

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

FORM 8-K

CURRENT REPORT

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

Date of Report (Date of Earliest Event Reported): July 19, 2022

Crown Electrokinetics Corp.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction  
of incorporation)

333-249833

(Commission  
File Number)

47-5423944

(IRS Employer  
Identification No.)

1110 NE Circle Blvd.

Corvallis, Oregon 97330

(Address of Principal Executive Offices)

(800) 674-3612

(Registrant's telephone number)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation to the registrant under any of the following provisions:

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

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.

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value	CRKN	NASDAQ Capital Market

Item 1.01 Entry into a Material Definitive Agreement

Underwriting Agreement

On July 19, 2022, Crown Electrokinetics Corp. (the "Company") entered into an underwriting agreement (the "Underwriting Agreement") with Roth Capital Partners, LLC (the "Representative"), as representative of the underwriters set forth on Schedule I thereto (collectively, the "Underwriters"), relating to the Company's public offering (the "Offering") of its common stock, par value \$0.0001 per share (the "Common Stock"). Under the Underwriting Agreement, the Company agreed to sell 1,250,000 shares of Common Stock to the Underwriters, at a purchase price per share of \$0.744 (the offering price to the public of \$0.80 per share minus the underwriters' discount), pursuant to the Company's registration statement on Form S-3 (File No. 333-262122) (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Securities Act"). The Company has also granted to the underwriters a 30-day option to purchase up to 187,500 additional shares of Common Stock to cover over-allotments.

The Underwriting Agreement includes customary representations, warranties and covenants by the Company. It also provides that the Company will indemnify the Underwriters against certain liabilities, including liabilities under the Securities Act, or contribute to payments the Underwriters may be required to make because of any of those liabilities.

The closing of the Offering is expected to occur on July 22, 2022, subject to customary closing conditions.

The foregoing summary of the Underwriting Agreement is qualified in its entirety by reference to the full text of the Underwriting Agreement, a copy of which is attached as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Underwriter Warrant

At the closing of the Offering, pursuant to the Underwriting Agreement, the Company will issue to the Representative, or at the Representative's direction, a warrant (the "Underwriter Warrant") to purchase 62,500 shares of Common Stock. Such warrant may be exercised beginning on the date that is 180 days after July 22, 2022 until July 19, 2022. The exercise price of the Underwriter Warrant is \$0.80 per share.

The foregoing summary of the Underwriter Warrant is qualified in its entirety by reference to the full text of the Underwriter Warrant, a copy of which is attached as Exhibit 4.1 to this Current Report on Form 8-K and is incorporated herein by reference.

### Item 3.02. Unregistered Sale of Equity Securities

The information set forth in Item 1.01 with respect to the Underwriter Warrant is incorporated by reference here.

### Item 9.01. Financial Statements and Exhibits

<u>Exhibit No.</u>	<u>Description</u>
1.1	<a href="#">Underwriting Agreement, dated July 19, 2022, by and between Crown Electrokinetics Corp. and Roth Capital Partners, LLC (as representative of the underwriters named therein).</a>
4.1	<a href="#">Form of Underwriter Warrant.</a>
5.1	<a href="#">Opinion of Pryor Cashman LLP</a>
23.1	<a href="#">Consent of Pryor Cashman LLP (included in Exhibit 5.1)</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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### SIGNATURES

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

Dated: July 22, 2022

**Crown Electrokinetics Corp.**

By: /s/ Doug Croxall  
Name: Doug Croxall  
Title: Chief Executive Officer

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NEITHER THESE SECURITIES NOR THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES HAVE 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. THESE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT SECURED BY SUCH SECURITIES.

**CROWN ELECTROKINETICS CORP.**

**WARRANT**

Warrant No. [ ]

Original Issue Date: July 22, 2022

Crown Electrokinetics Corp., a Delaware corporation (the “**Company**”), hereby certifies that, as partial compensation for its services as an underwriter to the Company, Roth Capital Partners, LLC or its registered assigns (the “**Holder**”), is entitled to purchase from the Company up to a total of 62,500 shares of the Company’s common stock, par value \$0.0001 per share (the “**Common Stock**”), at any time and from time to time from and after 180 days following the date hereof, and through and including July 19, 2027 (the “**Expiration Date**”), in accordance with FINRA Rule 5110, and subject to the following terms and conditions:

1. Definitions. As used in this Warrant, the following terms shall have the respective definitions set forth in this Section 1.

“**Affiliate**” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 144.

“**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“**Common Stock**” means the common stock of the Company, par value \$0.0001 per share, and any securities into which such common stock may hereafter be reclassified or for which it may be exchanged as a class.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

“**Exercise Price**” means \$0.80, subject to adjustment in accordance with Section 9.

“**Fundamental Transaction**” means any of the following: (1) the Company effects any merger or consolidation of the Company with or into another Person, (2) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (3) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (4) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property.

“**New York Courts**” means the state and federal courts sitting in the State of New York.

“**Original Issue Date**” means the Original Issue Date first set forth on the first page of this Warrant.

“**Person**” means an 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.

“**Prospectus**” means the prospectus, dated January 21, 2022, filed with the Securities and Exchange Commission pursuant to Rule 424 promulgated under the Securities Act.

“**Rule 144**” means Rule 144 promulgated by the Securities and Exchange Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Securities and Exchange Commission having substantially the same effect as such Rule.

“**Securities Act**” means the Securities Act of 1933, as amended.

“**Subsidiary**” means any “significant subsidiary” as defined in Rule 1-02(w) of Regulation S-X promulgated by the Securities and Exchange Commission under the Exchange Act.

“**Trading Day**” means (i) a day on which the Common Stock is traded on a Trading Market, or (ii) if the Common Stock is not quoted on any Trading Market, a day on which the Common Stock is quoted in the over-the-counter market as reported by the Pink Sheets LLC (or any similar organization or agency succeeding to its functions of reporting prices); provided, that in the event that the Common Stock is not listed or quoted as set forth in (i) or (ii) hereof, then Trading Day shall mean a Business Day.

“**Trading Market**” means whichever of the New York Stock Exchange, the NYSE American, the NASDAQ Global Select Market, the NASDAQ Global Market, the NASDAQ Capital Market or OTC Markets Group electronic quotation system on which the Common Stock is listed or quoted for trading on the date in question.

“**Underlying Shares**” means the shares of Common Stock issuable upon exercise of this Warrant.

2. Registration of Warrant. The Company shall register this Warrant upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

3. Registration of Transfers. The Company shall register the transfer of any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached hereto duly completed and signed, to the Company at its address specified herein. Upon any such registration or transfer, a new Warrant to purchase Common Stock, in substantially the form of this Warrant (any such new Warrant, a “**New Warrant**”), evidencing the portion of this Warrant so transferred shall be

issued to the transferee and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations of a holder of a Warrant.

