
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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 22, 2020**

YIELD10 BIOSCIENCE, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation)

001-33133

(Commission File Number)

04-3158289

(IRS Employer Identification No.)

19 Presidential Way, Woburn, Massachusetts

(Address of Principal Executive Offices)

01801

(Zip Code)

(617) 583-1700

(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 (*see* General Instruction A.2. below):

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

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

<u>Title of each class:</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered:</u>
Common Stock	YTEN	The Nasdaq Capital Market

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

Public Offering

On August 22, 2020, Yield10 Bioscience, Inc., a Delaware corporation (the “Company”), entered into an Underwriting Agreement (the “Underwriting Agreement”) with Maxim Group LLC (the “Underwriter”), pursuant to which the Company sold, in a registered public offering by the Company (the “Public Offering”) 835,000 shares of the Company’s common stock, par value \$0.01 per share (the “Common Stock”), at a public offering price of \$4.25 per share.

In addition, pursuant to the Underwriting Agreement, the Company granted the Underwriter a 45-day option to purchase up to 116,835 shares of Common Stock to cover over-allotments, if any, at the public offering price per share of Common Stock, less the underwriting discounts and commissions. The shares of Common Stock were offered by the Company pursuant to a registration statement on Form S-3 (File No. 333-237539), as initially filed with the Securities and Exchange Commission (the “Commission”) on April 1, 2020, and declared effective by the Commission on April 10, 2020, and a prospectus supplement dated August 21, 2020. A copy of the legal opinion and consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. relating to the validity of the issuance and sale of the shares sold in the Public Offering is attached as Exhibit 5.1 hereto. The offering is expected to close on August 26, 2020, subject to the satisfaction of customary closing conditions.

The Underwriting Agreement contains customary representations and warranties, agreements and obligations, conditions to closing and termination provisions. The Underwriting Agreement provides for indemnification by the Underwriters of the Company, its directors and executive officers, and by the Company of the Underwriters, for certain liabilities, including liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”) and affords certain rights of contribution with respect thereto. The foregoing description of the Underwriting Agreement is qualified in its entirety by reference to the Underwriting Agreement, which is attached as Exhibit 1.1 hereto and incorporated by reference herein.

Private Placement

On August 22, 2020, the Company entered into a Securities Purchase Agreement with Jack W. Schuler, the Company’s largest shareholder, and entities related to him (together, the “Investors”). Pursuant to the terms of the Securities Purchase Agreement, the Company sold to the Investors an aggregate of 396,450 unregistered shares of Common Stock in a private placement (the “Private Placement”), for gross proceeds of approximately \$1.7 million before transaction costs.

The Company has agreed in the Securities Purchase Agreement to file a registration statement within 60 calendar days to register the resale of the shares issued to the Investors in the Private Placement. The Securities Purchase Agreement contains customary representations, warranties and covenants by the Company, customary indemnification obligations of the Company and the Investors, including for liabilities under the Securities Act, and other obligations of the parties. The representations, warranties and covenants contained in the Securities Purchase Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement and may be subject to limitations agreed upon by the contracting parties.

The securities issued in the Private Placement were offered in reliance upon exemptions from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder and corresponding provisions of state securities laws. Each of the Investors is an “accredited investor” as defined in Rule 501(a) under the Securities Act.

The Company expects to receive net proceeds from the Public Offering and the Private Placement of approximately \$4.8 million, after deducting underwriting discounts and commissions and estimated offering expenses and excluding the option to purchase up to 116,835 additional shares to cover over-allotments.

Item 3.02. Unregistered Sales of Equity Securities.

The disclosure set forth in Item 1.01 above under “Private Placement” is hereby incorporated into this Item 3.02 by reference.

Item 8.01 Other Events.

On August 22, 2020, the Company issued a press release announcing the entry into the Underwriting Agreement and the Securities Purchase Agreement. A copy of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits**(d) Exhibits**

Exhibit No.	Description
<u>1.1</u>	<u>Underwriting Agreement, dated as of August 22, 2020, by and between Yield10 Bioscience, Inc. and Maxim Group LLC as representative of the several underwriters, if any, named on Schedule I thereto.</u>
<u>5.1</u>	<u>Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.</u>
<u>10.1</u>	<u>Securities Purchase Agreement, dated as of August 22, 2020 by and between Yield10 Bioscience, Inc. and the Investors listed on Schedule I thereto.</u>
<u>23.1</u>	<u>Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (contained in Exhibit 5.1).</u>
<u>99.1</u>	<u>Press release dated August 22, 2020.</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.

YIELD10 BIOSCIENCE, INC.

Date: August 25, 2020

By: /s/ Oliver P. Peoples
Oliver P. Peoples
President & Chief Executive Officer

YIELD10 BIOSCIENCE, INC.

UNDERWRITING AGREEMENT

August 22, 2020

Maxim Group LLC
405 Lexington Avenue
New York, New York 10174

As Representative of the Underwriters
named on Schedule A hereto

Ladies and Gentlemen:

Yield10 Bioscience, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell an aggregate of 835,000 shares ("Firm Shares") of the Company's common stock, \$0.01 par value per share ("Shares") to the several underwriters (such underwriters, for whom Maxim Group LLC ("Maxim" or the "Representative") is acting as representative, the "Underwriters" and each an "Underwriter"). The Company has also agreed to grant to the Representative on behalf of the Underwriters an option (the "Option") to purchase up to an additional 125,250 Shares (the "Option Shares" and, together with the Firm Shares, the "Securities") on the terms set forth in Section 1(b) hereof. The offering of the Securities is hereinafter called the "Offering".

Concurrently with the offer and sale of the Securities, the Company intends to offer Shares to an existing stockholder and entities affiliated with such stockholder, as described in the Prospectus (as defined below) (the "Concurrent Private Placement").

The Company confirms as follows its agreement with each of the Underwriters:

1. Agreement to Sell and Purchase.

(a) Purchase of Firm Shares. On the basis of the representations, warranties and agreements of the Company contained herein and subject to all the terms and conditions of this Agreement, the Company agrees to sell to the Underwriters, severally and not jointly, and the Underwriters, severally and not jointly, agree to purchase from the Company, the Firm Shares at a purchase price (the "Purchase Price") (prior to discount and commissions) of \$4.25 for one Firm Share (or \$3.9525 for one Firm Share net of discount and commissions). The Underwriters will not receive a fee, discount, or commission with respect to any Securities sold to the persons or entities listed on Addendum B to that certain engagement letter between the Representative and the Company, dated August 21, 2020.

(b) *Purchase of Option Shares.* Subject to all the terms and conditions of this Agreement, the Company grants to the Representative on behalf of the Underwriters the Option to purchase, severally and not jointly, all or less than all of the Option Shares. The purchase price (net of discount and commissions) to be paid for each Option Share will be the same Purchase Price (net of discount and commissions) allocated to the Firm Shares. The Option may be exercised in whole or in part at any time on or before the 45th day after the date of this Agreement, upon written notice (the "Option Notice") by the Representative to the Company no later than 12:00 noon, New York City time, at least two and no more than five business days before the date specified for closing in the Option Notice (the "Option Closing Date") setting forth the aggregate number of Option Shares to be purchased and the time and date for such purchase. Upon exercise of the Option, the Company will become obligated to convey to the Underwriters, and the Underwriters will become obligated to purchase, in each case subject to the terms and conditions set forth herein, the number of Option Shares specified in the Option Notice. If any Option Shares are to be purchased, each Underwriter agrees, severally and not jointly, to purchase the number of Option Shares (as adjusted by the Representative in such manner as it deems advisable to avoid fractional securities) that bears the same proportion to the number of Firm Shares to be purchased by it as set forth on Schedule A opposite such Underwriter's name as the total number of Option Shares to be purchased bears to the total number of Firm Shares.

2. Delivery and Payment.

(a) *Closing.* Delivery of the Firm Shares shall be made to the Representative through the facilities of the Depository Trust Company ("DTC") for the respective accounts of the Underwriters against payment of the Purchase Price by wire transfer of immediately available funds to the order of the Company. Such payment shall be made at 10:00 a.m., New York City time, on the third business day (the fourth business day, should the Offering be priced after 4:00 p.m., New York City Time) after the date of this Agreement or at such time on such other date, not later than ten business days after such date, as may be agreed upon by the Company and the Representative (such date is hereinafter referred to as the "Closing Date").

(b) *Option Closing.* To the extent the Option is exercised, delivery of the Option Shares against payment by the Underwriters of the purchase price for such securities (in the manner and at the location specified above) shall take place at the time and date (which may be the Closing Date, but not earlier than the Closing Date) specified in the Option Notice.

(c) *Electronic Transfer.* Electronic transfer of the Securities shall be made at the time of purchase in such names and in such denominations as the Representative shall specify.

(d) *Tax Stamps.* The cost of original issue tax stamps, if any, in connection with the issuance and delivery of the Securities by the Company to the Underwriters shall be borne by the Company. The Company shall pay and hold each Underwriter and any subsequent holder of the Securities harmless from any and all liabilities with respect to or resulting from any failure or delay in paying United States federal and state and foreign stamp and other transfer taxes, if any, which may be payable or determined to be payable in connection with the original issuance, sale and delivery to such Underwriter of the Securities.

3. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with, the several Underwriters, as of the date hereof and as of the Closing Date and as of each Option Closing Date, except as otherwise indicated, as follows:

(a) *Compliance with Registration Requirements.* The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") a registration statement on Form S-3 (File No. 333-237539) under the Securities Act of 1933, as amended (the "Act") and the rules and regulations of the Commission thereunder (the "Rules and Regulations"), and such amendments to such registration statement (including post effective amendments) as may have been required to the date of this Agreement and a preliminary prospectus supplement or "red herring" pursuant to Rule 424(b) under the Securities Act. Such registration statement, as amended (including any post effective amendments), has been declared effective by the Commission. Such registration statement, including amendments thereto (including post effective amendments thereto) as of the latest time of effectiveness thereof (the "Effective Time"), the exhibits and any schedules thereto and the documents and information otherwise deemed to be a part thereof or included therein by the Securities Act or otherwise pursuant to the Rules and Regulations, is herein called the "Registration Statement." If the Company has filed or files an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term Registration Statement shall include such Rule 462 Registration Statement.

(b) The Company intends to file with the Commission pursuant to Rule 424 under the Securities Act a final prospectus supplement relating to the Securities to a form of prospectus included in the Registration Statement. The form of prospectus included in the Registration Statement at the time it was declared effective, as it may have been amended, modified or supplemented and filed with the Commission after such effective date and prior to the date hereof pursuant to Rule 424(b)(3), is hereinafter called the "Base Prospectus," and such final prospectus supplement, as filed, along with the Base Prospectus, is hereinafter called the "Final Prospectus." Such Final Prospectus and any preliminary prospectus supplement or "red herring" relating to the Securities in the form in which they shall be filed with the Commission pursuant to Rule 424(b) under the Securities Act (including the Base Prospectus as so supplemented) is hereinafter called a "Prospectus."

(c) For purposes of this Agreement, all references to the Registration Statement, the Rule 462 Registration Statement, the Base Prospectus, the Final Prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System. All references in this Agreement to amendments or supplements to the Registration Statement, the Rule 462 Registration Statement, the Base Prospectus, the Final Prospectus or the Prospectus shall be deemed to mean and include the subsequent filing of any document under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that is deemed to be incorporated therein by reference therein or otherwise deemed by the Rules and Regulations to be a part thereof.

(d) *Effectiveness of Registration.* The Company has responded to all requests, if any, of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462 Registration Statement is in effect and, to the knowledge of the Company, no proceedings for such purpose have been instituted or are pending or are threatened by the Commission.

(e) *Accuracy of Registration Statement.* Each of the Registration Statement, any Rule 462 Registration Statement and any post-effective amendment thereto, at the time it became effective, when any document filed under the Exchange Act was or is filed and at all subsequent times, complied and will comply in all material respects with the Act and the Rules and Regulations, 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 in order to make the statements therein not misleading. The Prospectus, as amended or supplemented, as of its date and at all subsequent times when a prospectus is delivered or required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered in connection with sales of Securities, complied and will comply in all material respects with the Act, the Exchange Act and the Rules and Regulations, and did not or will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein not misleading, in the light of the circumstances under which they were made. The foregoing representations and warranties in this Section 3(e) do not apply to any statements or omissions made in reliance on and in conformity with information relating to the Underwriters furnished in writing to the Company by the Underwriters through the Representative specifically for inclusion in the Registration Statement or Prospectus or any amendment or supplement thereto. For all purposes of this Agreement, the information set forth in the Prospectus (i) in the fourth and fifth sentences of the fourth paragraph under the caption "Underwriting" setting forth the amount of the selling concession, (ii) in the twelfth, thirteenth and fourteenth paragraphs under the caption "Underwriting" regarding stabilization, short positions, penalty bids and market making and (iii) in the section titled "Underwriting – Notice to Non-US Investors" constitutes the only information (the "Underwriters' Information") relating to the Underwriters furnished in writing to the Company by the Underwriters through the Representative specifically for inclusion in the preliminary prospectus, the Registration Statement or the Prospectus.

(f) *Company Not Ineligible Issuer.* (i) At the time of filing the Registration Statement relating to the Securities and (ii) as of the date of the execution and delivery of this Agreement (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an "ineligible issuer" (as defined in Rule 405 of the Rules and Regulations).

(g) *Disclosure at the Time of Sale.* As of the Applicable Time, neither (i) the Issuer General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, the most recent preliminary prospectus related to this Offering, and the information included on Schedule C hereto, all considered together (collectively, the "General Disclosure Package"), nor (ii) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, included any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the General Disclosure Package based upon and in conformity with written information furnished to the Company by the Underwriters through the Representative specifically for use therein, it being understood and agreed that the only such information furnished by the Underwriters consists of the Underwriters' Information.

