Section prior to 5:00 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 electronic mail at the email address specified in this Section on a day that is not a Trading Day or later than 5:00 p.m. (New York City time) on any Trading Day, (iii) the first Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) if delivered by facsimile, upon electronic confirmation of delivery of such facsimile.

b) Lost or Mutilated Series B Preferred Stock Certificate. If a Holder's Series B Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series B Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

c) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the Holders of Series B Preferred Stock granted hereunder may be waived as to all shares of Series B Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series B Preferred Stock then outstanding, unless a higher percentage is required by the DGCL, in which case the written consent of the Holders of not less than such higher percentage shall be required.

d) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

e) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

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

g) Status of Converted Series B Preferred Stock. If any shares of Series B Preferred Stock shall be converted and the underlying Conversion Shares have been delivered in compliance with Section 6(d)(i) or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B Preferred Stock.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Designation this 7th day of August, 2019.

/s/ Michael Ostrach

Name: Michael Ostrach

Title: Chief Financial Officer

**SIGNATURE PAGE TO
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS OF
SERIES B CONVERTIBLE PREFERRED STOCK**

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF SERIES B PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series B Preferred Stock indicated below, represented by stock certificate No(s) _____ (the "**Preferred Stock Certificates**"), into shares of common stock, par value \$0.001 per share (the "**Common Stock**"), of Dynavax Technologies Corporation, a Delaware corporation (the "**Corporation**"), as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (the "**Certificate of Designation**") filed by the Corporation with the Secretary of State of the State of Delaware on August 8, 2019.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Attribution Parties), including the number of shares of Common Stock issuable upon conversion of the Series B Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series B Preferred Stock 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 Corporation (including, without limitation, any convertible notes or convertible preferred stock or warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(c) of the Certificate of Designation, is _____. For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion: _____
Number of shares of Series B Preferred Stock owned prior to Conversion: _____
Number of shares of Series B Preferred Stock to be Converted: _____
Number of shares of Common Stock to be Issued: _____
Address for delivery of physical certificates: _____

or

for DWAC Delivery:
DWAC Instructions:
Broker no: _____
Account no: _____

[HOLDER]

By: _____

Name:

Title:

Date:

DYNAVAX TECHNOLOGIES CORPORATION

WARRANT TO PURCHASE COMMON STOCK

Warrant No.:

Number of Shares of Common Stock:

Date of Issuance: August 12, 2019 (“**Issuance Date**”)

Dynavax Technologies Corporation, a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, _____, the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, at any time or times on or after _____ (the “**Initial Exercisability Date**”), but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), _____ fully paid non-assessable shares of Common Stock (as defined below), subject to adjustment as provided herein (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, this “**Warrant**”), shall have the meanings set forth in Section 14. This Warrant is one of the Warrants to Purchase Common Stock (the “**Warrants**”) issued in connection with the transactions contemplated by (i) that certain Underwriting Agreement, dated as of August 7, 2019 (the “**Subscription Date**”) by and between the Company and Cowen and Company, LLC and William Blair & Company, L.L.C., as the representatives of the several underwriters named therein, (ii) the Company’s Registration Statement on Form S-3 (File number 333-219781) (the “**Registration Statement**”) and (iii) the Company’s prospectus supplement dated as of August 7, 2019.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder at any time or times on or after the Initial Exercisability Date, in whole or in part, by delivery (whether via facsimile, electronic mail or otherwise) of a written notice, in the form attached hereto as Exhibit A (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant. Within one (1) Trading Day following the delivery of the Exercise Notice, the Holder shall make payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds or, if the provisions of Section 1(d) are applicable, by notifying the Company that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder (until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full), nor shall any ink-original signature or