4. Exercise and Duration of Warrants. This Warrant shall be exercisable by the registered Holder at any time and from time to time from and after 180 days following the date hereof (the “**Effective Date**”), through and including the Expiration Date, in accordance with FINRA Rule 5110. At 6:30 p.m., New York City time on the Expiration Date, the portion of this Warrant not exercised prior thereto shall be and become void and of no value. The Company may not call or redeem any portion of this Warrant without the prior written consent of the affected Holder. Neither this Warrant nor any shares of Common Stock issuable upon exercise of this Warrant, shall be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of this Warrant, or any security issuable upon exercise of this Warrant, by any person for a period of 180 days immediately following the date hereof, except as provided in FINRA Rule 5110(g)(2).

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5. Delivery of Common Stock.

(a) To effect exercises hereunder, the Holder shall not be required to physically surrender this Warrant unless all of the Warrant Shares represented by this Warrant are being exercised. Upon delivery of the Exercise Notice (in the form attached hereto) to the Company (with the attached Warrant Shares Exercise Log) at its address for notice set forth herein and upon payment of the Exercise Price multiplied by the number of Warrant Shares that the Holder intends to purchase hereunder, the Company shall promptly (but in no event later than two Trading Days after the Date of Exercise (as defined herein)) issue and deliver to the Holder, a certificate for the Warrant Shares issuable upon such exercise. The Company shall, upon request of the Holder and subsequent to the date on which a registration statement covering the resale of the Warrant Shares has been declared effective by the Securities and Exchange Commission, use its reasonable best efforts to deliver Warrant Shares hereunder electronically through the Depository Trust Corporation or another established clearing corporation performing similar functions, if available, provided that, the Company may, but will not be required to change its transfer agent if its current transfer agent cannot deliver Warrant Shares electronically through the Depository Trust Corporation. A “**Date of Exercise**” means the date on which the Holder shall have delivered to the Company: (i) the Exercise Notice (with the Warrant Shares Exercise Log attached to it), appropriately completed and duly signed and (ii) if applicable, payment of the Exercise Price for the number of Warrant Shares so indicated by the Holder to be purchased.

(b) If by the second Trading Day after a Date of Exercise the Company fails to deliver the required number of Warrant Shares in the manner required pursuant to Section 5(a), then the Holder will have the right to rescind such exercise.

(c) If by the second Trading Day after a Date of Exercise the Company fails to deliver the required number of Warrant Shares in the manner required pursuant to Section 5(a), and if after such second Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “**Buy-In**”), then the Company shall (1) reimburse the Holder the amount by which (x) the Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock or Warrants so purchased exceeds (y) the amount obtained by multiplying (A) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue by (B) the closing bid price of the shares of Common Stock, on the Date of Exercise and (2) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In.

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

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

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7. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity (which shall not include a surety bond), if requested. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company’s obligation to issue the New Warrant.

8. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of shares of Common Stock which are then issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of Persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable.

9. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9.

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

for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination.

(b) Fundamental Transactions. If, at any time while this Warrant is outstanding there is a Fundamental Transaction, then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant (the “**Alternate Consideration**”). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. At the Holder’s option and request, any successor to the Company or surviving entity in such Fundamental Transaction shall issue to the Holder a new warrant substantially in the form of this Warrant and consistent with the foregoing provisions and evidencing the Holder’s right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof. The terms of any agreement pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this paragraph (b) and insuring that the Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction.

(c) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to this Section 9, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

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(d) Calculations. All calculations under this Section 9 shall be made to the nearest cent or the nearest 1/100<sup>th</sup> of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

(e) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will promptly compute such adjustment in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company’s Transfer Agent.

(f) Notice of Corporate Events. If the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any Subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to the Holder a notice describing the material terms and conditions of such transaction (but only to the extent such disclosure would not result in the dissemination of material, non-public information to the Holder) at least 10 calendar days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction, and the Company will take all steps reasonably necessary in order to insure that the Holder is given the practical opportunity to exercise this Warrant prior to such time so as to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

10. Payment of Exercise Price. The Holder may pay the Exercise Price in one of the following manners:

(a) Cash Exercise. The Holder may deliver immediately available funds; or

(b) Cashless Exercise. The Holder may notify the Company in an Exercise Notice of its election to utilize cashless exercise, in which event the Company shall issue to the Holder the number of Warrant Units determined as follows:

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

where:

X = the number of Warrant Shares to be issued to the Holder.

Y = the number of Warrant Shares with respect to which this Warrant is being exercised.

A = the average of the daily volume weighted average price for the Common Stock for the five Trading Days immediately prior to (but not including) the Exercise Date.

B = the Exercise Price.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a cashless exercise transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued.

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11. Limitations on Exercise. Notwithstanding anything to the contrary contained herein, the number of Warrant Shares that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by such Holder and its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder’s for purposes of Section 13(d) of the Exchange Act, does not exceed 9.99% of the total number of issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise). For such purposes, beneficial ownership shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. This provision shall not restrict the number of shares of Common Stock which a Holder may receive or beneficially own in order to determine the amount of securities or other consideration that such Holder may receive in the event of a Fundamental Transaction as contemplated in Section 9 of this Warrant. This restriction may not be waived. Notwithstanding anything to the contrary contained in this Warrant, (a) no term of this Section may be waived

by any party, nor amended such that the threshold percentage of ownership would be directly or indirectly increased, (b) this restriction runs with the Warrant and may not be modified or waived by any subsequent holder hereof and (c) any attempted waiver, modification or amendment of this Section will be void ab initio.

12. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would, otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the closing price of one share of Common Stock as reported by the applicable Trading Market on the date of exercise, or round up to the nearest whole share of Common Stock.

13. Notices. Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 6:30 p.m. (New York City time) on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section on a day that is not a Trading Day or later than 6:30 p.m. (New York City time) on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. The addresses for such communications shall be: (i) if to the Company, to Crown Electrokinetics Corp., Attn: Chief Executive Officer, email: doug@crownek.com (or such other address as the Company shall indicate in writing in accordance with this Section), or (ii) if to the Holder, to the address or facsimile number appearing on the Warrant Register or such other address or facsimile number as the Holder may provide to the Company in accordance with this Section.

14. Warrant Agent. The Company shall serve as warrant agent under this Warrant. Upon 10 days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. Miscellaneous.

(a) No Rights as a Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 5 except as expressly set forth in Section 9. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 10(b) or to receive cash payments pursuant to Section 5(c) and 9(b), in no event shall the Company be required to net cash settle an exercise of this Warrant.

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(b) This Warrant shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. This Warrant may be amended only in writing signed by the Company and the Holder and their successors and assigns. The foregoing sentence shall be subject to the restrictions on waivers and amendments set forth in Section 11 of this Warrant.

(c) All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of this Warrant and the transactions herein contemplated ("**Proceedings**") (whether brought against a party hereto or its respective Affiliates, employees or agents) shall be commenced exclusively in the New York Courts. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any Proceeding, any claim that it is not personally subject to the jurisdiction of any New York Court, or that such Proceeding has been commenced in an improper or inconvenient forum. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Warrant or the transactions contemplated hereby. If either party shall commence a Proceeding to enforce any provisions of this Warrant, then the prevailing party in such Proceeding shall be reimbursed by the other party for its attorney's fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Proceeding.

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

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

(f) Prior to exercise of this Warrant, the Holder hereof shall not, by reason of being a Holder, be entitled to any rights of a stockholder with respect to the Common Stock.