As used in this subsection and elsewhere in this Agreement:

"Applicable Time" means 5:00 p.m. (New York City Time) on August 22, 2020 or such other time as agreed by the Company and the Representative.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the Rules and Regulations, relating to the Securities that (i) is required to be filed with the Commission by the Company, (ii) is “a written communication that is a road show” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the Offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors, as evidenced by its being specified in Schedule B hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

(h) *Issuer Free Writing Prospectuses.* Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the Prospectus Delivery Period (as defined below), does not include any information that conflicts with the information contained in the Registration Statement. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with the Underwriters’ Information. If at any time following the issuance of an Issuer Free Writing Prospectus there occurred an event or development as a result of which such Issuer Free Writing Prospectus conflicted with the information contained in the Registration Statement relating to the Securities or included an untrue statement of material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company has promptly notified the Representative and has promptly amended or supplemented, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(i) *Distribution of Offering Material by the Company.* The Company has not distributed and will not distribute, prior to the later of the Closing Date, any Option Closing Date and the completion of the Underwriters’ distribution of the Securities, any offering material in connection with the offering or sale of the Securities, the Registration Statement, the preliminary prospectus, the Permitted Free Writing Prospectuses reviewed and consented to by the Representative and included in Schedule B hereto, and the Prospectus. None of the Marketing Materials (as defined herein), as of their respective issue dates and at all subsequent times through the Prospectus Delivery Period (as defined below), include any information that conflicts with the information contained in the Registration Statement. If at any time following the issuance of any Marketing Material there occurred an event or development as a result of which such Marketing Material conflicted with the information contained in the Registration Statement relating to the Securities or included an untrue statement of material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company has promptly notified the Representative and has promptly amended or supplemented, at its own expense, such Marketing Material to eliminate or correct such conflict, untrue statement or omission.

(j) *Subsidiaries.* All of the direct and indirect subsidiaries of the Company (each, a “Subsidiary.”) are set forth in the Registration Statement, the General Disclosure Package and the Prospectus. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other similar restriction (each, a “Lien”), and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

(k) *Organization and Qualification.* The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents (collectively, the “Charter Documents”). Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of this Agreement or any other agreement, document, certificate or instrument required to be delivered pursuant to this Agreement (collectively, the “Transaction Documents”), (ii) a material adverse effect on the results of operations, assets, business, prospects, or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company’s ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii)), a “Material Adverse Effect”) and no action, claim, suit or proceeding (including, without limitation, a partial proceeding, such as a deposition), whether commenced or threatened (each, a “Proceeding”) has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(l) *Authorization; Enforcement.* The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company’s stockholders in connection herewith or therewith other than in connection with the Required Approvals (as hereinafter defined in Section 3(n)). This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, assuming due authorization, execution and delivery by the Representative, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors’ rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(m) *No Conflicts.* The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's Charter Documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as would not have or reasonably be expected to result in a Material Adverse Effect.

(n) *Filings, Consents and Approvals.* The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filing with the Commission of the Registration Statement and the Prospectus, (ii) such filings, if any, as are required to be made under applicable state securities laws, (iii) such applications, notices, filings or authorizations as are required to be obtained or made under applicable rules of the Financial Industry Regulatory Authority, Inc. ("FINRA") and The Nasdaq Stock Market, including, but not limited to, the listing of the Firm Shares for trading thereon, and (iv) such notices, filings or authorizations as have been obtained, given or made as of the date hereof (collectively, the "Required Approvals").

(o) [Reserved.]

(p) *Issuance of the Securities.* The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement.

(q) *Capitalization.* The capitalization of the Company as of a recent practicable date is as set forth in the Registration Statement, the General Disclosure Package and the Prospectus. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the Company's equity incentive plans and 401(K) plans, the issuance of shares of Common Stock to employees, directors or consultants pursuant to the Company's equity incentive plans and pursuant to the conversion and/or exercise of any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock ("Common Stock Equivalents") and is outstanding as of the date of the most recently filed periodic report under the Exchange Act. No individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind (each, a "Person") has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as a result of the purchase and sale of the Securities or as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. The issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Underwriters) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. There are no securities of the Company or any Subsidiary that have any anti-dilution or similar adjustment rights (other than adjustments for stock splits, recapitalizations, and the like) to the exercise or conversion price, have any exchange rights, or reset rights. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, there are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance in all material respects with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities, other than such approvals or authorizations as are required to be obtained or made under applicable rules of The Nasdaq Stock Market. There are no stockholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders.

(r) *SEC Reports; Financial Statements.* The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Registration Statement, the General Disclosure Package and the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted 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 under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. The agreements and documents described in the SEC Reports conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the rules and regulations thereunder to be described in the SEC Reports or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the SEC Reports, or (ii) is material to the Company’s business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought. Except as disclosed in the SEC Reports, none of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company’s knowledge, any other party is in default thereunder and, to the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations.

(s) *Material Changes; Undisclosed Events, Liabilities or Developments.* Since the date of the latest audited financial statements included within the SEC Reports, except as reflected or specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there has been no event, occurrence or development that has had or that would reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any material liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company equity incentive plans or as set forth in the Registration Statement, the General Disclosure Package and the Prospectus. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made, other than certain disclosure related to the issuance of securities in connection with the Concurrent Private Placement.

(t) *Litigation.* There is no action, suit, inquiry, notice of violation or proceeding pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an "Action") which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) would, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(u) *Labor Relations.* No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which would reasonably be expected to result in a Material Adverse Effect. None of the Company's or its Subsidiaries' employees is a member of a union that relates to such employee's relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(v) *Compliance.* Except as disclosed in the SEC Reports and as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including, without limitation, all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as would not have or reasonably be expected to result in a Material Adverse Effect.

(w) *Environmental Laws.* The Company and its Subsidiaries (i) are in compliance in all material respects with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply would be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.

(x) *Regulatory Permits.* The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits would not reasonably be expected to result in a Material Adverse Effect ("Material Permits"), and neither the Company nor any Subsidiary has received any written notice of proceedings relating to the revocation or modification of any Material Permit.

(y) *Title to Assets.* The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance in all material respects.

(z) *Intellectual Property.* To the knowledge of the Company, the Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the “*Intellectual Property Rights*”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or be abandoned, within two (2) years from the date of this Agreement, except where such action would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as would not have or reasonably be expected to not have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has no knowledge that it lacks or will be unable to obtain any rights or licenses to use all Intellectual Property Rights that are necessary to conduct its business.

(aa) *Insurance.* The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate Purchase Price. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(bb) *Transactions With Affiliates and Employees.* Except as set forth in the SEC Reports, none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(cc) *Sarbanes-Oxley; Internal Accounting Controls.* The Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective and applicable to the Company as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date or the Option Closing Date, as applicable. Except as set forth in the SEC Reports, the Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(dd) *Certain Fees; FINRA Affiliation.* Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. To the Company's knowledge, there are no other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may affect the Underwriters' compensation, as determined by FINRA. Other than with respect to compensation paid to Ladenburg Thalmann & Co., Inc. in connection with the Company's securities offering in November 2019, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to (i) any person, as a finder's fee, investing fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who provided capital to the Company, (ii) any FINRA member, or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member within the 180-day period prior to the date on which the Registration Statement was filed with the Commission (the "Filing Date") or thereafter. To the Company's knowledge, no (i) officer or director of the Company or its subsidiaries, (ii) owner of 5% or more of the Company's unregistered securities or that of its subsidiaries or (iii) owner of any amount of the Company's unregistered securities acquired within the 180-day period prior to the Filing Date, has any direct or indirect affiliation or association with any FINRA member. The Company will advise the Underwriters and their respective counsel if it becomes aware that any officer, director or stockholder of the Company or its subsidiaries is or becomes an affiliate or associated person of a FINRA member participating in the Offering.

(ee) *Investment Company.* The Company is not, and is not an affiliate of, and immediately after receipt of payment for the Securities, will not be or be an affiliate of, an “investment company” within the meaning of the Investment Company Act of 1940, as amended.

(ff) *Registration Rights.* Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, no Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(gg) *Listing and Maintenance Requirements.* The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as disclosed in the SEC Reports, the Company has not, in the 12 months preceding the date hereof, received notice from the Nasdaq Capital Market to the effect that the Company is not in compliance with the listing or maintenance requirements of the Nasdaq Capital Market. Except as disclosed in the SEC Reports, the Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through DTC or another established clearing corporation and the Company is current in payment of the fees to DTC (or such other established clearing corporation) in connection with such electronic transfer. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of The Nasdaq Stock Market, except to the extent that certain approvals or authorizations with respect to the Securities are required to be obtained or made under applicable rules of The Nasdaq Stock Market.

(hh) [Reserved.]

(ii) *No Integrated Offering.* Neither the Company or any Person acting on its behalf, nor, to the Company’s knowledge, any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the Company (as such terms are used in and construed under Rule 405 under the Securities Act) (each, an “Affiliate”) or any Person acting on their behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of The Nasdaq Stock Market.

(jj) *Solvency.* Based on the consolidated financial condition of the Company as of the Closing Date and as of the Option Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, may be insufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, the Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date or the Option Closing Date, as applicable. The Registration Statement, the General Disclosure Package and the Prospectus sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, “Indebtedness” means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company’s consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(kk) *Tax Status.* Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, each of the Company and its Subsidiaries (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.

(ll) *Foreign Corrupt Practices.* Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of Foreign Corrupt Practices Act of 1977, as amended.

(mm) *Accountants.* The Company's accounting firm is RSM US LLP (the "Accountants"). To the knowledge and belief of the Company, such accounting firm (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ending December 31, 2020.

(nn) *Regulation M Compliance.* The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Underwriters in connection with the Offering.

(oo) *Office of Foreign Assets Control.* Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or Affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(pp) *U.S. Real Property Holding Corporation.* The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon the Representative's request.

(qq) *Bank Holding Company Act.* Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA"), and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(rr) *Money Laundering.* The operations of the Company and its Subsidiaries are and have been conducted at all times in material compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

(ss) *Share Option Plans.* Each share option granted by the Company under the Company's share option plans was granted (i) in accordance with the terms of the Company's share option plans and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such share option would be considered granted under GAAP and applicable law. No share option granted under the Company's share option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, share options prior to, or otherwise knowingly coordinate the grant of share options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(tt) *Officer's Certificates.* Any certificate signed by any officer of the Company or any of its Subsidiaries delivered to the Representative or its counsel shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

4. Agreements of the Company. The Company agrees with the Underwriters as follows:

(a) *Amendments and Supplements to Registration Statement.* The Company shall not, either prior to any effective date or thereafter during such period as the Prospectus is required by law to be delivered (whether physically or through compliance with Rule 172 of the Rules and Regulations or any similar rule) (the "Prospectus Delivery Period") in connection with sales of the Securities by an Underwriter or dealer, amend or supplement the Registration Statement, the General Disclosure Package or the Prospectus, unless a copy of such amendment or supplement thereof shall first have been submitted to the Representative within a reasonable period of time prior to the filing or, if no filing is required, the use thereof and the Representative shall not have objected thereto in good faith.

(b) *Amendments and Supplements to the Registration Statement, the General Disclosure Package, and the Prospectus and Other Securities Act Matters.* During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the General Disclosure Package, the Registration Statement and the Prospectus. If, during the Prospectus Delivery Period, any event or development shall occur or condition exist as a result of which the General Disclosure Package or the Prospectus, as then amended or supplemented, would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or if it shall be necessary to amend or supplement the General Disclosure Package or the Prospectus in order to make the statements therein, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or if in the opinion of the Representative it is otherwise necessary to amend or supplement the Registration Statement, the General Disclosure Package or the Prospectus, or to file a new registration statement containing the Prospectus, in order to comply with the Act, the Rules and Regulations, the Exchange Act or the Exchange Act Rules, including in connection with the delivery of the Prospectus, the Company agrees to (i) promptly notify the Representative of any such event or condition and (ii) promptly prepare (subject to Section 4(a) and 4(f) hereof), file with the Commission (and use its best efforts to have any amendment to the Registration Statement or any new registration statement to be declared effective) and furnish at its own expense to the Representative (and, if applicable, to dealers), amendments or supplements to the Registration Statement, the General Disclosure Package or the Prospectus, or any new registration statement, necessary in order to make the statements in the General Disclosure Package or the Prospectus as so amended or supplemented, in the light of the circumstances then prevailing or under which they were made, as the case may be, not misleading, or so that the Registration Statement or the Prospectus, as amended or supplemented, will comply with the Act, the Rules and Regulations, the Exchange Act or the Exchange Act Rules or any other applicable law.

(c) *Notifications to the Underwriters.* The Company shall notify the Representative promptly, and shall confirm such advice in writing, (i) when any post-effective amendment to the Registration Statement has become effective, (ii) of any request by the Commission for amendments or supplements to the Registration Statement or the Prospectus or for additional information, (iii) of the commencement by the Commission or by any state securities commission of any proceedings for the suspension of the qualification of any of the Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose, including, without limitation, the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose or the threat thereof, (iv) of the happening of any event during the Prospectus Delivery Period that in the judgment of the Company makes any statement made in the Registration Statement or the Prospectus misleading (including by omission) or untrue or that requires the making of any changes in the Registration Statement or the Prospectus in order to make the statements therein, in light of the circumstances in which they are made, not misleading (including by omission), and (v) of receipt by the Company or any representative of the Company of any other communication from the Commission relating to the Company, the Registration Statement, any preliminary prospectus or the Prospectus. If at any time the Commission shall issue any order suspending the effectiveness of the Registration Statement, the Company shall use best efforts to obtain the withdrawal of such order at the earliest possible moment. The Company shall comply with the provisions of and make all requisite filings with the Commission pursuant to Rules 424(b), 430A, 430B and 462(b) of the Rules and Regulations and to notify the Representative promptly of all such filings.

(d) *Executed Registration Statement.* The Company shall furnish to the Representative, without charge, one signed copy of the Registration Statement, and of any post-effective amendment thereto, including financial statements and schedules, and all exhibits thereto, and shall furnish to the Representative, without charge, a copy of the Registration Statement and any post-effective amendment thereto, including financial statements and schedules but without exhibits.

(e) *Undertakings.* The Company shall comply with all the provisions of any undertakings contained and required to be contained in the Registration Statement.

(f) *Prospectus.* The Company shall prepare the Prospectus in a form approved by the Representative and shall file such Prospectus with the Commission pursuant to Rule 424(b) of the Rules and Regulations with a filing date not later than the second business day following the execution and delivery of this Agreement. From time to time during the period when the Prospectus is required (or, but for the provisions of Rule 172 under the Act, would be required) to be delivered, the Company shall deliver to the Representative, without charge, as many copies of the Prospectus and any amendment or supplement thereto as the Representative may reasonably request. The Company consents to the use of the Prospectus and any amendment or supplement thereto by the Representative and by all dealers to whom the Securities may be sold, both in connection with the offering or sale of the Securities and for any period of time thereafter during the Prospectus Delivery Period. If, during the Prospectus Delivery Period any event shall occur that in the judgment of the Company or counsel to the Underwriters should be set forth in the Prospectus in order to make any statement therein, in the light of the circumstances under which it was made, not misleading (including by omission), or if it is necessary to supplement or amend the Prospectus to comply with law, the Company shall forthwith prepare and duly file with the Commission an appropriate supplement or amendment thereto, and shall deliver to the Representative, without charge, such number of copies thereof as the Representative may reasonably request.