medallion guarantee (or other type of guarantee or notarization) with respect to any Exercise Notice be required. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares 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 and the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. On or before the first (1st) Trading Day following the date on which the Holder has delivered the applicable Exercise Notice, the Company shall transmit by facsimile or electronic mail an acknowledgment of confirmation of receipt of the Exercise Notice, in the form attached to the Exercise Notice, to the Holder and the Company's transfer agent (the "**Transfer Agent**"). So long as the Holder delivers the Aggregate Exercise Price (or notice of a Cashless Exercise, if applicable) on or prior to the first (1st) Trading Day following the date on which the Exercise Notice has been delivered to the Company, then on or prior to the earlier of (i) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, in each case following the date on which the Exercise Notice has been delivered to the Company, or, if the Holder does not deliver the Aggregate Exercise Price (or notice of a Cashless Exercise, if applicable) on or prior to the first (1st) Trading Day following the date on which the Exercise Notice has been delivered to the Company, then on or prior to the first (1st) Trading Day following the date on which the Aggregate Exercise Price (or notice of a Cashless Exercise, if applicable) is delivered (such earlier date, or if later, the earliest day on which the Company is required to deliver Warrant Shares pursuant to this Section 1(a), the "**Share Delivery Date**"), the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program ("**FAST**"), issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise. The Company shall be responsible for all fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any, including without limitation for same day processing. Upon delivery of the Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record and beneficial owner of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. If this Warrant is physically delivered to the Company in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three (3) Trading Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 6(d)) representing the right to purchase the number of Warrant Shares issuable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional

Warrant Shares are to be issued upon the exercise of this Warrant, but rather the number of Warrant Shares to be issued shall be rounded to the nearest whole number. The Company shall pay any and all transfer, stamp, issuance and similar taxes, costs and expenses (including, without limitation, fees and expenses of the Transfer Agent) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. The Company's obligations to issue and deliver Warrant Shares in accordance with the terms and subject to the conditions hereof 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; provided, however, that the Company shall not be required to deliver Warrant Shares with respect to an exercise prior to the Holder's delivery of the Aggregate Exercise Price (or notice of a Cashless Exercise, if applicable) with respect to such exercise. If the Company fails to deliver to the Holder the Warrant Shares pursuant to this Section 1(a) by the Share Delivery Date, then the Holder will have the right to rescind such exercise by delivering written notice to the Company at any time prior to the Company delivering such Warrant Shares.

(b) Exercise Price. For purposes of this Warrant, "**Exercise Price**" means \$4.50 per share, subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. The Company understands that a delay in the delivery of the Warrant Shares after the Share Delivery Date could result in economic loss to the Holder. As compensation to the Holder for such loss, if (i) the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 1(a) above pursuant to an exercise on or before the Share Delivery Date (other than a failure caused by incorrect or incomplete information provided by the Holder to the Company) and (ii) the Holder has not exercised its Buy-In rights as provided below with respect to such Warrant Shares, the Company agrees to pay (as liquidated damages and not as a penalty) to the Holder for late issuance of the Warrant Shares the proportionate amount of \$100 per Trading Day (increasing to \$200 per Trading Day after the tenth (10th) Trading Day) after the Share Delivery Date for each \$10,000 of Warrant Shares for which this Warrant is exercised which are not timely delivered. For purposes of clarification, if the Company is obligated to make payments of liquidated damages pursuant to this Section 1(c) for late issuance of the Warrant Shares, then it shall not also be obligated to make Buy-In payments as described below with respect to those same Warrant Shares. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 1(a) above pursuant to an exercise on or before the Share Delivery Date (other than a failure caused by incorrect or incomplete information provided by the Holder to the Company), and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, 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 (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase

obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence, the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a 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 shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof. The Company shall pay any payments incurred under this Section 1(c) in immediately available funds upon demand. The Company's current transfer agent participates in FAST. In the event that the Company changes transfer agents while this Warrant is outstanding, the Company shall use commercially reasonable efforts to select a transfer agent that participates in FAST. While this Warrant is outstanding, the Company shall request its transfer agent to participate in FAST with respect to this Warrant.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, if a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares is not available for the issuance or resale, as applicable, of such Warrant Shares, the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the "Net Number" of shares of Common Stock determined according to the following formula (a "**Cashless Exercise**"):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{B}$$

For purposes of the foregoing formula:

- A= the total number of shares with respect to which this Warrant is then being exercised.
- B= as applicable: (i) the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the

option of the Holder, either (y) the Weighted Average Price on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock as of the time of the Holder's execution of the applicable Exercise Notice if such Exercise Notice is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 1(a) hereof or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of "regular trading hours" on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

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, and the holding period of the Warrants being exercised may be tacked on to the holding period of the Warrant Shares. The Company agrees not to take any position contrary to this Section 1(d).