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

**CROWN ELECTROKINETICS CORP.**

By: \_\_\_\_\_  
Name: Doug Croxall  
Title: Chief Executive Officer

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EXERCISE NOTICE  
CROWN ELECTROKINETICS CORP.  
WARRANT DATED JULY 22, 2022

The undersigned Holder hereby irrevocably elects to purchase \_\_\_ shares of Common Stock pursuant to the above referenced Warrant. Capitalized terms used herein and not otherwise defined have the respective meanings set forth in the Warrant.

- (1) The undersigned Holder hereby exercises its right to purchase \_\_\_\_\_ shares of Common Stock pursuant to the Warrant.
- (2) The holder shall pay the sum of \$ \_\_\_\_\_ to the Company in accordance with the terms of the Warrant.
- (3) Pursuant to this Exercise Notice, the Company shall deliver to the holder Common Stock in accordance with the terms of the Warrant.
- (4) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (determined in accordance with Section 13(d) of the Securities Exchange Act of 1934) permitted to be owned under Section 11 of the Warrant to which this notice relates.

Dated: \_\_\_\_\_ Name of Holder: \_\_\_\_\_  
 (Print) \_\_\_\_\_  
 By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 (Signature must conform in all respects to name of holder as specified on the face of the Warrant)

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Warrant Shares Exercise Log

Date	Number of Warrant Shares Available to be Exercised	Number of Warrant Shares Exercised	Number of Warrant Shares Remaining to be Exercised

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CROWN ELECTROKINETICS CORP.  
WARRANT DATED JULY 22, 2022  
WARRANT NO. [ ]

FORM OF ASSIGNMENT

[To be completed and signed only upon transfer of Warrant]

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto \_\_\_\_\_ the right represented by the above-captioned Warrant to purchase \_\_\_ shares of Common Stock to which such Warrant relates and appoints \_\_\_\_\_ attorney to transfer said right on the books of the Company with full power of substitution in the premises.

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

In the presence of:  
 \_\_\_\_\_

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## CROWN ELECTROKINETICS CORP.

## UNDERWRITING AGREEMENT

## 1,250,000 Shares of Common Stock

July 19, 2022

Roth Capital Partners, LLC  
 As the Representative of the  
 Several Underwriters Named on Schedule I hereto

c/o Roth Capital Partners, LLC 888 San Clemente Drive, Suite 400  
 Newport Beach, CA 92660

Ladies and Gentlemen:

**Crown Electrokinetics Corp.**, a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the underwriters named in **Schedule I** hereto (the "Underwriters," or each, an "Underwriter"), for whom Roth Capital Partners, LLC is acting as the representative (the "Representative"), an aggregate of 1,250,000 authorized but unissued shares (the "Firm Shares") of common stock, par value \$0.0001 per share (the "Common Stock"), of the Company. The Company also proposes to sell to the Underwriters, upon the terms and conditions set forth in Section 4 hereof, up to an additional 187,500 shares of Common Stock (the "Option Shares"). The Firm Shares and the Option Shares are hereinafter collectively referred to as the "Shares". The Shares, the Underwriter Warrants (as defined below) and the Underwriter Warrant Shares (as defined below) are collectively referred to as the "Securities".

The Company and the several Underwriters hereby confirm their agreement as follows:

**1. Registration Statement and Prospectus.**

The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") a registration statement covering the Shares on Form S-3 (File No. 333-262122) under the Securities Act of 1933, as amended (the "Securities Act"), and the rules and regulations (the "Rules and Regulations") of the Commission thereunder, and such amendments to such registration statement (including post effective amendments) as may have been required to the date of this Underwriting Agreement (the "Agreement"). Such registration statement, as amended (including any post effective amendments), has been declared effective by the Commission. Such registration statement, together with the amendments thereto prior to the date of this Agreement, including the information (if any) deemed to be a part of, or incorporated by reference into, the registration statement at the time of effectiveness of such registration statement pursuant to Item 12 of Form S-3 under the Securities Act or Rule 430B under the Securities Act ("Rule 430B Information"), is hereinafter referred to as the "Registration Statement" and the related base prospectus, dated January 12, 2022, included in the Registration Statement at the time the Registration Statement first became effective is hereinafter called the "Base Prospectus." 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 from and after the date and time of filing of the Rule 462(b) Registration Statement, any reference herein to the term Registration Statement shall include such Rule 462 Registration Statement.

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The Company is filing with the Commission pursuant to Rule 430B and Rule 424 under the Securities Act a final prospectus supplement to the Base Prospectus relating to the Shares and the offering thereof after the execution and delivery of this Agreement. Such final prospectus supplement as filed, along with the Base Prospectus, is hereinafter called the "Final Prospectus." The term "Preliminary Prospectus" means the Base Prospectus, together with any preliminary prospectus supplement to the Base Prospectus that describes the Shares and the offering thereof, that omitted the Rule 430B Information and that was used prior to the filing of the Final Prospectus Supplement, filed with the Commission pursuant to Rule 424 of the Rules and Regulations, in the form provided to the Underwriters by the Company for use in connection with the offering of the Shares. Such Final Prospectus and any Preliminary Prospectus 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." For purposes of this Agreement, all references to the Registration Statement, Rule 462(b) Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Final Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System or any successor system thereto ("EDGAR"). Reference made herein to the Base Prospectus, any Preliminary Prospectus, or to the Final Prospectus shall be deemed to include any documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act as of the date of such prospectus. Any reference to any amendment or supplement to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Final Prospectus shall be deemed to include any document filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and which is deemed to be incorporated by reference therein or otherwise deemed by the Rules and Regulations to be a part thereof. The term "Effective Date" shall mean each date that the Registration Statement and any post-effective amendment or amendments thereto became or become effective.

The Commission has not notified the Company of any objection to the use of form of Registration Statement or any post-effective amendment thereto.

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**2. Representations and Warranties of the Company Regarding the Offering.**

(a) The Company represents and warrants to, and agrees with, the several Underwriters, as of the date hereof, and as of the Closing Date (as defined in Section 4(b) below) and as of each Option Closing Date (as defined in Section 4(c) below), as follows:

(i) **No Material Misstatements or Omissions.** At the Effective Date, at the date hereof, at the Closing Date, and at each Option Closing Date, if any, the Registration Statement and any post-effective amendment thereto complied or will comply in all material respects with the requirements of the Securities Act and the Rules and Regulations and did not, does not, and will not, as the case may be, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Time of Sale Disclosure Package (as defined in Section 2(a)(iv)(A)(1) below) as of 6:00 PM (Eastern time) (the "Applicable Time") on the date hereof, and at the Closing Date and on each Option Closing Date, if any, and the Final Prospectus, as amended or supplemented, as of its date, at the time of filing pursuant to Rule 424(b) under the Securities Act, and at the Closing Date and at each Option Closing Date, if any, and any individual Written Testing-the-Waters Communication, when considered together with the Time of Sale Disclosure Package, did not, does not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences shall not apply to statements in or omissions from the Registration Statement, the Time of Sale Disclosure Package or any Prospectus in reliance upon, and in conformity with, written



information furnished to the Company by any Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). The Registration Statement contains all exhibits and schedules required to be filed by the Securities Act or the Rules and Regulations. No order preventing or suspending the effectiveness or use of the Registration Statement or any Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission.