(g) *Permitted Free Writing Prospectuses.* The Company represents and agrees that it has not made and, unless it obtains the prior consent of the Representative, will not make, any offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 of the Rules and Regulations, required to be filed with the Commission or retained by the Company under Rule 433 of the Rules and Regulations; *provided* that the prior written consent of the Representative hereto shall be deemed to have been given in respect of the Issuer Free Writing Prospectuses included in Schedule B hereto. Any such free writing prospectus consented to by the Representative is herein referred to as a “Permitted Free Writing Prospectus.” The Company agrees that (i) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, and (ii) has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 of the Act applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping. If at any time following the issuance of an Issuer Free Writing Prospectus there occurs an event or development as a result of which such Issuer Free Writing Prospectus would conflict with the information contained in the Registration Statement relating to the Securities or would include an untrue statement of material fact or would omit to state a material fact necessary in order to make the statements therein, in light of the circumstances prevailing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement, or omission. The Company represents that it has satisfied and agrees that it will satisfy the conditions in Rule 433 to avoid a requirement to file with the Commission any electronic road show.

(h) *Compliance with Blue Sky Laws.* Prior to any public offering of the Securities by the Underwriters, the Company shall cooperate with the Representative and counsel to the Underwriters in connection with the registration or qualification (or the obtaining of exemptions from the application thereof) of the Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representative may so request, *provided, however*, that in no event shall the Company be obligated to qualify a public offering outside the United States or to do business as a foreign corporation in any jurisdiction where it is not now so qualified, to qualify or register as a dealer in securities, to take any action which would subject it to general service of process in any jurisdiction where it is not now so subject or subject itself to ongoing taxation in respect of doing business in any jurisdiction in which it is not so subject.

(i) *Delivery of Financial Statements.* During a period of five years commencing on the date hereof, the Company shall furnish to the Representative and each other Underwriter who may so request copies of such financial statements and other periodic and special reports as the Company may from time to time distribute generally to the holders of any class of its capital stock, and will furnish to the Representative and each other Underwriter who may so request a copy of each annual or other report it shall be required to file with the Commission; *provided, however*, that the availability of electronically transmitted copies filed with the Commission pursuant to EDGAR shall satisfy the Company’s obligation to furnish copies hereunder.

(j) *Availability of Earnings Statements.* The Company shall make generally available to holders of its securities as soon as may be practicable but in no event later than the last day of the fifteenth (15th) full calendar month following the calendar quarter in which the most recent effective date occurs in accordance with Rule 158 of the Rules and Regulations, an earnings statement (which need not be audited but shall be in reasonable detail) covering a period of twelve (12) months ended commencing after the effective date, and satisfying the provisions of Section 11(a) of the Act (including Rule 158 of the Rules and Regulations).

(k) *Consideration; Payment of Expenses.*

(i) The Representative reserves the right to reduce any item of compensation or adjust the terms thereof as specified herein in the event that a determination shall be made by FINRA to the effect that the Underwriters' aggregate compensation is in excess of FINRA rules or that the terms thereof require adjustment.

(ii) If the Closing occurs, the Company grants the Representative the right of first refusal for a period of six (6) months from the date of commencement of sales pursuant to the Prospectus to act as underwriter and book runner and/or placement agent, with the right to receive at least 60% of the economics related to such future financing, for any and all future public or private equity or equity-linked offerings and public debt offerings undertaken by the Company, excluding any offering or offerings of Securities sold only to the persons or entities listed on Addendum B to that certain engagement letter between the Representative and the Company, dated August 21, 2020 . The Company shall provide written notice to the Representative with the terms of such offering and if the Representative fails to accept in writing any such proposal within seven (7) business days after receipt of such written notice, then the Representative will have no claim or right with respect to any such offering(s).

(iii) Whether or not the transactions contemplated by this Agreement, the Registration Statement and the Prospectus are consummated or this Agreement is terminated, the Company hereby agrees to pay the following:

(1) all expenses in connection with the preparation, printing, formatting for EDGAR and filing of the Registration Statement, any Preliminary Prospectus and the Prospectus and any and all exhibits, amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers;

(2) all fees and expenses in connection with filings with FINRA's Public Offering System;

(3) all fees, disbursements and expenses of the Company's counsel, accountants and other agents and representatives in connection with the registration of the Securities under the Act and the Offering;

(4) all expenses in connection with the qualifications of the Securities for offering and sale under state or foreign securities or blue sky laws (including, without limitation, all filing and registration fees, and the fees and disbursements of Underwriters' counsel;

(5) all fees and expenses in connection with listing the Securities on a national securities exchange;

(6) all expenses, including travel and lodging expenses, of the Company's officers, directors and employees and any other expense of the Company incurred in connection with attending or hosting meetings with prospective purchasers of the Securities and any fees and expenses associated with the i-Deal system and NetRoadshow;

(7) any stock transfer taxes or other taxes incurred in connection with this Agreement or the offering, including any stock transfer taxes payable upon the transfer of securities to the Underwriters;

(8) the costs associated with preparing, printing and delivering certificates representing the Securities; and

(9) the cost and charges of any transfer agent or registrar for the Securities.

(l) *Reimbursement of Expenses.* If the Offering is consummated, the Company agrees to reimburse the Underwriters for their documented out of pocket costs and expenses (including Underwriters' counsel's fees and expenses) incident to the Offering; *provided, however,* that all such costs and expenses (including Underwriters' counsel's fees and expenses) that are incurred by the Underwriters shall not exceed \$40,000 in the aggregate. If the Offering is not consummated for any reason (other than a breach by the Representative of any of its obligations hereunder), the Company shall reimburse the Underwriters for all documented out-of-pocket expenses (including the reasonable fees, disbursements and other charges of counsel to the Underwriters) actually incurred by the Underwriters in connection herewith and as allowed under FINRA Rule 5110; *provided, however,* that the maximum amount of costs and expenses to be reimbursed by Company to the Underwriters pursuant to this Section 4(l) shall not exceed \$10,000 (including the reasonable fees, disbursements and other charges of counsel to the Underwriters).

(m) *No Stabilization or Manipulation.* The Company shall not at any time, directly or indirectly, take any action intended to cause or result in, or which might reasonably be expected to cause or result in, or which will constitute, stabilization or manipulation, under the Act or otherwise, of the price of the Securities to facilitate the sale or resale of any of the Securities.

(n) *Use of Proceeds.* The Company shall apply the net proceeds from the offering and sale of the Securities to be sold by the Company in the manner set forth in the General Disclosure Package and the Prospectus under "Use of Proceeds" and shall file such reports with the Commission with respect to the sale of the Securities and the application of the proceeds therefrom as may be required in accordance with Rule 463 under the Act.

(o) *Lock-Up Agreements of Company, Management and Affiliates.* The Company shall not, for a period of sixty (60) days after the Closing Date (the "Lock-Up Period"), without the prior written consent of Maxim (which consent may be withheld in its sole discretion), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or file with the Commission a registration statement under the Act to register, any shares of common stock warrants, or any securities convertible into or exercisable or exchangeable for common stock or (2) enter into any swap or other derivatives transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic benefits or risks of ownership of shares of common stock, or warrants, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock, warrants or other securities, in cash or otherwise, or publicly disclose the intention to enter into any transaction described in clause (1) or (2) above. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) the Shares to be sold in connection with the Concurrent Private Placement, (C) any shares of common stock issued pursuant to a trading plan established prior to June 30, 2020 pursuant to Rule 10b5-1 of the Exchange Act, and (D) the issuance of Common Stock upon the exercise of warrants as disclosed as outstanding in the Registration Statement, the General Disclosure Package or the Prospectus, provided that such warrants have not been amended since the date of this Agreement to increase the number of such warrants or warrant shares or to decrease the exercise price of such warrants or to extend the term of such warrants. The Company has caused each of its officers and directors of the Company to enter into agreements with the Representative in the form set forth in Exhibit A.

(p) *Lock-Up Releases.* If Maxim, in its sole discretion, agrees to release or waive the restrictions set forth in a lock-up letter described in Section 4(o) hereof for an officer or director of the Company and provides the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit B hereto through a major news service at least two business days before the effective date of such release or waiver, or any other method that satisfies the obligations described in FINRA Rule 5131(d)(2) at least two business days before the effective date of the release or waiver.

(q) *NASDAQ listing.* The Company will use its reasonable best efforts to effect and maintain the listing of the Common Stock on the NASDAQ Capital Market for at least three (3) years after the Closing Date.

(r) The Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement for at least three (3) years after the Closing Date.

5. Conditions of the Obligations of the Underwriters. The obligation of the Underwriters to purchase the Firm Shares on the Closing Date or the Option Shares on the Option Closing Date, as the case may be, as provided herein is subject to the accuracy of the representations and warranties of the Company, the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Post Effective Amendments and Prospectus Filings.* All filings made pursuant to Rules 424, 430A, or 430B of the Rules and Regulations, as applicable, shall have been made or will be made prior to the Closing Date in accordance with all such applicable rules.

(b) *No Stop Orders, Requests for Information and No Amendments.* (i) No stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall be pending or, to the knowledge of the Company, threatened by the Commission, (ii) no order suspending the qualification or registration of the Securities under the securities or Blue Sky laws of any jurisdiction shall be in effect and no proceeding for such purpose shall be pending before or threatened or contemplated by the authorities of any such jurisdiction, (iii) any request for additional information on the part of the staff of the Commission or any such authorities shall have been complied with to the satisfaction of the staff of the Commission or such authorities and (iv) after the date hereof no amendment or supplement to the Registration Statement or the Prospectus shall have been filed unless a copy thereof was first submitted to the Representative and the Representative did not object thereto in good faith, and the Representative shall have received certificates, dated the Closing Date and the Option Closing Date and signed by the Chief Executive Officer and the Chief Financial Officer of the Company in their capacities as such, and not individually, (who may, as to proceedings threatened, certify to their knowledge), to the effect of clauses (i), (ii) and (iii).

(c) *No Material Adverse Changes.* Since the respective dates as of which information is given in the Registration Statement and the Prospectus, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus (i) there shall not have been a Material Adverse Change, (ii) the Company shall not have incurred any material liabilities or obligations, direct or contingent, (iii) the Company shall not have entered into any material transactions not in the ordinary course of business other than pursuant to this Agreement and the transactions referred to herein, (iv) the Company shall not have issued any securities (other than the Securities or the Shares issued in the ordinary course of business pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, General Disclosure Package and the Prospectus) or declared or paid any dividend or made any distribution in respect of its capital stock of any class or debt (long-term or short-term), and (v) no material amount of the assets of the Company shall have been pledged, mortgaged or otherwise encumbered.

(d) *No Actions, Suits or Proceedings.* Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus, there shall have been no actions, suits or proceedings instituted, or to the Company's knowledge, threatened against, the Company or its subsidiaries or any of their respective officers in their capacity as such, before or by any federal, state or local court, commission, regulatory body, administrative agency or other governmental body, domestic or foreign.

(e) *All Representations True and Correct and All Conditions Fulfilled.* Each of the representations and warranties of the Company contained herein shall be true and correct as of the date of the Agreement and at the Closing Date as if made at the Closing Date and any Option Closing Date, as the case may be, and all covenants and agreements contained herein to be performed by the Company and all conditions contained herein to be fulfilled or complied with by the Company at or prior to the Closing Date and any Option Closing Date, shall have been duly performed, fulfilled or complied with.

(f) *Opinions of Counsel to the Company.* The Underwriters shall have received the opinions and letters, each dated the Closing Date and any Option Closing Date, as the case may be, each reasonably satisfactory in form and substance to the Representative and counsel for the Underwriters, from (1) Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., as corporate/securities counsel and (2) Pearne & Gordon LLP, as intellectual property counsel.

(g) *Accountants' Comfort Letter.* On the date of the Prospectus, the Representative shall have received from the Accountants a letter dated the date of its delivery, addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative and counsel to the Underwriters, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement and the Prospectus. At the Closing Date and any Option Closing Date, as the case may be, the Representative shall have received from the Accountants a letter dated such date, in form and substance reasonably satisfactory to the Representative and counsel to the Underwriters, to the effect that they reaffirm the statements made in the letter furnished by them pursuant to the preceding sentence and have conducted additional procedures with respect to certain financial figures included in the Prospectus, except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to the Closing Date or any Option Closing Date, as the case may be.

(h) *Officers' Certificates.* At the Closing Date and any Option Closing Date, there shall be furnished to the Representative an accurate certificate, dated the date of its delivery, signed by each of the Chief Executive Officer and the Chief Financial Officer of the Company, in their capacities as such, and not individually, in form and substance satisfactory to the Representative and counsel to the Underwriters, to the effect that:

- (i) each signer of such certificate has carefully examined the Registration Statement and the Prospectus;
- (ii) there has not been a Material Adverse Change; and
- (iii) with respect to the matters set forth in Sections 5(b)(i) and 5(e).

(i) *Transfer Agent's Certificate.* The Company's transfer agent shall have furnished or caused to be furnished to the Representative a certificate satisfactory to the Representative of one of its authorized officers with respect to the issuance of the Shares and such other customary matters related thereto as the Representative may reasonably request.

(j) *Eligible for DTC Clearance.* At or prior to the Closing Date and each Option Closing Date, the Shares shall be eligible for clearance and settlement through the facilities of the DTC.

(k) *Lock-Up Agreements.* At the date of this Agreement, the Representative shall have received the executed “lock-up” agreements referred to in Section 4(o) hereof from the Company’s officers and directors.

(l) *Compliance with Blue Sky Laws.* The Securities shall be qualified for sale in such states and jurisdictions as the Representative may reasonably request, including, without limitation, qualification for exemption from registration or prospectus delivery requirements in the provinces and territories of Canada and other jurisdictions outside the United States, and each such qualification shall be in effect and not subject to any stop order or other proceeding on the Closing Date and the Option Closing Date.

(m) *Stock Exchange Listing.* The Company shall have applied for the listing of the Shares on the NASDAQ Capital Market.