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 10.

(f) Beneficial Ownership. Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to the terms and conditions of this Warrant and any such exercise shall be null and void and treated as if never made, to the extent that immediately prior to or after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 4.99% (the "**Maximum Percentage**") of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of this Warrant beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants, including the other Warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 1(f). For purposes of this Section 1(f), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities

Exchange Act of 1934, as amended (the “**1934 Act**”), 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 Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 1(f) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of this Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q and Current Reports on Form 8-K or other public filing with the Securities and Exchange Commission (the “**SEC**”), as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 1(f), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of Common Stock to the Holder upon exercise of this Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage as specified in such notice (not to exceed 19.99%); provided that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is

delivered to the Company, (ii) the Holder may elect, upon delivery of written notice to the Company, that it shall not have the right to increase the Maximum Percentage from and after such time as may be specified in such notice, and any such election shall be irrevocable, and (iii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(f) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(f) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

(g) Required Reserve Amount. So long as this Warrant remains outstanding, the Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock under the Warrants then outstanding (without regard to any limitations on exercise) (the "**Required Reserve Amount**"); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 1(g) be reduced other than in connection with any exercise of Warrants or such other event covered by Section 2 below. The Required Reserve Amount (including, without limitation, each increase in the number of shares so reserved) shall be allocated pro rata among the holders of the Warrants based on the number of shares of Common Stock issuable upon exercise of Warrants held by each holder thereof on the Issuance Date (without regard to any limitations on exercise) (the "**Authorized Share Allocation**"). In the event that a holder shall sell or otherwise transfer any of such holder's Warrants, each transferee shall be allocated a pro rata portion of such holder's Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Warrants shall be allocated to the remaining holders of Warrants, pro rata based on the number of shares of Common Stock issuable upon exercise of the Warrants then held by such holders thereof (without regard to any limitations on exercise).

(h) Insufficient Authorized Shares. If at any time while this Warrant remains outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall promptly take all action reasonably necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for this Warrant then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than ninety (90) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of

Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding shares of Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES UPON SUBDIVISION OR COMBINATION OF COMMON STOCK.

(a) If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(a) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(b) Voluntary Adjustment by Company. The Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

(c) Rights Upon Distribution of Assets. In addition to any adjustments pursuant to the other subsections of Section 2 above, if, on or after the Subscription Date and on or prior to the Expiration Date, the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "**Distribution**"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial

ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

(d) Purchase Rights. In addition to any adjustments pursuant to the other subsections of Section 2 above, if at any time on or after the Subscription Date and on or prior to the Expiration Date the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Common Stock are to be determined for the grant, issuance or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right to be held similarly in abeyance) to the same extent as if there had been no such limitation).

(e) FUNDAMENTAL TRANSACTIONS. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3, including agreements to deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, which is exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction). Upon the consummation of each Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for the Company (so that from and after the date of the applicable Fundamental

Transaction, the provisions of this Warrant and the other Transaction Documents referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Notwithstanding the foregoing, and without limiting Section 1(f) hereof, the Holder may elect, at its sole option, by delivery of written notice to the Company to waive this Section 3 to permit the Fundamental Transaction without the assumption of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of each Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of this Warrant at any time after the consummation of the applicable Fundamental Transaction but prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights) (collectively, the “**Corporate Event Consideration**”) which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant). The provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Holder. The provisions of this Section 3 shall apply similarly and equally to successive Fundamental Transactions and Corporate Events. Notwithstanding the foregoing, in the event of a Change of Control, at the request of the Holder delivered before the 30th day after such Change of Control, 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 Change of Control), an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the effective date of such Change of Control, payable in cash; provided, that if the applicable Change of Control was not approved by the Company’s Board of Directors, the Black-Scholes Value of the remaining unexercised portion of this Warrant shall be payable at the option of the Company in either (x) Common Stock, whereby the Company would be continually obligated to actively settle shares of Common Stock in the event insufficient authorized shares of Common Stock were available (or corresponding Corporate Event Consideration, as applicable) valued at the value of the consideration received by the holders of Common Stock in such Change of Control or (y) cash.

3. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its certificate of incorporation or by-laws, or through any reorganization, transfer of assets, consolidation, merger, scheme, arrangement, dissolution, issuance 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, and will at all times in good faith carry out all of the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long

as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Warrants, the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the Warrants then outstanding (without regard to any limitations on exercise).

4. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, 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 capital stock 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, 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.

5. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 6(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 6(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form (but without the obligation to post a bond) and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 6(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 6(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 6(a) or Section 6(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

6. NOTICES. Whenever notice is required to be given under this Warrant, including, without limitation, an Exercise Notice, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or by facsimile or (b) from outside the United States, by International Federal Express, electronic mail or facsimile, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier specifying next day delivery, one (1) Business Day after so mailed, (C) if delivered by International Federal Express specifying two day delivery, two (2) Business Days after so mailed and (D) at the time of transmission, if delivered by electronic mail to the email address specified in this Section 6 prior to 5:00 p.m. (New York time) on a Trading Day, (E) the next Trading Day after the date of transmission, if delivered by electronic mail to the email address specified in this Section 6 on a day that is not a Trading Day or later than 5:00 p.m. (New York time) on any Trading Day and (F) if delivered by facsimile, upon electronic confirmation of delivery of such facsimile, and will be delivered and addressed as follows:

(i) If to the Company, to:

Dynavax Technologies Corporation
2100 Powell Street, Suite 900
Emeryville, CA 94608
Attention: Chief Financial Officer
Facsimile:
Email:

with a copy (which shall not constitute notice) to:

Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
Attention: Steven M. Przesmicki
Facsimile: (858) 550 6420
Email: przes@cooley.com

(ii) if to the Holder, at such address or other contact information delivered by the Holder to Company or as is on the books and records of the Company.

The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) promptly upon any adjustment of the Exercise Price, setting forth in reasonable detail, and certifying, the calculation of such adjustment and (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation; provided in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder; provided, further, that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

7. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended or waived and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

8. GOVERNING LAW; JURY TRIAL. This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. **THE PARTIES HEREBY IRREVOCABLY WAIVE ANY RIGHT THEY MAY HAVE, AND AGREE NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

9. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via facsimile or electronic mail within two (2) Business Days of receipt of the Exercise Notice or other event giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within two (2) Business Days submit via facsimile or electronic mail (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error.

10. **REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF.** The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and any other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to seek an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

11. **TRANSFER.** Subject to compliance with applicable federal and state securities laws, this Warrant and the Warrant Shares may be offered for sale, sold, transferred, pledged or assigned without the consent of the Company.

12. **SEVERABILITY; CONSTRUCTION; HEADINGS.** If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s). This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

13. **DISCLOSURE.** Upon receipt or delivery by the Company of any notice in accordance with the terms of this Warrant, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries, the Company shall contemporaneously with any such receipt or delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, nonpublic information relating to the Company or its subsidiaries, the Company so shall indicate to such Holder contemporaneously with delivery of such notice, and in the absence of any such indication, the Holder shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries.

14. **CERTAIN DEFINITIONS.** For purposes of this Warrant, the following terms shall have the following meanings:

(a) “**Affiliate**” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act of 1933, as amended.

(b) “**Attribution Parties**” means, collectively, the following Persons and entities: (i) any direct or indirect Affiliates of the Holder, (ii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iii) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) or Section 16 of the 1934 Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(c) “**Bid Price**” means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of any market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 9. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(d) “**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 Change of Control, or, if the Change of Control is not publicly announced, the date the Change of Control 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 40%, (iii) the underlying price per share used in such calculation shall be the greater of (A) the sum of the price per share being offered in cash, if any, plus the per share value of any non-cash consideration, if any, being offered in such Change of Control and (B) the greater of (x) the last Weighted Average Price immediately prior to the public announcement of such Change of Control and (y) the last Weighted Average Price immediately prior to the consummation of such Change of Control, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

(e) “**Bloomberg**” means Bloomberg Financial Markets.