(ii) **Marketing Materials.** The Company has not distributed any prospectus or other offering material in connection with the offering and sale of the Shares other than any Preliminary Prospectus, the Time of Sale Disclosure Package, the Final Prospectus, and the roadshow or investor presentations delivered to and approved by the Representative for use in connection with the marketing of the offering of the Shares (the “Marketing Materials”).

(iii) **Emerging Growth Company.** The Company is an “emerging growth company,” as defined in Section 2(a) of the Securities Act (an “Emerging Growth Company”).

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(iv) **Accurate Disclosure.** (A) The Company has provided a copy to the Underwriters of each Issuer Free Writing Prospectus (as defined below) used in the sale of Securities. The Company has filed all Issuer Free Writing Prospectuses required to be so filed with the Commission, and no order preventing or suspending the effectiveness or use of any Issuer Free Writing Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission. When taken together with the rest of the Time of Sale Disclosure Package or the Final Prospectus, no Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of Shares, has, does or will include (1) any untrue statement of a material fact or omission 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, or (2) information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Final Prospectus. The representations and warranties set forth in the immediately preceding sentence shall not apply to statements in or omissions from the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by any Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). As used in this paragraph and elsewhere in this Agreement:

(1) “Time of Sale Disclosure Package” means the Base Prospectus, the Prospectus most recently filed with the Commission before the time of this Agreement, including any preliminary prospectus supplement deemed to be a part thereof, each Issuer Free Writing Prospectus, and the description of the transaction provided by the Underwriters included on **Schedule II**.

(2) “Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act, relating to the Shares that (A) is required to be filed with the Commission by the Company, or (B) is exempt from filing pursuant to Rule 433(d)(5)(i) or (d)(8) under the Securities Act, 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) under the Securities Act.

(B) At the time of filing of the Registration Statement and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405 under the Securities Act or an “excluded issuer” as defined in Rule 164 under the Securities Act.

(C) Each Issuer Free Writing Prospectus listed on **Schedule III** satisfied, as of its issue date and at all subsequent times through the Prospectus Delivery Period, all other conditions as may be applicable to its use as set forth in Rules 164 and 433 under the Securities Act, including any legend, record-keeping or other requirements.

(v) **Financial Statements.** The financial statements of the Company, together with the related notes and schedules, included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act, and the rules and regulations of the Commission thereunder, and fairly present the financial condition of the Company as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with U.S. generally accepted accounting principles (“GAAP”) consistently applied throughout the periods involved. No other financial statements or schedules are required under the Securities Act, the Exchange Act, or the Rules and Regulations to be included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus.

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(vi) **Independent Accountants.** To the Company’s knowledge, **Marcum LLP**, which has expressed its opinion with respect to the financial statements and schedules incorporated by reference as a part of the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, is an independent public accounting firm with respect to the Company within the meaning of the Securities Act and the Rules and Regulations.

(vii) **Accounting and Disclosure Controls.** The Company maintains systems of “internal control over financial reporting” (as defined under Rules 13a-15 and 15d-15 under the Exchange Act) that comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, 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; (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by references in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus fairly present the information called for in all material respects and are prepared in accordance with the Commission’s rules and guidelines applicable thereto. Since the date of the latest audited financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, there has been no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

The Company maintains disclosure controls and procedures that have been designed to ensure that material information relating to the Company is made known to the Company’s principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective.

(viii) **Forward-Looking Statements.** The Company had a reasonable basis for, and made in good faith, each “forward-looking statement” (within the meaning of Section 27A of the Securities Act or Section 21E of the Exchange Act) contained or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package, the Final Prospectus or the Marketing Materials.

(ix) **Statistical and Marketing-Related Data.** All statistical or market-related data included or incorporated by reference in the Registration

(x) **Trading Market.** The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is approved for listing on the Nasdaq Capital Market (the “Nasdaq”). There is no action pending by the Company or, to the Company’s knowledge, the Nasdaq to delist the Common Stock from the Nasdaq, nor has the Company received any notification that the Nasdaq is contemplating terminating such listing. The Company has filed an application to include the Shares and Underwriter Warrant Shares on the Nasdaq when issued and when issued, the Shares and Warrant Shares will be listed on the Nasdaq. The Company has taken all actions it deems reasonably necessary or advisable to take on or prior to the date of this Agreement to assure that it will be in compliance in all material respects with all applicable corporate governance requirements set forth in the rules of the Nasdaq that are then in effect.

(xi) **Absence of Manipulation.** The Company has not taken, directly or indirectly, any action that is designed to or that has constituted or that would reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares.

(xii) **Investment Company Act.** The Company is not and, after giving effect to the offering and sale of the Shares and the application of the net proceeds thereof, will not be an “investment company,” as such term is defined in the Investment Company Act of 1940, as amended.

(xiii) **Form S-3 Eligibility.** The Company was at the time of the filing of the Registration Statement eligible to use Form S-3. The Company is eligible to use Form S-3 under the Securities Act and it meets the transaction requirements with respect to the aggregate market value of securities being sold pursuant to this offering and during the twelve calendar (12) months prior to this offering, as set forth in General Instruction I.B.6 of Form S-3.

### **3. Representations and Warranties Regarding the Company.**

(a) 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, as follows:

(i) **Good Standing.** The Company has been duly organized and is validly existing as a corporation or other entity in good standing under the laws of its jurisdiction of incorporation. The Company has the power and authority (corporate or otherwise) to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation or other entity in good standing in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary, except where the failure to so qualify would not have or be reasonably likely to result in a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company, or in its ability to perform its obligations under this Agreement (“Material Adverse Effect”).

(ii) **Authorization.** The Company has the power and authority to enter into this Agreement and the Underwriter Warrants and to authorize, issue and sell the Shares and the Underwriter Warrant Shares as contemplated by this Agreement and the Underwriter Warrants. This Agreement and the Underwriter Warrants have been duly authorized by the Company, and when executed and delivered by the Company, and will constitute the valid, legal and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity.

(iii) **Contracts.** The execution, delivery and performance of this Agreement and the Underwriter Warrants and the consummation of the transactions herein contemplated will not (A) result in a breach or violation of any of the terms and provisions of, or constitute a default under, any law, order, rule or regulation to which the Company is subject, or by which any property or asset of the Company is bound or affected, (B) conflict with, result in any violation or breach of, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any right of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) (a “Default Acceleration Event”) of, any agreement, lease, credit facility, debt, note, bond, mortgage, indenture or other instrument (the “Contracts”) or obligation or other understanding to which the Company is a party or by which any property or asset of the Company is bound or affected, except to the extent that such conflict, default, or Default Acceleration Event not reasonably likely to result in a Material Adverse Effect, or (C) result in a breach or violation of any of the terms and provisions of, or constitute a default under, the Company’s Certificate of Incorporation or by-laws.

(iv) **No Violations of Governing Documents.** The Company is not in violation, breach or default under its certificate of incorporation, by-laws or other equivalent organizational or governing documents.