(n) *Exchange Act Registration.* One or more registration statements in respect of the Shares have been filed on Form 8-A pursuant to Section 12(b) of the Exchange Act, each of which registration statement complies in all material respects with the Exchange Act.

(o) *Good Standing.* At the Closing Date and any Option Closing Date, the Company shall have furnished to the Representative satisfactory evidence of the good standing of the Company and its subsidiaries, in their respective jurisdictions of organization (to the extent the concept of “good standing” or such equivalent concept exists under the laws of the applicable jurisdictions) and their good standing as foreign entities in such other jurisdictions as the Representative may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions. If the applicable jurisdiction does not have a concept of “good standing,” the Company will furnish evidence in writing or any standard form of telecommunication from the appropriate governmental authorities that the relevant company was duly incorporated and remains duly registered in the jurisdiction of its incorporation.

(p) *Company Certificates.* The Company shall have furnished to the Representative such certificates, in addition to those specifically mentioned herein, as the Representative may have reasonably requested as to the accuracy and completeness at the Closing Date and any Option Closing Date of any statement in the Registration Statement, the General Disclosure Package or the Prospectus, as to the accuracy at the Closing Date and any Option Closing Date of the representations and warranties of the Company herein, as to the performance by the Company of its obligations hereunder, or as to the fulfillment of the conditions concurrent and precedent to the obligations hereunder of the Underwriters.

(q) *No Objection.* FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

If any of the conditions hereinabove provided for in this Section 5 shall not have been fulfilled when and as required by this Agreement to be fulfilled, the obligations of the Underwriters hereunder may be terminated by the Representative by notifying the Company of such termination in writing at or prior to the Closing Date or any Option Closing Date, as the case may be.

6. Indemnification.

(a) *Indemnification of the Underwriters.* The Company shall indemnify and hold harmless each Underwriter, its affiliates, the directors, officers, employees and agents of such Underwriter and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Act or Section 20 of the Exchange Act from and against any and all losses, claims, liabilities, expenses and damages (including any and all investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), to which they, or any of them, may become subject under the Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based on (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, as applicable, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact contained in any preliminary prospectus, any preliminary prospectus supplement, any Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement to any of the foregoing) or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or (iii) any untrue statement or alleged untrue statement of a material fact contained in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities, including any roadshow or investor presentations made to investors by the Company (whether in person or electronically) (collectively, "Marketing Materials") or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading or (iv) in whole or in part any inaccuracy in any material respect in the representations and warranties of the Company contained herein; *provided, however*, that the Company shall not be liable to the extent that such loss, claim, liability, expense or damage is based on any untrue statement or omission or alleged untrue statement or omission made in reliance on and in conformity with Underwriters' Information. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) *Indemnification of the Company.* Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company, its affiliates, the directors, officers, employees and agents of the Company and each other person or entity, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, against any losses, liabilities, claims, damages and expenses whatsoever, as incurred (including but not limited to reasonable attorneys' fees and any and all reasonable expenses whatsoever, incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, and any and all amounts paid in settlement of any claim or litigation), joint or several, to which they or any of them may become subject under the Act, the Exchange Act or otherwise, insofar as such losses, liabilities, claims, damages or expenses (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, any Preliminary Prospectus, the Prospectus, or any amendment or supplement to any of them, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that any such loss, liability, claim, damage or expense (or action in respect thereof) arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon the Underwriters' Information; provided, however, that in no case shall any Underwriter be liable or responsible for any amount in excess of the underwriting discount and commissions applicable to the Securities purchased by such Underwriter hereunder. The parties agree that such information provided by or on behalf of the Underwriters through the Representative consists solely of the material referred to in the last sentence of Section 3(c) hereof.

(c) *Indemnification Procedures.* Any party that proposes to assert the right to be indemnified under this Section 6 shall, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 6, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party under the foregoing provisions of this Section 6 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable out-of-pocket costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (i) the employment of counsel by the indemnified party has been authorized in writing by one of the indemnifying parties in connection with the defense of such action, (ii) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (iii) the indemnified party has reasonably concluded that a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party shall not have the right to direct the defense of such action on behalf of the indemnified party), (iv) the indemnifying party does not diligently defend the action after assumption of the defense, or (v) the indemnifying party has not in fact employed counsel satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel shall be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges shall be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party shall not be liable for any settlement of any action or claim effected without its written consent (which consent will not be unreasonably withheld or delayed). No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 6 (whether or not any indemnified party is a party thereto), unless (x) such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party, and (y) the indemnifying party confirms in writing its indemnification obligations hereunder with respect to such settlement, compromise or judgment. Notwithstanding the foregoing, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a) effected without its written consent if (A) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (B) such indemnifying party shall have received notice of the terms of such settlement at least 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) *Contribution.* In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 6 is applicable in accordance with its terms but for any reason is held to be unavailable, the Company and the Underwriters shall contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Underwriters, such as persons who control the Company within the meaning of the Act, officers of the Company who signed the Registration Statement and directors of the Company, who may also be liable for contribution), to which the Company and the Underwriter may be subject 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 Securities pursuant to this Agreement. The relative benefits received by the Company and the Underwriters shall be deemed to be in the same proportion as (x) the total proceeds from the Offering (net of underwriting discount and commissions but before deducting expenses) received by the Company bears to (y) the underwriting discount and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Underwriters, on the other, with respect to the statements or omissions which resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 6(d) were to be determined by pro rata allocation or by any other method of allocation (even if the Underwriters were treated as one entity for such purpose) which does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense or damage, or action in respect thereof, referred to above in this Section 6(d) shall be deemed to include, for purpose of this Section 6(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 6(d), no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by it. No person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 6(d), any person who controls a party to this Agreement within the meaning of the Act will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, and each director, officer, employee, counsel or agent of an Underwriter will have the same rights to contribution as such Underwriter, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 6(d), will notify any such party or parties from whom contribution may be sought, but the omission so to notify will not relieve the party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 6(d). The obligations of the Underwriters to contribute pursuant to this Section 6(d) are several in proportion to the respective number of Securities to be purchased by each of the Underwriters hereunder and not joint. No party will be liable for contribution with respect to any action or claim settled without its written consent (which consent will not be unreasonably withheld).

(e) *Survival.* The indemnity and contribution agreements contained in this Section 6 and the representations and warranties of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or any controlling Person thereof, (ii) acceptance of any of the Securities and payment therefor or (iii) any termination of this Agreement.

7. *Termination.* The obligations of the Underwriters under this Agreement may be terminated at any time prior to the Closing Date (or, with respect to the Option Shares, on or prior to the Option Closing Date), by notice to the Company from the Representative, without liability on the part of the Underwriters to the Company, if, prior to delivery and payment for the Firm Shares to be delivered in the form of the Firm Shares (or the Option Shares), in the sole judgment of the Representative, any of the following shall occur:

(a) trading or quotation in any of the equity securities of the Company shall have been suspended or limited by the Commission, The Nasdaq Stock Market or by an exchange or otherwise;

(b) trading in securities generally on the New York Stock Exchange, the NYSE MKT, the NASDAQ Capital Market, the NASDAQ Global Market, the NASDAQ Global Select Market shall have been suspended or limited or minimum or maximum prices shall have been generally established on such exchange, or additional material governmental restrictions, not in force on the date of this Agreement, shall have been imposed upon trading in securities generally by such exchange or by order of the Commission or any court or other governmental authority;

(c) a general banking moratorium shall have been declared by any of U.S. federal, New York authorities;

(d) the United States shall have become engaged in new hostilities, there shall have been an 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 there shall have occurred such a material adverse change in general economic, political or financial conditions, including, without limitation, as a result of terrorist activities after the date hereof (or the effect of international conditions on the financial markets in the United States shall be such), or any other calamity or crisis shall have occurred, the effect of any of which is such as to make it impracticable or inadvisable to market the Securities on the terms and in the manner contemplated by the Prospectus;

(e) the Company shall have sustained a loss material or substantial to the Company by reason of flood, fire, accident, hurricane, earthquake, theft, sabotage, or other calamity or malicious act, whether or not such loss shall have been insured, the effect of any of which is such as to make it impracticable or inadvisable to market the Securities on the terms and in the manner contemplated by the Prospectus; or

(f) there shall have been a Material Adverse Change.

8. Underwriter Default.

(a) If any Underwriter or Underwriters shall default in its or their obligation to purchase Firm Shares hereunder, and if the Securities with respect to which such default relates (the “Default Securities”) do not (after giving effect to arrangements, if any, made by the Representative pursuant to subsection (b) below) exceed in the aggregate 10% of the number of Firm Shares, each non-defaulting Underwriter, acting severally and not jointly, agrees to purchase from the Company that number of Default Securities that bears the same proportion to the total number of Default Securities then being purchased as the number of Firm Shares set forth opposite the name of such Underwriter on Schedule A hereto bears to the aggregate number of Firm Shares set forth opposite the names of the non-defaulting Underwriters; subject, however, to such adjustments to eliminate fractional securities as the Representative in its discretion shall make.

(b) In the event that the aggregate number of Default Securities exceeds 10% of the number of Firm Shares, (i) the Company or the Representative will have the right to terminate this Agreement without liability on the part of the Company or the non-defaulting Underwriters (except in each case as provided in Sections 4 (k), 6 and 8) or (ii) at the election of the Company, the Representatives may arrange for themselves or for another party or parties (including any non-defaulting Underwriter or Underwriters who so agree) to purchase the Default Securities on the terms contained herein. Nothing in this Agreement shall relieve a defaulting Underwriter or Underwriters of its or their liability, if any, to the other Underwriters and the Company for damages occasioned by its or their default hereunder.

(c) In the event that any Default Securities are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, the Representatives or the Company shall have the right to postpone the Closing Date for a period, not exceeding five (5) Business Days, in order to effect whatever changes may thereby be necessary in the Registration Statement or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment or supplement to the Registration Statement or the Prospectus which, in the reasonable opinion of Underwriters’ Counsel, may be necessary or advisable. The term “Underwriter” as used in this Agreement shall include any party substituted under this Section 8 with like effect as if it had originally been a party to this Agreement with respect to such Firm Shares.

9. Miscellaneous.

(a) *Notices.* Notice given pursuant to any of the provisions of this Agreement shall be in writing and, unless otherwise specified, shall be mailed, hand delivered or telecopied (a) if to the Company, at the office of the Company, 19 Presidential Way, Woburn, Massachusetts 01801, telephone number: (617) 583-1700, Attention: Chief Executive Officer, or (b) if to the Representative or any Underwriter, to Maxim Group LLC, 405 Lexington Avenue, New York, New York 100174, Attention: Legal Department, telecopy number: (212) 895-3555. Any such notice shall be effective only upon receipt. Any notice under Section 6 hereof may be made by telecopy or telephone, but if so made shall be subsequently confirmed in writing.

(b) *No Third Party Beneficiaries.* This Agreement has been and is made solely for the benefit of the Underwriters, the Company and, with respect to Section 6, the controlling persons, directors, officers, employees, counsel and agents referred to in Section 6 hereof, and their respective successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. The term "successors and assigns" as used in this Agreement shall not include a purchaser of Securities from any Underwriter in his, her or its capacity as such a purchaser, as such purchaser of Securities from such Underwriter.

(c) *Survival of Representations and Warranties.* All representations, warranties and agreements of the Company contained herein or in certificates or other instruments delivered pursuant hereto shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the Underwriters or any of their controlling persons and shall survive delivery of and payment for the Securities hereunder.

(d) *Disclaimer of Fiduciary Relationship.* The Company acknowledges and agrees that (i) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the Underwriters, on the other hand, (ii) in connection with the Offering contemplated by this Agreement and the process leading to such transaction, the Underwriters are and have been acting pursuant to a contractual relationship created solely by this Agreement and are not agents or fiduciaries of the Company or its securityholders, creditors, employees or any other party, (iii) no Underwriter has assumed nor will it assume any advisory or fiduciary responsibility in favor of the Company with respect to the offering of the Securities contemplated by this Agreement or the process leading thereto (irrespective of whether such Underwriter or its affiliates has advised or is currently advising the Company on other matters) and each such Underwriter has no obligation to the Company with respect to the offering of the Securities contemplated by this Agreement except the obligations expressly set forth in this Agreement, (iv) the Underwriters and their affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) no Underwriter has provided any legal, accounting, regulatory or tax advice with respect to the Offering contemplated by this Agreement and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

(e) *Governing Law.* THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED ENTIRELY WITHIN SUCH STATE.

(f) *Submission to Jurisdiction.* Each party hereby irrevocably submits to the non-exclusive jurisdiction of any New York State or United States federal court sitting in The City of New York, Borough of Manhattan, over any suit, action or proceeding arising out of or relating to this Agreement, the Disclosure Package, the Prospectus, the Registration Statement, or the offering of the Securities. Each party hereby irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of venue of any such suit, action or proceeding brought in such a court and any claim that any such suit, action or proceeding brought in such a court has been brought in an inconvenient forum. To the extent that either party has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, such party irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding including without limitation, any immunity pursuant to the U.S. Foreign Sovereign Immunities Act of 1976, as amended. Each of the Underwriters and the Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the Supreme Court of the State of New York, New York County, or in the United States District Court for the Southern District of New York and agrees that service of process upon the Company mailed by certified mail or delivered by Federal Express via overnight delivery to the Company's address shall be deemed in every respect effective service of process upon the Company in any such suit, action or proceeding, and service of process upon an Underwriter mailed by certified mail or delivered by Federal Express via overnight delivery to the Underwriters' address shall be deemed in every respect effective service of process upon such Underwriter in any such suit, action or proceeding.

(g) *Judgment Currency.* If for the purposes of obtaining judgment in any court it is necessary to convert a sum due hereunder into any currency other than United States dollars, the parties hereto agree, to the fullest extent permitted by law, that the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Underwriters could purchase United States dollars with such other currency in The City of New York on the business day preceding that on which final judgment is given. The obligation of the Company with respect to any sum due from it to an Underwriter or any person controlling such Underwriter shall, notwithstanding any judgment in a currency other than United States dollars, not be discharged until the first business day following receipt by such Underwriter or controlling person of any sum in such other currency, and only to the extent that such Underwriter or controlling person may in accordance with normal banking procedures purchase United States dollars with such other currency. If the United States dollars so purchased are less than the sum originally due to such Underwriter or controlling person hereunder, the Company agrees as a separate obligation and notwithstanding any such judgment, to indemnify such Underwriter or controlling person against such loss. If the United States dollars so purchased are greater than the sum originally due to such Underwriter or controlling person hereunder, such Underwriter or controlling person agrees to pay to the Company an amount equal to the excess of the dollars so purchased over the sum originally due to such Underwriter or controlling person hereunder.