(f) “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(g) “**Change of Control**” means any Fundamental Transaction other than (i) any reorganization, recapitalization or reclassification of the Common Stock in which holders of the Company’s voting power immediately prior to such reorganization, recapitalization or reclassification continue after such reorganization, recapitalization or reclassification to hold publicly traded securities and, directly or indirectly, are, in all material respects, the holders of the voting power of the surviving entity (or entities with the authority or voting power to elect the members of the board of directors (or their equivalent if other than a corporation) of such entity or entities) after such reorganization, recapitalization or reclassification, (ii) pursuant to a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of the Company or (iii) a merger in connection with a bona fide acquisition by the Company of any Person in which (x) the gross consideration paid, directly or indirectly, by the Company in such acquisition is not greater than 20% of the Company’s market capitalization as calculated on the date of the consummation of such merger and (y) such merger does not contemplate a change to the identity of a majority of the board of directors of the Company. Notwithstanding anything herein to the contrary, any transaction or series of transactions that, directly or indirectly, results in the Company or the Successor Entity not having Common Stock or common stock, as applicable, registered under the 1934 Act and listed on an Eligible Market shall be deemed a Change of Control.

(h) “**Closing Bid Price**” and “**Closing Sale Price**” means, for any security as of any date, the last closing bid price and last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing bid price or the closing trade price, as the case may be, then the last bid price or the last trade price, respectively, of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last closing bid price or last trade price, respectively, of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last closing bid price or last trade price, respectively, of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no closing bid price or last trade price, respectively, is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Closing Bid Price or the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Bid Price or the Closing Sale Price, as the case may be, of such security on such date shall be the fair

market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 9. All such determinations to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(i) “**Common Stock**” means (i) the Company’s Common Stock, par value \$0.001 per share, and (ii) any capital stock into which such Common Stock shall have been changed or any capital stock resulting from a reclassification of such Common Stock.

(j) “**Convertible Securities**” means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(k) “**Eligible Market**” means The Nasdaq Capital Market, the NYSE American LLC, The Nasdaq Global Select Market, The Nasdaq Global Market or The New York Stock Exchange, Inc.

(l) “**Expiration Date**” means February 12, 2022.

(m) “**Fundamental Transaction**” means (A) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company or any of its “significant subsidiaries” (as defined in Rule 1-02 of Regulation S-X) to one or more Subject Entities, or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its shares of Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby all such Subject Entities, individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its shares of Common Stock, (B) that the Company shall, directly or indirectly, including through

subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their Common Stock without approval of the stockholders of the Company or (C) directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

(n) “**Group**” means a “group” as that term is used in Section 13(d) of the 1934 Act and as defined in Rule 13d-5 thereunder.

(o) “**Options**” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(p) “**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 an Eligible 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.

(q) “**Person**” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(r) “**Principal Market**” means the Nasdaq Capital Market.

(s) “**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, for the Company’s primary trading market or quotation system with respect to the Common Stock that is in effect on the date of delivery of an applicable Exercise Notice.

(t) “**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

(u) “**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.

(v) “**Trading Day**” means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded.

(w) “**Transaction Documents**” means any agreement entered into by and between the Company and the Holder, as applicable.

(x) “**Weighted Average Price**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its “Volume at Price” function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as such market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as such market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest Closing Bid Price and the lowest closing ask price of any of the market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 9 but with the term “Weighted Average Price” being substituted for the term “Exercise Price.” All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

DYNAVAX TECHNOLOGIES CORPORATION

By: _____
Name:
Title:

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK

DYNAVAX TECHNOLOGIES CORPORATION

The undersigned holder hereby exercises the right to purchase _____ shares of Common Stock (“**Warrant Shares**”) of Dynavax Technologies Corporation, a Delaware corporation (the “**Company**”), evidenced by the attached Warrant to Purchase Common Stock (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

a “Cash Exercise” with respect to _____ Warrant Shares; and/or

a “Cashless Exercise” with respect to _____ Warrant Shares

1. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of \$_____ to the Company in accordance with the terms of the Warrant.

2. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant.

Date:

Name of Registered Holder

By: _____

Name:

Title:

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs its transfer agent, Computershare Inc., to issue the above indicated number of shares of Common Stock on or prior to the applicable Share Delivery Date.