(v) **Consents.** No consents, approvals, orders, authorizations or filings are required on the part of the Company in connection with the execution, delivery or performance of this Agreement and the Underwriter Warrants and the issue and sale of the Securities, except (A) the registration under the Securities Act of the Shares, which has been effected, (B) the necessary filings and approvals from the Nasdaq to list the Shares and Underwriter Warrant Shares, (C) such consents, approvals, authorizations, registrations or qualifications as may be required under state or foreign securities or Blue Sky laws and the rules of the Financial Industry Regulatory Authority, Inc. (“FINRA”) in connection with the purchase and distribution of the Shares by the several Underwriters, (D) such consents and approvals as have been obtained and are in full force and effect, and (E) such consents, approvals, orders, authorizations and filings the failure of which to make or obtain is not reasonably likely to result in a Material Adverse Effect.

(vi) **Capitalization.** The Company has an authorized capitalization as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. All of the issued and outstanding shares of capital stock of the Company are duly authorized and validly issued, fully paid and nonassessable, and have been issued in compliance with all applicable securities laws, and conform to the description thereof in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. Except for the issuances of options or restricted stock in the ordinary course of business, since the respective dates as of which information is provided in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, the Company has not entered into or granted any convertible or exchangeable securities, options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company any shares of the capital stock of the Company. The Shares, when issued and paid for as provided herein, will be duly authorized and validly issued, fully paid and nonassessable, will be

issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights and will conform to the description of the capital stock of the Company contained in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. The shares of Common Stock issuable upon the exercise of the Underwriter Warrants (the “Underwriter Warrant Shares”), when issued, paid for and delivered upon due exercise of the Underwriter Warrants, as applicable, will be duly authorized and validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights. The Underwriter Warrant Shares have been reserved for issuance. The Underwriter Warrants, when issued, will conform in all material respects to the descriptions thereof set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus.

(vii) **Taxes.** The Company has (a) filed all foreign, federal, state and local tax returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof and (b) paid all taxes (as hereinafter defined) shown as due and payable on such returns that were filed and has paid all taxes imposed on or assessed against the Company. The provisions for taxes payable, if any, shown on the financial statements included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. No issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company, and no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company. The term “taxes” mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term “returns” means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

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(viii) **Material Change.** Since the respective dates as of which information is given (including information incorporated by reference) in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock; (c) there has not been any change in the capital stock of the Company (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants, upon the conversion of outstanding shares of preferred stock or other convertible securities or the issuance of restricted stock awards or restricted stock units under the Company’s existing stock awards plan, or any new grants thereof in the ordinary course of business), (d) there has not been any material change in the Company’s long-term or short-term debt, and (e) there has not been the occurrence of any Material Adverse Effect.

(ix) **Absence of Proceedings.** There is not pending or, to the knowledge of the Company, threatened, any action, suit or proceeding to which the Company is a party or of which any property or assets of the Company is the subject before or by any court or governmental agency, authority or body, or any arbitrator or mediator, which is reasonably likely to result in a Material Adverse Effect.

(x) **Permits.** The Company holds, and is in compliance with, all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders (“Permits”) of any governmental or self-regulatory agency, authority or body required for the conduct of its business, and all such Permits are in full force and effect, in each case except where the failure to hold, or comply with, any of them is not reasonably likely to result in a Material Adverse Effect or adversely affect the consummation of the transactions contemplated by this Agreement.

(xi) **Good Title.** The Company has good and marketable title to all property (whether real or personal) described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus as being owned by them that are material to the business of the Company, in each case free and clear of all liens, claims, security interests, other encumbrances or defects, except those that are disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus and those that are not reasonably likely to result in a Material Adverse Effect. The property held under lease by the Company is held by it under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company.

(xii) **Intellectual Property.** The Company owns or possesses or has valid right to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights (“Intellectual Property”) necessary for the conduct of the business of the Company as currently carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. To the knowledge of the Company, no action or use by the Company involves or gives rise to any infringement of, or license or similar fees for, any Intellectual Property of others, except where such action, use, license or fee is not reasonably likely to result in a Material Adverse Effect. The Company has not received any notice alleging any such infringement or fee. To the Company’s knowledge, none of the technology employed by the Company has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company’s knowledge, any of the officers, directors or employees of the Company, or, to the Company’s knowledge, otherwise in violation of the rights of any persons, except in each case for such violations as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

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(xiii) **Employment Matters.** There is (A) no unfair labor practice complaint pending against the Company, nor to the Company’s knowledge, threatened against it before the National Labor Relations Board, any state or local labor relation board or any foreign labor relations board, and no grievance or arbitration proceeding arising out of or under any collective bargaining agreement is so pending against the Company, or, to the Company’s knowledge, threatened against it and (B) no labor disturbance by the employees of the Company exists or, to the Company’s knowledge, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers, customers or contractors, that could reasonably be expected, singularly or in the aggregate, to have a Material Adverse Effect. The Company is not aware that any key employee or significant group of employees of the Company plans to terminate employment with the Company.

(xiv) **ERISA Compliance.** No “prohibited transaction” (as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder (“ERISA”), or Section 4975 of the Internal Revenue Code of 1986, as amended from time to time (the “Code”)) or “accumulated funding deficiency” (as defined in Section 302 of ERISA) or any of the events set forth in Section 4043(b) of ERISA (other than events with respect to which the thirty (30)-day notice requirement under Section 4043 of ERISA has been waived) has occurred or could reasonably be expected to occur with respect to any employee benefit plan of the Company which would reasonably be expected to, singularly or in the aggregate, have a Material Adverse Effect. Each employee benefit plan of the Company is in compliance in all material respects with applicable law, including ERISA and the Code. The Company has not incurred and could not reasonably be expected to incur liability under Title IV of ERISA with respect to the termination of, or withdrawal from, any pension plan (as defined in ERISA). Each pension plan for which the Company would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified, and, to the Company’s knowledge, nothing has occurred, whether by action or by failure to act, which could, singularly or in the aggregate, cause the loss of such qualification.

(xv) **Environmental Matters.** The Company is in compliance with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to their businesses (“**Environmental Laws**”), except where the failure to comply has not had and would not reasonably be expected to have, singularly or in the aggregate, a Material Adverse Effect. There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company (or, to the Company’s knowledge, any other entity for whose acts or omissions the Company is or may otherwise be liable) upon any of the property now or previously owned or leased by the Company, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability, except for any violation or liability which has not had and would not reasonably be expected to have, singularly or in the aggregate, a Material Adverse Effect; and there has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances with respect to which the Company has knowledge.

(xvi) **SOX Compliance.** The Company is in compliance in all material respects with all applicable provisions of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder or implementing the provisions thereof.

(xvii) **Money Laundering Laws.** The operations of the Company is and has been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the “**Money Laundering Laws**”); and no action, suit or proceeding by or before any Governmental Entity involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened. “**Governmental Entity**” shall be defined as any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency (whether foreign or domestic) having jurisdiction over the Company or any of its properties, assets or operations.