(h) *Counterparts.* This Agreement may be signed in two or more counterparts with the same effect as if the signatures thereto and hereto were upon the same instrument.

(i) *Survival of Provisions Upon Invalidity of Any Single Provision.* In case any provision in this Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(j) *Waiver of Jury Trial.* The Company and each Underwriter each hereby irrevocably waive any right they may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or the transactions contemplated hereby.

(k) *Titles and Subtitles.* The titles of the sections and subsections of this Agreement are for convenience and reference only and are not to be considered in construing this Agreement.

(l) *Entire Agreement.* This Agreement embodies the entire agreement and understanding between the parties hereto and supersedes all prior agreements and understandings relating to the subject matter hereof. This Agreement may not be amended or otherwise modified or any provision hereof waived except by an instrument in writing signed by the parties hereto.

[Signature page follows]

If the foregoing correctly sets forth your understanding, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among us.

Very truly yours,

YIELD10 BIOSCIENCE, INC.

By: /s/ Oliver P. Peoples
Name: Oliver P. Peoples
Title: President and CEO

Accepted by the Representatives, acting for themselves and as Representatives of the Underwriters named on Schedule A hereto, as of the date first written above:

MAXIM GROUP LLC

By: /s/ Clifford A. Teller
Name: Clifford A. Teller
Title: Executive Managing Director, Investment Banking

SCHEDULE A

Name of Underwriter	Number of Firm Shares Being Purchased
Maxim Group LLC	835,000
Total	835,000

SCHEDULE B

ISSUER FREE WRITING PROSPECTUSES:

S-I-1

SCHEDULE C

1. The public offering price per Firm Share shall be \$4.25.
2. The Company is selling 835,000 Firm Shares.
3. The Company has granted an option to the Representative, on behalf of the Underwriters, to purchase up to an additional 125,250 Firm Shares.

LOCK-UP AGREEMENT

August __, 2020

Maxim Group LLC
405 Lexington Avenue
New York, NY 10174

Re: **Yield10 Bioscience, Inc.**

Ladies and Gentlemen:

As an inducement to Maxim Group LLC, as representative of the underwriters (the "**Representative**"), to execute an underwriting agreement (the "**Underwriting Agreement**") providing for a public offering (the "**Offering**") of the common stock, par value \$0.01 per share (the "**Shares**"), of Yield10 Bioscience, Inc., a Delaware corporation (the "**Company**"), the undersigned hereby agrees that without, in each case, the prior written consent of the Representative, during the period specified in the second succeeding paragraph (the "**Lock-Up Period**"), the undersigned will not (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, any Shares or any securities convertible into, exercisable or exchangeable for or that represent the right to receive Shares (including, without limitation, Shares which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the U.S. Securities and Exchange Commission (the "**SEC**") and securities which may be issued upon exercise of a stock option or warrant) whether now owned or hereafter acquired (the "**Undersigned's Securities**") or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Undersigned's Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Shares or such other securities, in cash or otherwise. The foregoing restriction is expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned's Securities even if such Undersigned's Securities would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include, without limitation, any short sale or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any of the Undersigned's Securities or with respect to any security that includes, relates to, or derives any significant part of its value from such Undersigned's Securities.

In addition, the undersigned agrees that, without the prior written consent of the Representative, it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to, the registration of any Shares or any security convertible into or exercisable or exchangeable for Shares other than as contemplated in the registration statement relating to the Offering.

The Lock-Up Period shall mean the period commencing on the date of this Lock-Up Agreement and continue and include the date sixty (60) days after the date of the final prospectus supplement used to sell Shares in the Offering pursuant to the Underwriting Agreement.

Notwithstanding the foregoing, the undersigned may transfer the Undersigned's Securities (i) to a Permitted Transferee, (ii) as a *bona fide* gift or gifts, (iii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, (iv) by virtue of the laws of descent and distribution upon death of the undersigned, or (v) pursuant to a qualified domestic relations order. As used in this Agreement, the term "Permitted Transferee" shall mean, if the undersigned is a corporation, company, business trust, association, limited liability company, partnership, limited liability partnership or other entity (collectively, the "*Entities*" or, individually, the "*Entity*"), to any person or Entity which controls, is directly or indirectly controlled by, or is under common control with the undersigned and, if the undersigned is a partnership or limited liability company, to its partners, former partners or an affiliated partnership (or members, former members or an affiliated limited liability company) managed by the same manager or managing partner (or managing member, as the case may be) or management company, or managed by an entity controlling, controlled by, or under common control with, such manager or managing partner (or managing member) or management company in accordance with partnership (or membership) interests; *provided*, in the case of clauses (i) through (v), that the transferee agrees in writing with the Representative to be bound by the terms of this Lock-Up Agreement, and *provided*, further, that in the case of clauses (i) through (iii), that no filing by any party in any public report or filing with the SEC shall be required or shall be made voluntarily in connection with such transfer. For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

In addition, the foregoing restrictions shall not apply to (i) the exercise of stock options granted pursuant to the Company's equity incentive plans; *provided*, that such restrictions shall apply to any of the Undersigned's Securities issued upon such exercise, or (ii) the establishment of any contract, instruction or plan (a "*Plan*") that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) under the Exchange Act; *provided*, that no sales of the Undersigned's Securities shall be made pursuant to such a Plan prior to the expiration of the Lock-Up Period, and such a Plan may only be established if no public announcement of the establishment or existence thereof and no filing with the SEC or other regulatory authority in respect thereof or transactions thereunder or contemplated thereby, by the undersigned, the Company or any other person, shall be required, and no such announcement or filing is made voluntarily, by the undersigned, the Company or any other person, prior to the expiration of the Lock-Up Period.

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

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Lock-Up Agreement and that, upon request, the undersigned will execute any additional documents necessary in connection with the enforcement hereof. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that the undersigned shall be released from all obligations under this Lock-Up Agreement if (i) the Company or the Representative informs the other that it does not intend to proceed with the Offering, (ii) the Underwriting Agreement does not become effective or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares to be sold thereunder, or (iii) the Offering is not completed by September 30, 2020.

The undersigned understands that the Representative is entering into the Underwriting Agreement and proceeding with the Offering in reliance upon this Lock-Up Agreement.

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

Whether or not the Offering actually occurs depends on a number of factors, including market conditions. Any Offering will only be made pursuant to the Underwriting Agreement, the terms of which are subject to negotiation among the parties thereto.

[Signature page follows]

Very truly yours,

(Name - Please Print)

(Signature)

B-4

Form of Press Release

[]
[Date]

Yield10 Bioscience, Inc., a Delaware corporation (the “Company”), announced today that Maxim Group LLC, the lead book-running manager in the Company’s recent public sale of common stock, is [waiving][releasing] a lock-up restriction with respect to [____] of the Company’s Shares held by [certain officers or directors][an officer or director] of the Company. The [waiver][release] will take effect on [____], and the Shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

August 25, 2020
Yield10 Bioscience, Inc.
19 Presidential Way
Woburn, Massachusetts 01801

Ladies and Gentlemen:

This opinion is furnished to you in connection with the sale and issuance by Yield10 Bioscience, Inc., a Delaware corporation (the "Company"), in a public offering pursuant to the Registration Statement on Form S-3 (Registration Statement No. 333-237539 initially filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Act"), on April 1, 2020 and declared effective by the Commission on April 10, 2020 (the "Registration Statement"), of 951,835 shares ("Shares") of the Company's common stock, par value \$0.01 per share ("Common Stock"), including 116,835 shares that may be sold pursuant to the underwriters' option to purchase additional shares. The Shares are to be sold by the Company pursuant to an underwriting agreement (the "Underwriting Agreement") to be entered into by and between the Company and Maxim Group LLC on behalf of themselves and as representative to the several underwriters to be named therein. The Shares are to be offered and sold in the manner described in the Registration Statement and the related prospectus included therein (the "Prospectus").

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of: (i) the Amended and Restated Certificate of Incorporation of the Company, as amended; (ii) the Amended and Restated Bylaws of the Company, as amended; (iii) certain resolutions of the Board of Directors of the Company (the "Board") relating to the issuance, sale and registration of the Shares; (iv) the Registration Statement; (v) the Prospectus; and (vi) the Underwriting Agreement. In addition, we have examined originals or copies, certified or otherwise identified to our satisfaction, of certain other corporate records, documents, instruments and certificates of public officials and of the Company, and we have made such inquiries of officers of the Company and public officials and considered such questions of law as we have deemed necessary for purposes of rendering the opinions set forth herein. Our opinions are limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought to independently verify such matters.

In rendering our opinion set forth below, we have assumed that (i) each document submitted to us is accurate and complete; (ii) each such document that is an original is authentic; (iii) each such document that is a copy conforms to an authentic original; and (iv) all signatures (other than signatures on behalf of the Company) on each such document are genuine. We have further assumed the legal capacity of natural persons, and we have assumed that each party to the documents we have examined or relied on (other than the Company) has the legal capacity or authority and has satisfied all legal requirements that are applicable to that party to the extent necessary to make such documents enforceable against that party. We have also assumed that all of the shares of Common Stock issuable following the date hereof will be issued for not less than par value. We have not verified any of those assumptions.

Based upon, subject to and limited by the foregoing, we are of the opinion that the Shares of Common Stock, when issued against payment therefor as set forth in the Registration Statement, will be validly issued, fully paid and non-assessable.

We express no opinion as to matters governed by any laws other than the Delaware General Corporation Law and the federal laws of the United States of America, as in effect on the date hereof.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption “Legal Matters” in the Prospectus. In giving such permission, we do not admit hereby that we come within the category of persons whose consent is required under Section 7 of the Act, or the rules and regulations of the Commission thereunder. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable law.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.

SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this “Agreement”) dated August 22, 2020, is entered into by and among (i) Yield10 Bioscience, Inc., a Delaware corporation (the “Company”), and (ii) each person listed on Schedule I hereto (each, an “Investor” and collectively, the “Investors”).

WHEREAS, subject to the terms and conditions set forth in this Agreement, the Company desires to issue and sell to each Investor, and each Investor, severally and not jointly, desires to purchase from the Company, an aggregate of 396,450 shares (“Shares”) of the Company’s common stock, par value \$0.01 (the “Common Stock”), in a private placement pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (the “Securities Act”).

NOW THEREFORE, in consideration of the mutual covenants made herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

1. Purchase and Sale of Securities. Subject to the terms and conditions hereof, each Investor agrees, severally and not jointly, to purchase from the Company, and the Company agrees to sell to the Investors at the Closing, the number of Shares set forth opposite each such Investor’s name on Schedule I hereto for the aggregate purchase price set forth in Schedule I hereto.

2. Issuance of Securities. Notwithstanding anything in this Agreement to the contrary, the Company shall have no obligation to sell any of the Shares to any person who is a resident of a jurisdiction in which the sale of Shares to such person would constitute a violation of the securities, “blue sky” or other similar laws of such jurisdiction (collectively referred to as the “State Securities Laws”).

3. The Closing. The closing of the purchase and sale of the Common Stock (the “Closing”) shall take place at the headquarters of the Company as promptly as practicable after the satisfaction or waiver (to the extent permitted by law) of the conditions set forth in Section 7 hereof, or at such other time and place as the Company may designate by notice to the Investors (such date and time being referred to herein as the “Closing Date”); provided, however, that if the Closing Date does not occur on or before September 30, 2020, this Agreement may be terminated by any Investor, as to such Investor’s obligations hereunder and without any effect whatsoever on the obligations between the Company and the other Investors, by written notice to the other parties.

4. Payment for Securities. Payment for the Common Stock shall be received by the Company from the Investors by wire transfer of immediately available funds or other means approved by the Company at or prior to the Closing, at the price of \$4.25 per Share. The Company shall deliver or cause its transfer agent to deliver certificates representing the Shares that each Investor purchases to each such Investor at the Closing bearing the legend set forth in Section 10.

5. Representations and Warranties of the Company. Except as otherwise specifically described in the Company’s Annual Report on Form 10-K for the year ended December 31, 2019, the Company’s Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020 and June 30, 2020, and any current reports on Form 8-K filed by the Company subsequent to December 31, 2019 and through the date of this Agreement with the Securities and Exchange Commission (the “Commission”), including the information incorporated by reference therein (collectively, the “Disclosure Package”), the Company hereby represents and warrants to and covenants with the Investors, as of the date hereof and as of the Closing, that:

(a) Organization, Good Standing and Qualification. The Company is duly formed and validly existing under the laws of Delaware, with full corporate power and authority to conduct its business as it is currently being conducted and to own its assets; and has secured any other material authorizations, approvals, permits and orders required by law for the conduct by the Company of its business as it is currently being conducted. Metabolix GmbH and Metabolix Oilseeds, Inc., the Company's wholly-owned subsidiaries (the "Subsidiaries"), are duly formed and validly existing under the laws of Germany and Canada, respectively, with full corporate power and authority to conduct their respective businesses as they are currently being conducted and to own their respective assets; and has secured any other material authorizations, approvals, permits and orders required by law for the conduct by the Subsidiaries of their businesses as they are currently being conducted. The Company has no material subsidiaries other than the Subsidiaries.

(b) Authorization. The Company has all corporate right, power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. All corporate action on the part of the Company, its directors and stockholders necessary for the authorization, execution, delivery and performance of this Agreement by the Company, the authorization, sale, issuance and delivery of the Shares contemplated herein and the performance of the Company's obligations hereunder has been taken. This Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

(c) Capitalization.

(i) As of the date hereof, the authorized capital stock of the Company consisted of 5,000,000 shares of preferred stock, none of which were issued and outstanding, and 60,000,000 shares of Common Stock, 1,982,493 shares of which were issued and outstanding. The Preferred Stock and the Common Stock are collectively referred to herein as the "Capital Stock." All of the issued and outstanding shares of Capital Stock have been duly authorized, validly issued and are fully paid and nonassessable. As of August 15, 2020, 2,843,699 shares of Common Stock issuable upon exercise of warrants were outstanding, options to purchase 322,684 shares of Common Stock were outstanding, and an additional 19,650 shares of Common Stock were available for issuance under the Company's Stock Option and Incentive Plan. Except as set forth in the preceding sentence and in the Company's Registration Statement on Form S-3 (Reg. No. 333-237539), as of the date hereof there are no outstanding options, warrants, rights (including conversion or preemptive rights), agreements, arrangements or commitments of any character, whether or not contingent, relating to the issued or unissued Capital Stock of the Company or obligating the Company to issue or sell any share of Capital Stock of, or other equity interest in, the Company.