DYNAVAX TECHNOLOGIES CORPORATION

By: _____

Name:

Title:



Steven M. Przesmicki
+1 858 550 6070
przes@cooley.com

August 8, 2019

Dynavax Technologies Corporation
2100 Powell Street, Suite 900
Emeryville, CA 94608

Ladies and Gentlemen:

We have acted as counsel to Dynavax Technologies Corporation, a Delaware corporation (the "**Company**"), in connection with the issuance and sale by the Company of (i) 18,525,000 shares (the "**Common Shares**") of common stock of the Company, par value \$0.001 per share (the "**Common Stock**"), (ii) 4,840 shares of Series B Convertible Preferred Stock (the "**Preferred Shares**" and, together with the Common Shares, the "**Shares**"), par value \$0.001 per share, which Preferred Shares are convertible into 4,840,000 shares of Common Stock and (iii) warrants to purchase up to 5,841,250 shares of Common Stock (together with the Shares, the "**Securities**"), pursuant to the Registration Statement on Form S-3 (No. 333-219781) (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 in the Registration Statement (the "**Base Prospectus**"), and the related prospectus supplement dated August 8, 2019, filed with the Commission pursuant to Rule 424(b) under the Act (together with the Base Prospectus, the "**Prospectus**").

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, the Company's Sixth Amended Restated Certificate of Incorporation (as amended) and Amended and Restated Bylaws, and 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; the accuracy, completeness and authenticity of certificates of public officials; and the due execution and delivery of all documents other than by the Company where due execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently sought to verify such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Securities, when sold in accordance with the Agreement, the Registration Statement and the Prospectus, will be validly issued, and the Securities will be fully paid and nonassessable.

COOLEY LLP 4401 EASTGATE MALL SAN DIEGO, CA 92121
T: (858) 550-6000 F: (858) 550-6420 COOLEY.COM



Dynavax Technologies Corporation
August 8, 2019
Page Two

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to a current report of the Company on Form 8-K for incorporation by reference into the Registration Statement.

Sincerely,

COOLEY LLP

By: /s/ Steven M. Przesmicki
Steven M. Przesmicki

COOLEY LLP 4401 EASTGATE MALL SAN DIEGO, CA 92121
T: (858) 550-6000 F: (858) 550-6420 COOLEY.COM

Dynavax Technologies Announces Proposed Public Offering of Common Stock, Non-Voting Preferred Stock and Warrants to Purchase Common Stock

Emeryville, Calif., August 7, 2019 (GLOBE NEWSWIRE) — Dynavax Technologies Corporation (Nasdaq: DVAX), a fully-integrated biopharmaceutical company focused on discovering, developing and commercializing novel vaccines, today announced that it intends to offer and sell, subject to market and other conditions, an aggregate of up to \$60.0 million of shares of its common stock, shares of newly designated non-voting Series B Convertible Preferred Stock and warrants to purchase common stock in an underwritten public offering. The offering is subject to market and other conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

Cowen and William Blair are acting as joint book-running managers for the offering.

Dynavax anticipates using the net proceeds from the offering to fund activities associated with ongoing commercialization of HEPLISAV-B® and for general corporate purposes, including working capital.

The securities described above are being offered by Dynavax pursuant to a shelf registration statement that automatically became effective upon filing with the Securities and Exchange Commission (SEC) on August 8, 2017. A preliminary prospectus supplement related to the offering will be filed with the SEC and will be available on the SEC's website located at <http://www.sec.gov>. Copies of the preliminary prospectus supplement and the accompanying prospectus relating to this offering, when available, may be obtained by contacting: Cowen and Company, LLC, Attention: Prospectus Department, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (631) 274-2806; or William Blair & Company, L.L.C., Attention: Prospectus Department, 150 North Riverside Plaza, Chicago, IL 60606, by telephone at (800) 621-0687 or by email at prospectus@williamblair.com.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

About Dynavax

Dynavax is a biopharmaceutical company focused on leveraging the power of the body's innate and adaptive immune responses through toll-like receptor (TLR) stimulation. Dynavax discovers, develops and commercializes novel vaccines. Dynavax launched its first commercial product, HEPLISAV-B® [Hepatitis B Vaccine (Recombinant), Adjuvanted], in February 2018, following U.S. FDA approval for prevention of infection caused by all known subtypes of hepatitis B virus in adults age 18 years and older.