(xviii) **Foreign Corrupt Practices Act** Neither the Company nor any director or officer of the Company, nor, to the knowledge of the Company, any employee, representative, agent, affiliate of the Company or any other person acting on behalf of the Company, is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “**FCPA**”), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and, to the knowledge of the Company, its affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(xix) **OFAC.** Neither the Company nor any director or officer of the Company, nor, to the knowledge of the Company, any employee, representative, agent or affiliate of the Company or any other person acting on behalf of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“**OFAC**”); and the Company will not directly or indirectly use the proceeds of the offering of the Shares contemplated hereby, or lend, contribute or otherwise make available such proceeds to any person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(xx) **Insurance.** The Company carries, or is covered by, insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries.

(xxi) **Books and Records.** The minute books of the Company have been made available to the Underwriters and counsel for the Underwriters, and such books (i) contain a complete summary of all meetings and actions of the board of directors (including each board committee) and stockholders of the Company (or analogous governing bodies and interest holders, as applicable), since the time of its incorporation through the date of the latest meeting and action, and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

(xxii) **No Undisclosed Contracts.** There is no Contract or document required by the Securities Act or by the Rules and Regulations to be described in the Registration Statement, the Time of Sale Disclosure Package or in the Final Prospectus or to be filed as an exhibit to the Registration Statements which is not so described or filed therein as required; and all descriptions of any such Contracts or documents contained in the Registration Statement, the Time of Sale Disclosure Package and in the Final Prospectus are accurate and complete descriptions of such documents in all material respects. No such Contract has been suspended or terminated for convenience or default by the Company party thereto or any of the other parties thereto, and the Company has not received notice, and the Company has no knowledge, of any such pending or threatened suspension or termination.

(xxiii) **No Undisclosed Relationships.** No relationship, direct or indirect, exists between or among the Company on the one hand, and the directors, officers, stockholders (or analogous interest holders), customers or suppliers of the Company on the other hand, which is required to be described in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus and which is not so described.

(xxiv) **Insider Transactions.** There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of their respective family members, except as disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. All transactions by the Company with office holders or control persons of the Company have been duly approved by the board of directors of the Company, or duly appointed committees or officers thereof, if and to the extent required under applicable law.

(xxv) **No Registration Rights.** No person or entity has the right to require registration of Common Shares or other securities of the Company within 90 days of the date hereof because of the filing or effectiveness of the Registration Statement or otherwise, except for persons and entities who have expressly waived such right in writing or who have been given timely and proper written notice and have failed to exercise such right within the time or times required under the terms and conditions of such right. There are no persons with registration rights or similar rights to have any securities registered by the Company under the Securities Act.

(xxvi) **Continued Business.** No supplier, customer, distributor or sales agent of the Company has notified the Company that it intends to discontinue

or decrease the rate of business done with the Company, except where such discontinuation or decrease has not resulted in and could not reasonably be expected to result in a Material Adverse Effect.

(xxvii) **No Finder's Fee.** There are no claims, payments, issuances, arrangements or understandings for services in the nature of a finder's, consulting or origination fee with respect to the introduction of the Company to any Underwriter or the sale of the Shares hereunder or any other arrangements, agreements, understandings, payments or issuances with respect to the Company that may affect the Underwriters' compensation, as determined by FINRA.

(xxviii) **No Fees.** Except as described in the Registration Statement, 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 12-month period prior to the date on which the Registration Statement was filed with the Commission ("Filing Date") or thereafter.

(xxix) **Proceeds.** None of the net proceeds of the offering will be paid by the Company to any participating FINRA member or any affiliate or associate of any participating FINRA member, except as specifically authorized herein.

(xxx) **No FINRA Affiliations.** To the Company's knowledge, no (i) officer or director of the Company, (ii) owner of 5% or more of any class of the Company's securities 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 Representative and counsel to the Underwriters if it becomes aware that any officer, director of the Company or any owner of 5% or more of any class of the Company's securities is or becomes an affiliate or associated person of a FINRA member participating in the offering.

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(xxxi) **No Financial Advisor.** Other than the Underwriters, no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the transactions contemplated hereby.

(xxxii) **Certain Statements.** The statements set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus under the caption "Description of Securities" insofar as they purport to constitute a summary of (i) the terms of the Company's outstanding securities, (ii) the terms of the Shares, and (iii) the terms of the documents referred to therein, are accurate, complete and fair in all material respects.

(xxxiii) **Prior Sales of Securities.** Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, the Company has not sold or issued any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulations D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, stock option plans or other employee compensation plans or pursuant to outstanding preferred stock, options, rights or warrants or other outstanding convertible securities.

(b) Any certificate signed by any officer of the Company and delivered to the Representative on behalf of the Underwriters or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

#### **4. Purchase, Sale and Delivery of Shares.**

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Firm Shares to the several Underwriters, and the several Underwriters agree, severally and not jointly, to purchase the Firm Shares set forth opposite the names of the Underwriters in Schedule I hereto. The purchase price to be paid by the Underwriters to the Company for the Firm Shares shall be \$0.744 per share.

(b) The Firm Shares will be delivered by the Company to the Representative, for the respective accounts of the several Underwriters, against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Roth Capital Partners, LLC, 888 San Clemente Drive, Suite 400, Newport Beach, CA 92660, or such other location as may be mutually acceptable, at 6:00 a.m. Pacific Time, on the second (or if the Firm Shares are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the third) full business day following the date hereof, or at such other time and date as the Representative and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, or, in the case of the Option Shares, at such date and time set forth in the Option Notice. The time and date of delivery of the Firm Shares is referred to herein as the "Closing Date." On the Closing Date, the Company shall deliver the Firm Shares, which shall be registered in the name or names and shall be in such denominations as the Representative may request on behalf of the Underwriters at least one (1) business day before the Closing Date, to the respective accounts of the several Underwriters, which delivery shall be made through the facilities of the Depository Trust Company's DWAC system.

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(c) The Company hereby grants to the Underwriters the option to purchase some or all of the Option Shares and, upon the basis of the warranties and representations and subject to the terms and conditions herein set forth, the Underwriters shall have the right, severally and not jointly, to purchase at the purchase price set forth in Section 4(a) all or any portion of the Option Shares as may be necessary to cover over-allotments made in connection with the transactions contemplated hereby. The purchase price to be paid by the Underwriters for the Option Shares shall be \$0.744 per share. This option may be exercised by the Underwriters at any time and from time to time on or before the thirtieth (30<sup>th</sup>) day following the date hereof, by written notice to the Company (the "Option Notice"). The Option Notice shall set forth the aggregate number of Option Shares as to which the option is being exercised, and the date and time when the Option Shares are to be delivered (such date and time being herein referred to as the "Option Closing Date"); *provided, however*, that the Option Closing Date shall not be earlier than the Closing Date nor earlier than the first business day after the date on which the option shall have been exercised nor later than the fifth business day after the date on which the option shall have been exercised unless the Company and the Representative otherwise agree. If the Underwriters elect to purchase less than all of the Option Shares, the Company agrees to sell to each Underwriter the number of Option Shares obtained by multiplying the number of Option Shares specified in such notice by a fraction, the numerator of which is the number of Option Shares set forth opposite the name of the Underwriter in Schedule I hereto under the caption "Number of Option Shares to be Sold" and the denominator of which is the total number of Option Shares.