(ii) The Shares have been duly authorized and, when issued, delivered and paid for in the manner set forth in this Agreement, will be validly issued, fully paid and non-assessable and shall be free and clear of any encumbrances, preemptive rights or restrictions (other than as provided in this Agreement or any restrictions on transfer generally imposed under applicable securities laws).

(iii) No “bad actor” disqualifying event described in Rule 506(d)(1)(i)-(viii) of the Securities Act (a “Disqualification Event”) is applicable to the Company or, to the Company’s knowledge, any Company Covered Person, except for a Disqualification Event as to which Rule 506(d)(2)(ii–iv) or (d)(3), is applicable. For purposes of this Agreement a “Company Covered Person” means, with respect to the Company as an “issuer” for purposes of Rule 506 of the Securities Act, any person listed in the first paragraph of Rule 506(d)(1).

(iv) The Company owns all of the issued and outstanding equity interests of its Subsidiaries.

(d) Consents. The Company is not required to obtain any material consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other person in connection with the execution, delivery and performance by the Company of this Agreement, other than the filings that have been made, or will be made, pursuant to the rules and regulations of The Nasdaq Stock Market LLC (“Nasdaq”), applicable State Securities Laws and post-sale filings pursuant to applicable federal and State Securities Laws which the Company undertakes to file or obtain within the applicable time periods.

(e) Securities Laws. Assuming the accuracy of each Investor’s representations and warranties set forth in Section 6, no registration under the Securities Act is required for the offer and sale of the Shares by the Company to the Investors as contemplated hereby.

(f) Litigation. There is no action, suit, proceeding or investigation pending or, to the Company’s knowledge, currently threatened in writing against the Company or any of its directors and officers that questions the validity of this Agreement or the right of the Company to enter into this Agreement or to consummate the transactions contemplated hereby. There is no action, suit, proceeding or investigation pending or, to the Company’s knowledge, currently threatened in writing against the Company or any subsidiary or any of their respective directors and officers which would have, either individually or in the aggregate, a Material Adverse Effect (as defined below).

(g) Filings. The Company has filed all forms, reports and documents required to be filed by it with the Commission (collectively, the “Company SEC Reports”). As of the respective dates they were filed (except if amended, updated or superseded by a filing made by the Company with the Commission prior to the date of this Agreement, then on the date of such filing), the Company SEC Reports complied in all material respects with the requirements of the Securities Act or the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as the case may be, and the applicable rules and regulations of the Commission thereunder.

(h) Financial Statements. The consolidated financial statements of the Company (including any notes thereto) contained in the Disclosure Package (i) complied as to form in all material respects with the published rules and regulations of the Commission with respect thereto, (ii) were prepared in accordance with United States generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods indicated (except as may be indicated in the notes thereto or, in the case of unaudited financial statements, as permitted by Form 10-Q or Form 8-K) and (iii) each presented fairly, in all material respects, the consolidated financial position of the Company and its consolidated subsidiaries as of the respective dates thereof and for the respective periods indicated therein, except as otherwise noted therein (subject, in the case of unaudited financial statements, to normal and recurring year-end adjustments which were not and are not expected, individually or in the aggregate, to have a Material Adverse Effect). The Company has not had any material disagreement with any of its auditors regarding accounting matters or policies during any of its past three full fiscal years or during the current fiscal year-to-date, which disagreements would require disclosure to the Company’s Board of Directors.

(i) Certain Fees. No brokerage or finder’s fees or commissions are or will be payable by the Company or any subsidiary of the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other person with respect to the transactions contemplated by this Agreement. The Investors shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by this Agreement.

(j) Acknowledgment Regarding Investors’ Purchase of Securities. The Company acknowledges and agrees that each of the Investors is acting solely in the capacity of an arm’s length purchaser with respect to this Agreement and the transactions contemplated hereby. The Company further acknowledges that no Investor is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to this Agreement and the transactions contemplated hereby and any advice given by any Investor or any of their respective representatives or agents in connection with this Agreement and the transactions contemplated hereby is merely incidental to the Investors’ purchase of the Shares. The Company further represents to each Investor that the Company’s decision to enter into this Agreement has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(k) Acknowledgment Regarding Investors’ Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 6(a)(iv) and 12 hereof), it is understood and acknowledged by the Company that: (i) none of the Investors has been asked by the Company to agree, nor has any Investor agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or “derivative” securities based on securities issued by the Company or to hold the Shares for any specified term, (ii) past or future open market or other transactions by any Investor, specifically including, without limitation, short sales or “derivative” transactions, before or after the Closing, may negatively impact the market price of the Company’s publicly-traded securities, (iii) any Investor, and counter-parties in “derivative” transactions to which any such Investor is a party, directly or indirectly, may presently have a “short” position in the Common Stock and (iv) each Investor shall not be deemed to have any affiliation with or control over any arm’s length counter-party in any “derivative” transaction. The Company further understands and acknowledges that, except as otherwise provided by applicable law or the policies of the Company applicable to directors, officers and employees of the Company, (y) one or more Investors may engage in hedging activities at various times during the period that the Shares are outstanding, and (z) such hedging activities (if any) could reduce the value of the existing stockholders’ equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of this Agreement.

6. Representations and Warranties of the Investors. As of the date hereof and as of the Closing, each of the Investors, severally and not jointly, hereby represents and warrants to and covenants with the Company that:

(a) General.

(i) The Investor has all requisite authority to purchase the Shares, enter into this Agreement and to perform all the obligations required to be performed by the Investor hereunder, and such purchase will not contravene any law, rule or regulation binding on the Investor or any investment guideline or restriction applicable to the Investor.

(ii) The Investor is acquiring the Shares for its own account and is not acquiring the Shares as a nominee or agent or otherwise for any other person.

(iii) The Investor will comply with all applicable laws and regulations the Investor is required to comply with in connection with the purchase or sale of Shares in effect in any jurisdiction in which the Investor purchases or sells Shares and obtain any consent, approval or permission the Investor is required to obtain in connection with such purchase or sale of Shares under the laws and regulations of any jurisdiction to which the Investor is subject or in which the Investor makes such purchases or sales, and the Company shall have no responsibility therefor.

(iv) Other than consummating the transactions contemplated hereby, the Investor has not directly or indirectly, nor has any person acting on behalf of or pursuant to any understanding with such Investor, executed any purchases or sales, including short sales, of the securities of the Company during the period commencing as of the time that such Investor first received a term sheet (written or oral) from the Company or any other person representing the Company setting forth the material terms of the transactions contemplated hereby and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of an Investor that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Investor's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Investor's assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Shares covered by this Agreement. Other than to other persons party to this Agreement, such Investor has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect short sales or similar transactions in the future.

(b) Information Concerning the Company.

(i) The Investor understands and accepts that the purchase of the Shares involves various risks. The Investor represents that it is able to bear a complete loss of its investment in the Shares.

(ii) The Investor confirms that it is not relying on any communication (written or oral) of the Company or any of its affiliates, as investment advice or as a recommendation to purchase the Shares. It is understood that information and explanations related to the terms and conditions of the Shares provided by the Company or any of its affiliates shall not be considered investment advice or a recommendation to purchase the Shares, and that neither the Company nor any of its affiliates is acting or has acted as an advisor to the Investor in deciding to invest in the Shares. The Investor acknowledges that neither the Company nor any of its affiliates has made any representation regarding the proper characterization of the Shares for purposes of determining the Investor's authority to invest in the Shares.

(iii) The Investor acknowledges that it has had the opportunity to review this Agreement (including all exhibits and schedules hereto) and the Disclosure Package and has been afforded (A) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Shares and the merits and risks of investing in the Shares; (B) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (C) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment.

(iv) The Investor understands that, unless the Investor notifies the Company in writing to the contrary at or before the Closing, each of the Investor's representations and warranties contained in this Agreement will be deemed to have been reaffirmed and confirmed as of the Closing, taking into account all information received by the Investor.

(v) The Investor understands that no federal or state agency has passed upon the merits or risks of an investment in the Shares or made any finding or determination concerning the fairness or advisability of this investment.

(vi) The Investor is not purchasing the Shares as a result of any advertisement, article, notice or other communication regarding the Shares published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general solicitation or general advertisement.

(c) Non-reliance.

(i) The Investor represents that it is not relying on (and will not at any time rely on) any communication (written or oral) of the Company, as investment advice or as a recommendation to purchase the Shares, it being understood that information and explanations related to the terms and conditions of the Shares shall not be considered investment advice or a recommendation to purchase the Shares.

(ii) Except as expressly provided herein, the Investor confirms that the Company has not (A) given any guarantee or representation as to the potential success, return, effect or benefit (either legal, regulatory, tax, financial, accounting or otherwise) an of investment in the Shares or (B) made any representation to the Investor regarding the legality of an investment in the Securities under applicable legal investment or similar laws or regulations. In deciding to purchase the Shares, the Investor is not relying on the advice or recommendations of the Company and the Investor has made its own independent decision that the investment in the Shares is suitable and appropriate for the Investor.

(d) Status of Investor.

(i) The Investor has such knowledge, sophistication, skill and experience in business, financial and investment matters that the Investor is capable of evaluating the merits and risks of an investment in the Shares, and has so evaluated the merits and risks of such investment. With the assistance of the Investor's own professional advisors, to the extent that the Investor has deemed appropriate, the Investor has made its own legal, tax, accounting and financial evaluation of the merits and risks of an investment in the Shares and the consequences of this Agreement. The Investor has considered the suitability of the Shares as an investment in light of its own circumstances and financial condition and the Investor is able to bear the risks associated with an investment in the Shares and its authority to invest in the Shares.

(ii) At the time the Investor was offered the Shares, the Investor was, and as of the date hereof the Investor is, and on the Closing Date, the Investor will be either (A) a "qualified institutional buyer" as defined in Rule 144A(a) under the Securities Act or (B) an "accredited investor" as defined in as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7), or (a)(8) under the Securities Act, and not required to be registered as a broker-dealer under Section 15 of the Exchange Act. The Investor agrees to furnish any additional information reasonably requested by the Company or any of its affiliates to assure compliance with applicable U.S. federal and State Securities Laws in connection with the purchase and sale of the Shares.

(iii) The Investor hereby represents that neither it nor any of its Rule 506(d) Related Parties is a "bad actor" within the meaning of Rule 506(d) of the Securities Act. For purposes of this Agreement a "Rule 506(d) Related Party" means a person or entity covered by the "Bad Actor disqualification" provision of Rule 506(d) of the Securities Act.

(e) Restrictions on Transfer or Sale of Securities.

(i) The Investor is acquiring the Shares solely for the Investor's own beneficial account, for investment purposes, and not with a view to, or for resale in connection with, any distribution of the Shares, has no present intention of distributing any of such Shares in violation of the Securities Act or any applicable State Securities Laws and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Shares in violation of the Securities Act or any applicable State Securities Laws (this representation and warranty not limiting such Investor's right to sell the Shares pursuant to the Registration Statement (as defined below) or otherwise in compliance with applicable federal law and State Securities Laws). The Investor understands that the Shares have not been registered under the Securities Act or any State Securities Laws by reason of specific exemptions under the provisions thereof which depend in part upon the investment intent of the Investor and of the other representations made by the Investor in this Agreement. The Investor understands that the Company is relying upon the representations and agreements contained in this Agreement for the purpose of determining whether this transaction meets the requirements for such exemptions.

(ii) The Investor understands that the Shares are “restricted securities” under applicable federal securities laws and that the Securities Act and the rules of the Commission provide in substance that the Investor may dispose of the Shares only pursuant to an effective registration statement under the Securities Act or an exemption therefrom such as the exemption and safe harbor provided under Rule 144 of the Securities Act.

(iii) The Investor agrees that the Investor will not sell, assign, pledge, give, transfer or otherwise dispose of the Shares or any interest therein, or make any offer or attempt to do any of the foregoing, except pursuant to a registration of the Shares under the Securities Act or in a transaction which is exempt from the registration provisions of the Securities Act such as the exemption and safe harbor provided under Rule 144 of the Securities Act; that the certificates representing the Shares will bear a legend making reference to the foregoing restrictions; and that the Company and its affiliates and transfer agent shall not be required to give effect to any purported transfer of such Shares except upon compliance with the foregoing restrictions. The Company acknowledges and agrees that an Investor may from time to time pledge pursuant to a bona fide margin agreement with a registered broker-dealer or grant a security interest in some or all of the Shares to a financial institution that is an “accredited investor” as defined in Rule 501(a) under the Securities Act and who agrees to be bound by the provisions of this Agreement and, if required under the terms of such arrangement, such Purchaser may transfer pledged or secured Shares to the pledgees or secured parties. Such a pledge or transfer would not be subject to approval of the Company and no legal opinion of legal counsel of the pledgee, secured party or pledgor shall be required in connection therewith. Further, no notice shall be required of such pledge.

7. Conditions to Obligations of the Investor and the Company. The obligations of the Investors to purchase and pay for the Shares and of the Company to sell the Shares are subject to the satisfaction at or prior to the Closing of the following conditions precedent:

(a) Solely in the case of the Investors:

(i) The representations and warranties of the Company contained in Section 5 hereof shall be true and correct as of the Closing in all material respects with the same effect as though such representations and warranties had been made as of the Closing.

(ii) No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered or promulgated by any court or governmental authority of competent jurisdiction which prohibits the consummation of any of the transactions contemplated by this Agreement.

(iii) Between the date of this Agreement and the Closing Date, there shall not have been a Material Adverse Effect. For purposes of this Agreement, a “Material Adverse Effect” means any event, change, violation, inaccuracy, circumstance or effect that, individually or in the aggregate, has had or would reasonably be expected to have a material adverse effect on, or result in a material adverse change in, as the case may be, the business, operations, properties, condition (financial or otherwise), assets, liabilities or results of operations of the Company, except for any such events, changes, violations, inaccuracies, circumstances or effects resulting from (w) any changes in general economic, regulatory or political conditions, (x) any changes or events generally affecting the industry in which the Company operates, (y) any adverse change or effect that is caused by the announcement of the transactions contemplated by this Agreement, or (z) any violations or other matters arising from changes in law or GAAP; unless in any such instance such change or effect described in (w), (x) or (z) impacts the Company in a materially disproportionate manner relative to a preponderance of the other similar entities impacted by such change.