Forward-Looking Statements

This press release contains forward-looking statements, including statements related to the expectations regarding the timing and size of the proposed offering and the anticipated use of the net proceeds. These statements are only predictions based on current information and expectations and involve a number of risks and uncertainties. Actual events or results may differ materially from those projected in any of such statements due to various factors, including market risks and uncertainties and the satisfaction of customary closing conditions for an offering of securities. For a discussion of these and other factors, please refer to Dynavax's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 as well as Dynavax's subsequent filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All forward-looking statements are qualified in their entirety by this cautionary statement and Dynavax undertakes no obligation to revise or update this press release to reflect events or circumstances after the date hereof, except as required by law.

Contact:
ir@dynavax.com
510-665-7269

Dynavax Technologies Announces Pricing of \$70.1 Million Public Offering of Common Stock, Non-Voting Preferred Stock and Warrants to Purchase Common Stock

Emeryville, Calif., August 8, 2019 (GLOBE NEWSWIRE) — Dynavax Technologies Corporation (Nasdaq: DVAX), a fully-integrated biopharmaceutical company focused on discovering, developing and commercializing novel vaccines, today announced the pricing of an underwritten public offering of 18,525,000 shares of its common stock, 4,840 shares of its newly designated non-voting Series B Convertible Preferred Stock (Series B stock), and warrants to purchase an aggregate of 5,841,250 shares of its common stock. Each share of common stock is being sold together with a warrant to purchase 0.25 of a share of common stock, at a combined price to the public of \$3.00 per share of common stock and accompanying warrant. Each share of Series B stock is being sold together with warrants to purchase 250 shares of common stock, at a combined price to the public of \$3,000.00 per share of Series B stock and accompanying warrants. Each share of Series B stock will be convertible into 1,000 shares of common stock at the holder's option, subject to beneficial ownership limitations. All of the warrants being sold in the offering will have an exercise price of \$4.50 per share of common stock, will be immediately exercisable upon issuance and will expire on the 30-month anniversary of the date of issuance. The offering is expected to close on or about August 12, 2019, subject to customary closing conditions. The gross proceeds to Dynavax from the offering are expected to be \$70.1 million, before deducting underwriting discounts and commissions and other offering expenses payable by Dynavax.

Cowen and William Blair are acting as joint book-running managers for the offering.

Dynavax anticipates using the net proceeds from the offering to fund activities associated with ongoing commercialization of HEPLISAV-B® and for general corporate purposes, including working capital.

The securities described above are being offered by Dynavax pursuant to a shelf registration statement that automatically became effective upon filing with the Securities and Exchange Commission (SEC) on August 8, 2017. A final prospectus supplement and the accompanying prospectus related to the offering will be filed with the SEC and will be available on the SEC's website located at <http://www.sec.gov>. Copies of the final prospectus supplement and the accompanying prospectus relating to this offering, when available, may be obtained by contacting: Cowen and Company, LLC, Attention: Prospectus Department, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (631) 274-2806; or William Blair & Company, L.L.C., Attention: Prospectus Department, 150 North Riverside Plaza, Chicago, IL 60606, by telephone at (800) 621-0687 or by email at prospectus@williamblair.com.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

About Dynavax

Dynavax is a biopharmaceutical company focused on leveraging the power of the body's innate and adaptive immune responses through toll-like receptor (TLR) stimulation. Dynavax discovers, develops and commercializes novel vaccines. Dynavax launched its first commercial product, HEPLISAV-B® [Hepatitis B Vaccine (Recombinant), Adjuvanted], in February 2018, following U.S. FDA approval for prevention of infection caused by all known subtypes of hepatitis B virus in adults age 18 years and older.

Forward-Looking Statements

This press release contains forward-looking statements, including statements related to Dynavax's expectations regarding the completion, timing and size of the offering and the anticipated use of the net proceeds. These statements are only predictions based on current information and expectations and involve a number of risks and uncertainties. Actual events or results may differ materially from those

projected in any of such statements due to various factors, including market risks and uncertainties and the satisfaction of customary closing conditions for an offering of securities. For a discussion of these and other factors, please refer to Dynavax's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 as well as Dynavax's subsequent filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All forward-looking statements are qualified in their entirety by this cautionary statement and Dynavax undertakes no obligation to revise or update this press release to reflect events or circumstances after the date hereof, except as required by law.

Contact:

ir@dynavax.com

510-665-7269