(d) Payment of the purchase price for and delivery of the Option Shares shall be made on an Option Closing Date in the same manner and at the same office as the payment for the Firm Shares as set forth in subparagraph (b) above.

(e) It is understood that the Representative has been authorized, for its own account and the accounts of the several Underwriters, to accept delivery of and receipt for, and make payment of the purchase price for, the Firm Shares and Option Shares the Underwriters have agreed to purchase. The Representative, individually and not as the Representative of the Underwriters, may (but shall not be obligated to) make payment for any Securities to be purchased by any Underwriter whose funds shall not have been received by the Representative by the Closing Date or any Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(f) On the Closing Date, the Company shall issue to the Underwriters (and/or their designees), warrants (the "Underwriter Warrants"), in form and substance acceptable to the Representative, for the purchase of an aggregate of 62,500 shares of Common Stock, which shall be registered in the name or names and shall be in such denominations as the Representative may request on behalf of the Underwriters at least one (1) business day before the Closing Date.

#### 5. Covenants.

(a) The Company covenants and agrees with the Underwriters as follows:

(i) The Company shall prepare the Final Prospectus in a form approved by the Representative and file such Final Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by the Rules and Regulations.

(ii) During the period beginning on the date hereof and ending on the later of the Closing Date or such date as determined by the Representative the Final Prospectus is no longer required by law to be delivered in connection with sales by an underwriter or dealer (the "Prospectus Delivery Period"), prior to amending or supplementing the Registration Statement, including any Rule 462 Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, the Company shall furnish to the Representative for review and comment a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Representative reasonably objects.

(iii) From the date of this Agreement until the end of the Prospectus Delivery Period, the Company shall promptly advise the Representative in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending its use or the use of the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time during the Prospectus Delivery Period, the Company will use its reasonable efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A, 430B or 430C as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or 164(b) of the Securities Act).

(iv) (A) 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, as now and hereafter amended, so far as necessary to permit the continuance of sales of or dealings in the Shares as contemplated by the provisions hereof, the Time of Sale Disclosure Package, the Registration Statement and the Final Prospectus. If during the Prospectus Delivery Period any event occurs the result of which would cause the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Representative or counsel to the Underwriters to amend the Registration Statement or supplement the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act, or to file under the Exchange Act any document that would be deemed to be incorporated by reference in the Final Prospectus in order to comply with the Securities Act or the Exchange Act, the Company will promptly notify the Representative, allow the Representative the opportunity to provide reasonable comments on such amendment, prospectus supplement or document, and will amend the Registration Statement or supplement the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) or file such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance.

(B) If at any time during the Prospectus Delivery Period there occurred or occurs an event or development the result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement or any Prospectus or included or would include, when taken together with the Time of Sale Disclosure Package, an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(v) The Company shall take or cause to be taken all necessary action to qualify the Securities for sale under the securities laws of such jurisdictions as the Representative reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Securities, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified, to execute a general consent to service of process in any state or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise subject.

(vi) The Company will furnish to the Underwriters and counsel to the Underwriters copies of the Registration Statement, each Prospectus, any Issuer Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Underwriters may from time to time reasonably request.

(vii) The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(viii) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (A) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriters of the Securities (including all fees and expenses of the registrar and transfer agent of the Shares and the registrar and transfer agent of the Underwriter Warrants (if other than the Company), and the cost of preparing and printing stock certificates and warrant certificates), (B) all expenses and fees (including, without limitation, fees and expenses of the Company's counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements

therein and all amendments, schedules, and exhibits thereto), the Securities, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, any Issuer Free Writing Prospectus and any amendment thereof or supplement thereto, (C) all reasonable filing fees and reasonable fees and disbursements of the Underwriters' counsel incurred in connection with the qualification of the Shares for offering and sale by the Underwriters or by dealers under the securities or blue sky laws of the states and other jurisdictions that the Representative shall designate, (D) the reasonable filing fees and reasonable fees and disbursements of counsel to the Underwriters incident to any required review and approval by FINRA, of the terms of the sale of the Shares, (F) listing fees, if any, and (G) all other costs and expenses incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein. The Company will reimburse the Representative for the Underwriters' reasonable out-of-pocket expenses, including legal fees and disbursements, in connection with the purchase and sale of the Securities contemplated hereby up to an aggregate of \$75,000 (including amounts payable pursuant to clauses (C) and (D) above). If this Agreement is terminated by the Representative in accordance with the provisions of Section 6, Section 9 or Section 10, the Company will reimburse the Underwriters for all out-of-pocket disbursements (including, but not limited to, reasonable fees and disbursements of counsel, travel expenses, postage, facsimile and telephone charges) incurred by the Underwriters in connection with their investigation, preparing to market and marketing the Shares or in contemplation of performing their obligations hereunder.

(ix) The Company intends to apply the net proceeds from the sale of the Shares to be sold by it hereunder for the purposes set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus under the heading "Use of Proceeds".

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(x) The Company has not taken and will not take, directly or indirectly, during the Prospectus Delivery Period, any action designed to or which might reasonably be expected to cause or result in, or that has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares.

(xi) The Company represents and agrees that, unless it obtains the prior written consent of the Representative, and each Underwriter, severally, and not jointly, represents and agrees that, unless it obtains the prior written consent of the Company, it has not made and will not make any offer relating to the Shares that would constitute an Issuer Free Writing Prospectus; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the free writing prospectuses included in **Schedule III**. Any such free writing prospectus consented to by the Company and the Representative is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, and has complied or will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely Commission filing where required, legending and record-keeping.

(xii) [Reserved].

(xiii) The Company hereby agrees, during a period of three years from the effective date of the Registration Statement, to furnish to the Representative copies of all reports or other communications (financial or other) furnished to shareholders, and to deliver to the Representative as soon as reasonably practicable upon availability, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; provided, that any information or documents available on the Commission's Electronic Data Gathering, Analysis and Retrieval System shall be considered furnished for purposes of this Section 5(a)(xiii).

(xiv) The Company hereby agrees to engage and maintain, at its expense, a registrar and transfer agent for the Common Stock (if other than the Company).

(xv) The Company hereby agrees to use its reasonable best efforts to obtain approval to list the Shares and the Underwriter Warrant Shares on the Nasdaq.

(xvi) The Company hereby agrees not to take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any securities of the Company to facilitate the sale or resale of the Shares.

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(xvii) The Company will promptly notify the Representative if the Company ceases to be an Emerging Growth Company at any time prior to the end of the Prospectus Delivery Period.

**6. Conditions of the Underwriter's Obligations.** The respective obligations of the several Underwriters hereunder to purchase the Shares are subject to the accuracy, as of the date hereof and at all times through the Closing Date, and on each Option Closing Date (as if made on the Closing Date or such Option Closing Date, as applicable), of and compliance with all representations, warranties and agreements of the Company contained herein, the performance by the Company of its obligations hereunder and the following additional conditions:

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

(b) The Shares and the Underwriter Warrant Shares shall be approved for listing on the Nasdaq, subject to official notice of issuance.

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

(d) The Representative shall not have reasonably determined, and advised the Company, that the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus, contains an untrue statement of fact which, in the reasonable opinion of the Representative, is material, or omits to state a fact which, in the reasonable opinion of the Representative, is material and is required to be stated therein or necessary to make the statements therein not misleading.