(b) Solely in the case of the Company:

(i) The representations and warranties of the Investors contained in Section 6 hereof shall be true and correct as of the Closing in all material respects with the same effect as though such representations and warranties had been made as of the Closing.

(ii) No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered or promulgated by any court or governmental authority of competent jurisdiction which prohibits the consummation of any of the transactions contemplated by this Agreement.

8. Covenants of the Company.

(a) The Company hereby agrees to use reasonable best efforts (i) to maintain the listing or quotation of the Common Stock on the Nasdaq Capital Market (or such other trading market that the Company applies to have the Common Stock traded on), and (ii) as promptly as practicable following the Closing Date, to secure the listing of the Common Shares on such trading market.

(b) The Company shall file a Current Report on Form 8-K and press release disclosing the material terms of the transactions contemplated hereby. The Company shall, prior to such filing, furnish to the Investors for review a copy of such Form 8-K and press release. Such press release will be issued prior to market open on the business day following the date of execution of this Agreement and the Form-8-K will be filed within the time prescribed by the regulations of the Commission.

(c) The Company shall use its reasonable best efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act. For so long as any Investor holds unregistered Shares, if the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to such Investor and make publicly available in accordance with Rule 144(c) such information as is required for such Investor to sell the Shares under Rule 144.

9. Registration Rights.

(a) Shelf Registration.

(i) At the request of the holders of at least a majority of the Registrable Shares (the “Majority Investors”), the Company shall use commercially reasonable efforts to file no later than 60 calendar days after the Closing Date (the “Filing Date”) a registration statement covering the resale of the Shares (the “Registrable Shares”) with the Commission for an offering to be made on a continuous basis pursuant to Rule 415, or if Rule 415 is not available for offers and sales of the Registrable Shares, by such other means of distribution of Registrable Shares as the Majority Investors may reasonably specify (the “Initial Registration Statement”). The Initial Registration Statement shall be on Form S-3 (except if the Company is ineligible to register for resale the Registrable Shares on Form S-3, in which case such registration shall be on another appropriate form).

(ii) The Company shall use commercially reasonable efforts to effect the registration (including a declaration of effectiveness thereof by the Commission) and applicable qualifications or compliances (including, without limitation, the execution of any required undertaking to file post-effective amendments, appropriate qualifications or exemptions under applicable State Securities Laws and appropriate compliance with applicable securities laws, requirements or regulations) as promptly as practicable after the filing of the Initial Registration Statement, but in any event prior to the date which is 90 days after the Filing Date (the “Effectiveness Date”). The Company shall, within two (2) business days after the Effectiveness Date, file a final prospectus with the Commission as required by Rule 424 under the Securities Act.

(iii) In the event that all of the Registrable Shares cannot, as a result of the rules and regulations of the Commission, be registered for resale as a secondary offering on a single registration statement, the Company agrees to promptly (i) inform the Investors thereof, (ii) use commercially reasonable efforts to file amendments to the Initial Registration Statement as required by the Commission and/or (iii) withdraw the Initial Registration Statement and use commercially reasonable efforts to file a new registration statement (a “New Registration Statement”), in either case covering the maximum number of Registrable Shares permitted to be registered by the Commission, on Form S-3 or, if the Company is ineligible to register for resale the Registrable Shares on Form S-3, such other form available to register for resale the Registrable Shares as a secondary offering; provided, however, that prior to filing such amendment or New Registration Statement, the Company shall be obligated to use commercially reasonable efforts to advocate with the Commission for the registration of all of the Registrable Shares. In the event the Company amends the Initial Registration Statement or files a New Registration Statement, as the case may be, under clauses (ii) or (iii) above, the Company will use commercially reasonable efforts to file with the Commission, as promptly as practicable, one or more registration statements on Form S-3 or, if the Company is ineligible to register for resale the Registrable Shares on Form S-3, such other form available to register for resale those Registrable Shares that were not registered for resale on the Initial Registration Statement, as amended, or the New Registration Statement (the “Remainder Registration Statements” and, collectively with the Initial Registration Statement and the New Registration Statement, the “Registration Statements”).

(iv) Notwithstanding any other provision of this Agreement, if the Commission limits the number of Registrable Shares permitted to be registered on a particular Registration Statement (and notwithstanding that the Company used diligent efforts to advocate with the Commission for the registration of all or a greater number of Registrable Shares), unless otherwise directed in writing by a holder as to its Registrable Shares, the number of Registrable Shares to be registered on such Registration Statement will be reduced as follows:

- (1) First, the Company shall reduce or eliminate any securities to be included other than Registrable Shares;
- (2) Second, the Company shall reduce Registrable Shares (applied to the Investors on a pro rata basis based on the total number of unregistered Registrable Shares held by such Investors).

In the event of a cutback hereunder, the Company shall give the Investors at least three (3) business days prior written notice along with the calculations as to such Investor's allotment.

(b) All expenses incurred by the Company in complying with Section 9(a) hereof, including, without limitation, all registration, qualification and filing fees, printing expenses, escrow fees, fees and expenses of counsel for the Company, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding the fees of legal counsel for any Investor or holder of Registrable Shares) shall be borne by the Company. All selling commissions applicable to the sale of Registrable Shares and all fees and expenses of legal counsel for any Investor or holder of Registrable Shares related to the registration and sale of the Registrable Shares shall be borne by the Investor or holder of Registrable Shares incurring such commissions, fees or expenses.

(c) In the case of the registration, qualification, exemption or compliance effected by the Company pursuant to this Agreement, the Company shall, upon reasonable request, inform the Investors as to the status of such registration, qualification, exemption and compliance. At its expense the Company shall:

(i) except for such times as the Company is permitted hereunder to suspend the use of the prospectus forming part of a Registration Statement, use its commercially reasonable efforts to keep such registration, and any qualification, exemption or compliance under State Securities Laws which the Company determines to obtain, continuously effective with respect to the Investors, and to keep the applicable Registration Statement effective until the later of (A) two (2) years from the Closing Date, (B) the date by which all the Registrable Shares may be sold without volume or manner of sale restrictions which may be applicable to affiliates under Rule 144, or (C) the date on which all of the Registrable Shares are sold. The period of time during which the Company is required hereunder to keep a Registration Statement effective is referred to herein as the "Registration Period";

(ii) advise the Investors within five (5) business days:

- (1) when a Registration Statement or any amendment thereto has been filed with the Commission and when such Registration Statement or any post-effective amendment thereto has become effective;

- (2) of any request by the Commission for amendments or supplements to any Registration Statement or the prospectus included therein or for additional information;
- (3) of the issuance by the Commission of any stop order suspending the effectiveness of any Registration Statement or, to the Company's knowledge, the initiation of any proceedings for such purpose;
- (4) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Registrable Shares included therein for sale in any jurisdiction or, to the Company's knowledge, the initiation or threatening of any proceeding for such purpose; and
- (5) subject to the provisions this Agreement, of the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of a prospectus, in the light of the circumstances under which they were made) not misleading;

(iii) use its commercially reasonable efforts to obtain the withdrawal of any order suspending the effectiveness of any Registration Statement as soon as reasonably practicable;

(iv) if an Investor so requests in writing, promptly furnish to the Investor, without charge, at least one copy of each Registration Statement and each post-effective amendment thereto, including financial statements and schedules, and, if explicitly requested, all exhibits in the form filed with the Commission;

(v) during the Registration Period, promptly deliver to each Investor, without charge, as many copies of each prospectus included in a Registration Statement and any amendment or supplement thereto as the Investor may reasonably request in writing; and the Company consents to the use, consistent with the provisions hereof, of the prospectus or any amendment or supplement thereto by the Investor of Registrable Shares in connection with the offering and sale of the Registrable Shares covered by a prospectus or any amendment or supplement thereto;

(vi) during the Registration Period, if an Investor so requests in writing, deliver to the Investor, without charge, (i) one copy of the following documents, other than those documents available via the Commission's EDGAR system: (A) its annual report on Form 10-K (or similar form), (B) its definitive proxy statement with respect to its annual meeting of stockholders, (C) each of its quarterly reports on Form 10-Q, and (D) a copy of each full Registration Statement (the foregoing, in each case, excluding exhibits); and (ii) if explicitly requested, all exhibits excluded by the parenthetical to the immediately preceding clause (D); provided, that the Company shall have no obligation to provide any document pursuant to this clause that is available on the Commission's EDGAR system;

(vii) prior to any public offering of Registrable Shares pursuant to any Registration Statement, promptly take such actions as may be necessary to register or qualify or obtain an exemption for offer and sale under State Securities Laws of such United States jurisdictions as an Investor reasonably request in writing; provided that the Company shall not for any such purpose be required to qualify generally to transact business as a foreign corporation in any jurisdiction where it is not so qualified or to consent to general service of process in any such jurisdiction, and do any and all other acts or things reasonably necessary or advisable to enable the offer and sale in such jurisdictions of the Registrable Shares covered by any such Registration Statement;

(viii) upon the occurrence of any event contemplated by Section 9(c)(ii)(5) above, except for such times as the Company is permitted hereunder to suspend the use of a prospectus forming part of a Registration Statement, and taking into account the Company's good faith assessment of any adverse consequences to the Company and its stockholders of the premature disclosure of such event, the Company shall use its commercially reasonable efforts to prepare a post-effective amendment to such Registration Statement or a supplement to the related prospectus, or file any other required document so that, as thereafter delivered to purchasers of the Registrable Shares included therein, such prospectus will not include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ix) otherwise use its commercially reasonable efforts to comply in all material respects with all applicable rules and regulations of the Commission which could affect the sale of the Registrable Shares;

(x) use its commercially reasonable efforts to cause all Registrable Shares to be listed on each securities exchange or market, if any, on which equity securities issued by the Company have been listed; and

(xi) cooperate with any broker-dealer through which an Investor proposes to resell its Registrable Shares in such broker-dealer's filing with the FINRA Corporate Financing Department pursuant to FINRA Rule 5110, as requested by any such Investor.

(d) No Investor shall have the right to take any action to restrain, enjoin or otherwise delay any registration pursuant to Section 9(a) hereof as a result of any controversy that may arise with respect to the interpretation or implementation of this Agreement.

(e) Indemnification.

(i) To the extent permitted by law, the Company shall indemnify each Investor and each person controlling such Investor within the meaning of Section 15 of the Securities Act, with respect to which any registration that has been effected pursuant to this Agreement, against all claims, losses, damages and liabilities (or action in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened (subject to Section 9(e)(iii) below), arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any Registration Statement, prospectus, any amendment or supplement thereof, or other document incident to any registration, qualification or compliance or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in light of the circumstances in which they were made, or any violation by the Company of any rule or regulation promulgated by the Securities Act applicable to the Company and relating to any action or inaction required of the Company in connection with any such registration, qualification or compliance, and will reimburse each Investor and each person controlling such Investor, for reasonable legal and other out-of-pocket expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action as incurred; provided that the Company will not be liable in any such case to the extent that any untrue statement or omission or allegation thereof is made in reliance upon and in conformity with written information furnished to the Company by or on behalf of such Investor for use in preparation of any Registration Statement, prospectus, amendment or supplement; provided however, that the Company will not be liable in any such case where the claim, loss, damage or liability arises out of the failure of such Investor to comply with the covenants and agreements contained in this Agreement respecting sales of Registrable Shares, and except that the foregoing indemnity agreement is subject to the condition that, insofar as it relates to any such untrue statement or alleged untrue statement or omission or alleged omission made in any preliminary prospectus but eliminated or remedied in the amended prospectus on file with the Commission at the time any Registration Statement becomes effective or in an amended prospectus filed with the Commission pursuant to Rule 424(b) which meets the requirements of Section 10(a) of the Securities Act (each, a "Final Prospectus"), such indemnity shall not inure to the benefit of the Investor or any such controlling person, if a copy of a Final Prospectus furnished by the Company to the Investor for delivery was not furnished to the person or entity asserting the loss, liability, claim or damage at or prior to the time such furnishing is required by the Securities Act and a Final Prospectus would have cured the defect giving rise to such loss, liability, claim or damage.

(ii) Each Investor will, severally and not jointly, indemnify the Company, each of its directors and officers, and each person who controls the Company within the meaning of Section 15 of the Securities Act, against all claims, losses, damages and liabilities (or actions in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened (subject to Section 9(e)(iii) below), arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any Registration Statement, prospectus, any amendment or supplement thereof, or other document incident to any such registration, or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in light of the circumstances in which they were made, and will reimburse the Company, such directors and officers, and each person controlling the Company for reasonable legal and any other expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action as incurred, in each case to the extent, but only to the extent, that such untrue statement or omission or allegation thereof is made in reliance upon and in conformity with written information furnished to the Company by or on behalf of such Investor for use in preparation of any Registration Statement, prospectus, amendment or supplement. Notwithstanding the foregoing, the maximum liability of the Investor under this section shall be limited to the proceeds received by the Investor from the sale of Registrable Shares.

(iii) Each party entitled to indemnification under this Section 9(e) (the “Indemnified Party”) shall give notice to the party required to provide indemnification (the “Indemnifying Party”) promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party (at its expense) to assume the defense of any such claim or any litigation resulting therefrom, provided that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld, conditioned or delayed), and the Indemnified Party may participate in such defense at such Indemnified Party’s expense, and provided further that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Agreement, unless such failure is materially prejudicial to the Indemnifying Party in defending such claim or litigation. An Indemnifying Party shall not be liable for any settlement of an action or claim effected without its written consent (which consent shall not be unreasonably withheld, conditioned or delayed). No Indemnifying Party, in its defense of any such claim or litigation, shall, except with the consent of each Indemnified Party (which consent shall not be unreasonably withheld, conditioned or delayed), consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

(iv) If the indemnification provided for in this Section 9(e) is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any loss, liability, claim, damage or expense referred to therein, then the Indemnifying Party, in lieu of indemnifying such Indemnified Party thereunder, shall contribute to the amount paid or payable by such Indemnified Party as a result of such loss, liability, claim, damage or expense in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the statements or omissions which resulted in such loss, liability, claim, damage or expense as well as any other relevant equitable considerations. The relative fault of the Indemnifying Party and of the Indemnified Party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties’ relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 9(e) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 9(e), no Investor shall be required to contribute pursuant to this Section 9(e), in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Investor from the sale of the Registrable Shares exceeds the amount of any damages that such Investor has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission.

(f) Disclosure, Etc.

(i) Not less than five (5) business days prior to the filing of each Registration Statement, the Company shall furnish to each Investor copies of such Registration Statement and all exhibits being filed therewith, and shall consider in good faith the reasonable comments of such Investor. Notwithstanding the foregoing sentence, the Company shall not be obligated to provide the Investors advance copies of any universal shelf registration statement registering securities in addition to those required hereunder. Each Investor agrees that, upon receipt of any notice from the Company of the happening of any event requiring the preparation of a supplement or amendment to a prospectus relating to Registrable Shares so that, as thereafter delivered to the Investor, such prospectus shall not contain an untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, the Investor will forthwith discontinue disposition of Registrable Shares pursuant to a Registration Statement and prospectus contemplated by Section 9(a) until its receipt of copies of the supplemented or amended prospectus from the Company and, if so directed by the Company, the Investor shall deliver to the Company all copies, other than permanent file copies then in the Investor’s possession, of the prospectus covering such Registrable Shares current at the time of receipt of such notice.

(ii) Each Investor shall suspend, upon request of the Company, any disposition of Registrable Shares pursuant to any Registration Statement and prospectus contemplated by Section 9(a) during the occurrence or existence of any pending corporate development with respect to the Company that the Board of Directors of the Company believes in good faith may be material and that, in the determination of the Board of Directors of the Company, makes it not in the best interest of the Company to allow continued availability of a Registration Statement or prospectus. The Company shall be entitled to exercise its right under this paragraph to suspend the availability of a Registration Statement and prospectus for a period not to exceed 60 calendar days (which need not be consecutive days) in any 12-month period.

(iii) Upon the occurrence of any event contemplated by Section 3(d), as promptly as reasonably possible under the circumstances taking into account the Company's good faith assessment of any adverse consequences to the Company and its stockholders of the premature disclosure of such event, prepare a supplement or amendment, including a post-effective amendment, to a Registration Statement or a supplement to the related prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither a Registration Statement nor such prospectus will 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 light of the circumstances under which they were made, not misleading. The Company will use its best efforts to ensure that the use of the prospectus may be resumed as promptly as is practicable. The Company shall be entitled to exercise its right under this Section 9(f) to suspend the availability of a Registration Statement and prospectus for a period not to exceed 60 calendar days (which need not be consecutive days) in any 12-month period.

(iv) As a condition to the inclusion of its Registrable Shares, the Investor shall furnish to the Company such information regarding the Investor and the distribution proposed by the Investor as the Company may reasonably request in writing, including completing a Registration Statement Questionnaire in the form provided by the Company, or as shall be required in connection with any registration referred to in this Section 9.

(v) Each Investor hereby covenants with the Company (i) not to make any sale of the Registrable Shares without effectively causing the prospectus delivery requirements under the Securities Act to be satisfied (unless such sale is pursuant to Rule 144).

(vi) Each Investor agrees not to take any action with respect to any distribution deemed to be made pursuant to a Registration Statement which would constitute a violation of Regulation M under the Exchange Act or any other applicable rule, regulation or law.

(vii) At the end of the Registration Period, each Investor shall discontinue sales of shares pursuant to any Registration Statement upon receipt of notice from the Company of its intention to remove from registration the shares covered by any such Registration Statement which remain unsold, and the Investor shall notify the Company of the number of shares registered which remain unsold immediately upon receipt of such notice from the Company.

(g) The rights to cause the Company to register Registrable Shares granted to the Investors by the Company under Section 9(a) may be assigned by an Investor in connection with a transfer by such Investor of all or a portion of its Registrable Shares, provided, however, that the Investor must give the Company at least 10 days prior notice of such transfer for such transfer to be reflected in the Registration Statement or any amendment thereto and that (i) such transfer may otherwise be effected in accordance with applicable securities laws; (ii) such Investor gives prior written notice to the Company at least 10 days prior to the transfer; and (iii) such transferee agrees to comply with the terms and provisions of this Agreement, and such transfer is otherwise in compliance with this Agreement. Except as specifically permitted by this Section 9(g), the rights of an Investor with respect to Registrable Shares as set out herein shall not be transferable to any other person, and any attempted transfer shall cause all rights of such Investor therein to be forfeited.

(h) The rights of an Investor under any provision of this Section 9 may be waived (either generally or in a particular instance, either retroactively or prospectively and either for a specified period of time or indefinitely) or amended by an instrument in writing signed by such Investor.

10. Legend. At the Closing, the certificates representing the Shares sold pursuant to this Agreement will be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT WITH A REGISTERED BROKER-DEALER OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN "ACCREDITED INVESTOR" AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT OR OTHER LOAN SECURED BY SUCH SECURITIES.

provided, that the Company shall (a) cause such legend to be promptly removed once a registration statement covering the resale of any Shares is effective under the Securities Act or if such legend is no longer required under applicable law and (b) in connection with any sale under Rule 144, promptly (and in any event within five (5) business days after receipt by the Company of a request therefor accompanied by all reasonably required documentation) deliver, or cause to be delivered, to the Investors new certificate(s) representing such Shares that are free from all restrictive and other legends or, at the request of an Investor, via DWAC transfer to such Investor's account.

11. Replacement of Shares. If any certificate or instrument evidencing any Shares is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Shares.

12. Certain Transactions. Each Investor, severally and not jointly, covenants that neither it, nor any affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including short sales, of any of the Company's securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 8(b).

13. Expenses. The parties hereto shall pay their own costs and expenses in connection herewith; provided that, subject to the consummation of the transactions contemplated hereby, the Company shall reimburse the Investors upon demand for up to \$50,000 of reasonable out-of-pocket expenses incurred by the Investors, including without limitation reimbursement of reasonable attorneys' fees, in connection with the negotiation and execution of this Agreement and the consummation of the transactions contemplated hereby.

14. Waiver, Amendment. Neither this Agreement nor any provisions hereof shall be amended, waived, discharged or terminated except by an instrument in writing signed, in the case of an amendment, by the Company and Investors holding not less than a majority of the Registrable Shares affected by such amendment or, in the case of a waiver, discharge or termination, by the party against whom such waiver, discharge or termination is sought.

15. Assignability. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investors holding not less than a majority of the Registrable Shares. Any Investor may assign any or all of its rights under this Agreement to any person to whom such Investor assigns or transfers any Shares; provided that such transferee agrees in writing to be bound, with respect to the transferred Shares, by the provisions of this Agreement that apply to the "Investors." Additionally, at any time prior to the Closing, any Investor may allocate any portion of his, her or its Common Stock being purchased hereunder to a third party reasonably acceptable to the Company (an "Additional Investor"), provided that such Additional Investor executes a counterpart signature page to this Agreement becoming an Investor hereunder in all respects, including without limitation making the representations and warranties in Section 6 of this Agreement. In the event an Additional Investor becomes a party to this Agreement, Schedule I to this Agreement shall be updated automatically without the need for an amendment to this Agreement.

16. Waiver of Jury Trial. EACH OF THE COMPANY AND THE INVESTORS IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY WITH RESPECT TO ANY LEGAL PROCEEDING ARISING OUT OF THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT.

17. Submission to Jurisdiction. With respect to any suit, action or proceeding relating to any offers, purchases or sales of the Shares by the Investors ("Proceedings"), each of the Company and the Investors irrevocably submits to the jurisdiction of the federal or state courts located in the State of Delaware, which submission shall be exclusive unless none of such courts has lawful jurisdiction over such Proceedings.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

19. Section and Other Headings. The section and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

20. Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed to be an original and all of which together shall be deemed to be one and the same agreement.

21. Notices. All notices and other communications provided for herein shall be in writing and shall be deemed to have been duly given if delivered personally or sent by registered or certified mail, return receipt requested, postage prepaid to the following addresses (or such other address as either party shall have specified by notice in writing to the other):

If to the Company:

Yield10 Bioscience, Inc.
19 Presidential Way
Woburn, Massachusetts 01801
Attention: Oliver Peoples, CEO
Email: peoples@Yield10Bioscience.com

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

Megan N. Gates, Esq.
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
One Financial Center
Boston, Massachusetts 02111
Attention: Megan N. Gates
Email: mgates@mintz.com

If to any Investor:

The address specified in Schedule I for notices to such Investor

22. Binding Effect. The provisions of this Agreement shall be binding upon and accrue to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns.

23. Survival. All representations, warranties and covenants contained in this Agreement shall survive the Closing.

24. Notification of Changes. Each of the Company and the Investors hereby covenants and agrees to notify the other upon the occurrence of any event prior to the Closing which would cause any representation, warranty, or covenant of such party contained in this Agreement to be false or incorrect.

25. Severability. If any term or provision of this Agreement is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction.

26. Independent Nature of Investors' Obligations and Rights. The obligations of each Investor under this Agreement are several and not joint with the obligations of any other Investor, and no Investor shall be responsible in any way for the performance or non-performance of the obligations of any other Investor under this Agreement. Nothing contained herein, and no action taken by any Investor pursuant hereto, shall be deemed to constitute the Investors as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Investors are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated hereby. Each Investor shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement, and it shall not be necessary for any other Investor to be joined as an additional party in any proceeding for such purpose. Each Investor has had the opportunity to be represented by its own separate legal counsel in its review and negotiation of this Agreement (including the exhibits and schedules hereto). Except as expressly contemplated by this Agreement, the Company has elected to provide all Investors with the same terms and Agreement for the convenience of the Company and not because it was required or requested to do so by any of the Investors.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

YIELD10 BIOSCIENCE, INC.

By: /s/ Oliver P. Peoples

Name: Oliver P. Peoples

Title: President and CEO

INVESTORS:

JACK W. SCHULER

/s/ Jack W. Schuler

Name: Jack W. Schuler

SCHULER GRANDCHILDREN LLC

By: /s/ George Schuler

Name: George Schuler

Title: Manager

TINO HANS SCHULER TRUST

By: /s/ Tino Schuler

Name: Tino Schuler

Title: Trustee

TANYA EVA SCHULER TRUST

By: /s/ Tanya Sharman

Name: Tanya Sharman

Title: Trustee

THERESE HEIDI SCHULER TRUST

By: /s/ George Schuler

Name: George Schuler

Title: Trustee

SCHEDULE I

Investor	Number of Shares	Price per Share	Aggregate Purchase Price
Jack W. Schuler	186,450	\$ 4.25	\$ 792,412.50
Tino Hans Schuler Trust	60,000	\$ 4.25	\$ 255,000
Tanya Eva Schuler Trust	60,000	\$ 4.25	\$ 255,000
Therese Heidi Schuler Trust	60,000	\$ 4.25	\$ 255,000
Schuler Grandchildren LLC	30,000	\$ 4.25	\$ 127,500
Total	396,450		\$ 1,684,912.50



**Yield10 Bioscience Announces Pricing of \$5.2 Million Public Offering
and Concurrent Private Placement**

WOBURN, Mass., Aug. 22, 2020 (GLOBENEWSWIRE) -- Yield10 Bioscience, Inc. (Nasdaq: YTEN), an agricultural bioscience company, today announced the pricing of its underwritten public offering of 835,000 shares of its common stock at a public offering price of \$4.25 per share. The gross proceeds from the public offering will be approximately \$3.5 million, before deducting underwriting discounts and commissions and estimated offering expenses. In addition, Yield10 also announced that investors affiliated with existing investor Jack W. Schuler, have agreed to purchase 396,450 shares of Yield10's common stock pursuant to a securities purchase agreement with Yield10 at the same price per share as in the public offering, in a separate private placement transaction that is expected to close concurrently with the public offering. The gross proceeds from the private placement will be approximately \$1.7 million. All shares in the public offering and private placement are to be sold by Yield10.

The public offering and private placement are expected to close concurrently on or about August 26, 2020, subject to customary closing conditions.

Maxim Group LLC is acting as the sole book-running manager for the public offering.

Yield10 also has granted to the underwriter a 45-day option to purchase up to an additional 125,250 shares of common stock, at the public offering price less discounts and commissions.

The public offering is being made pursuant to an effective shelf registration statement on Form S-3 that was filed with the U.S. Securities and Exchange Commission (SEC) on April 1, 2020 and declared effective on April 10, 2020. A preliminary prospectus supplement describing the terms of the public offering has been filed with the SEC. A final prospectus supplement will be filed with the SEC and will form a part of the effective registration statement. Copies of the preliminary prospectus supplement and accompanying prospectus relating to the public offering may be obtained by contacting Maxim Group LLC, 405 Lexington Avenue, 2nd Floor, New York, NY 10174, or by telephone at (212) 895-3745.

The shares being sold in the private placement have not been and will not be registered under the Securities Act of 1933, as amended, or any state securities laws and may not be offered or sold in the United States absent registration with the SEC or an applicable exemption from such registration requirements.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any state or 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 jurisdiction.

About Yield10 Bioscience

Yield10 Bioscience, Inc. is an agricultural bioscience company developing crop innovations for sustainable global food security. The Company uses its “Trait Factory” including the “GRAIN” big data mining trait gene discovery tool as well as the Camelina oilseed “Fast Field Testing” system to develop high value seed traits for the agriculture and food industries. As a path toward commercialization of novel traits, Yield10 is pursuing a partnering approach with major agricultural companies to drive new traits into development for canola, soybean, corn, and other commercial crops. The Company is also developing improved Camelina varieties as a platform crop for the production and commercialization of nutritional oils, proteins, and PHA biomaterials. The Company’s expertise in oilseed crops also extends into canola, where it is currently field-testing novel yield traits to generate data to drive additional licensing opportunities. Yield10 is headquartered in Woburn, MA and has an Oilseeds Center of Excellence in Saskatoon, Canada.

For more information about the company, please visit www.yield10bio.com, or follow the Company on [Twitter](#), [Facebook](#) and [LinkedIn](#).

(YTEN-G)

Safe Harbor for Forward-Looking Statements

This press release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements in this release do not constitute guarantees of future performance. Investors are cautioned that statements in this press release which are not strictly historical, including, without limitation, the closing of the public offering and concurrent private placement described in this press release, constitute forward-looking statements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated, including the risks and uncertainties detailed in Yield10 Bioscience's filings with the Securities and Exchange Commission. Yield10 assumes no obligation to update any forward-looking information contained in this press release or with respect to the matters described herein.

Contacts:

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Investor Relations:

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Managing Director, CORE IR

Media Inquiries:

Eric Fischgrund, eric@fischtankpr.com

FischTank PR