(e) On or after the date hereof (i) no downgrading shall have occurred in the rating accorded any of the Company's securities by any "nationally recognized statistical organization," as that term is defined by the Commission for purposes of Rule 436(g)(2) under the Securities Act, and (ii) no such organization shall have publicly

(f) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative, for the benefit of the Underwriters, the opinion and negative assurance letters of Pryor Cashman LLP, counsel to the Company, each dated the Closing Date or the Option Closing Date, as applicable, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative.

(g) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative, for the benefit of the Underwriters, the opinion and negative assurance letter of Olivo IP Law Group, P.C., intellectual property counsel to the Company, dated the Closing Date or the Option Closing Date, as applicable, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative.

(h) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative, for the benefit of the Underwriters, the negative assurance letter of Sichenzia Ross Ference LLP, counsel to the Underwriters, dated the Closing Date or the Option Closing Date, as applicable, and addressed to the Underwriters, in form and substance reasonably satisfactory to Representative.

(i) The Representative, for the benefit of the Underwriters, shall have received a letter of Marcum LLP on the date hereof and on the Closing Date and on each Option Closing Date, addressed to the Underwriters, confirming that they are independent public accountants within the meaning of the Securities Act and are in compliance with the applicable requirements relating to the qualifications of accountants under Rule 2-01 of Regulation S-X of the Commission, and confirming, as of the date of each such letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, as of a date not prior to the date hereof or more than five days prior to the date of such letter), the conclusions and findings of said firm with respect to the financial information and other matters required by the Underwriters.

(j) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative, for the benefit of the Underwriters, a certificate, dated the Closing Date and on each Option Closing Date and addressed to the Underwriters, signed by the chief executive officer and the chief financial officer of the Company, in their capacity as officers of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement that are qualified by materiality or by reference to any Material Adverse Effect are true and correct in all respects, and all other representations and warranties of the Company in this Agreement are true and correct, in all material respects, as if made at and as of the Closing Date and on the Option Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part required to be performed or satisfied at or prior to the Closing Date or on the Option Closing Date, as applicable;

(ii) No stop order or other order (A) suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof, (B) suspending the qualification of the Shares for offering or sale, or (C) suspending or preventing the use of the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus or any Issuer Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to their knowledge, is contemplated by the Commission or any state or regulatory body; and

(iii) There has been no occurrence of any event resulting or reasonably likely to result in a Material Adverse Effect during the period from and after the date of this Agreement and prior to the Closing Date or on the Option Closing Date, as applicable.

(k) On or before the date hereof, the Representative shall have received duly executed lock-up agreement (each a "Lock-Up Agreement") in the form set forth on **Exhibit A** hereto, by and between the Representative and each of the parties specified in **Schedule IV**.

(l) The Company shall have furnished to the Underwriters and their counsel such additional documents, certificates and evidence as the Representative or its counsel may have reasonably requested.

If any condition specified in this Section 6 shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by the Representative by notice to the Company at any time at or prior to the Closing Date or on the Option Closing Date, as applicable, and such termination shall be without liability of any party to any other party, except that Section 5(a)(viii), Section 7 and Section 10 shall survive any such termination and remain in full force and effect.

#### **7. Indemnification and Contribution.**

(a) The Company agrees to indemnify, defend and hold harmless each Underwriter, its affiliates, directors and officers and employees, and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which such party may become subject, under the Securities Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the 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, or arise out of or are based upon the omission from the Registration Statement, or alleged omission to state therein, a material fact required to be stated therein or necessary to make the statements therein not misleading (ii) an untrue statement or alleged untrue statement of a material fact contained in the Time of Sale Disclosure Package, any Written Testing-the-Waters Communications, any Prospectus, the Final Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, or the Marketing Materials or in any other materials used in connection with the offering of the Securities, 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, in light of the circumstances under which they were made, not misleading, (iii) in whole or in part, any inaccuracy in the representations and warranties of the Company contained herein, or (iv) in whole or in part, any failure of the Company to perform its obligations hereunder or under law, and will reimburse such party for any legal or other expenses reasonably incurred by such party in connection with evaluating, investigating or defending against such loss, claim, damage, liability or action; *provided, however*, that such indemnity shall not inure to the benefit of any Underwriter (or any person controlling such Underwriter) in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Time of Sale Disclosure Package, any Written Testing-the-Waters Communications, any Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by the related Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f).



(b) Each Underwriter, severally and not jointly, will indemnify, defend and hold harmless the Company, its directors and each officer of the Company who signs the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which such party may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by such Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f), and will reimburse such party for any legal or other expenses reasonably incurred by such party in connection with evaluating, investigating, and defending against any such loss, claim, damage, liability or action. The obligation of each Underwriter to indemnify the Company (including any controlling person, director or officer thereof) shall be limited to the amount of the underwriting discount applicable to the Shares to be purchased by such Underwriter hereunder actually received by such Underwriter.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the failure to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure. In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof; *provided, however*, that if (i) 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, (ii) 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 will not have the right to direct the defense of such action on behalf of the indemnified party), or (iii) the indemnifying party has not in fact employed counsel reasonably 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, the indemnified party shall have the right to employ a single counsel to represent it in any claim in respect of which indemnity may be sought under subsection (a) or (b) of this Section 7, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the indemnified party as incurred.

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The indemnifying party under this Section 7 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is a party or could be named and indemnity was or would be sought hereunder by such indemnified party, unless such settlement, compromise or consent (a) includes an unconditional release of such indemnified party from all liability for claims that are the subject matter of such action, suit or proceeding and (b) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering and sale of the Shares or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discount received by the Underwriters, in each case as set forth in the table on the cover page of the Final Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the first sentence of this subsection (d). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim that is the subject of this subsection (e). Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount of the of the underwriting discount applicable to the Shares to be purchased by such Underwriter hereunder actually received by such Underwriter. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' respective obligations to contribute as provided in this Section 7 are several in proportion to their respective underwriting commitments and not joint.

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(e) The obligations of the Company under this Section 7 shall be in addition to any liability that the Company may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act; and the obligations of each Underwriter under this Section 7 shall be in addition to any liability that each Underwriter may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to the Company, and its officers, directors and each person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act.

(f) For purposes of this Agreement, each Underwriter severally confirms, and the Company acknowledges, that there is no information concerning such Underwriter furnished in writing to the Company by such Underwriter specifically for preparation of or inclusion in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus or any Issuer Free Writing Prospectus, other than the statement set forth in the last paragraph on the cover page of the Prospectus, the marketing and legal names of each Underwriter, and the statements set forth in the "Underwriting" section of the Registration Statement, the Time of Sale Disclosure Package, and the Final Prospectus only insofar as such statements relate to the amount of selling concession and re-allowance, if any, or to over-allotment, stabilization and related activities that may be undertaken by such Underwriter.

**8. Representations and Agreements to Survive Delivery:** All representations, warranties, and agreements of the Company contained herein or in certificates delivered

pursuant hereto, including, but not limited to, the agreements of the several Underwriters and the Company contained in Section 5(a)(viii) and Section 7 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the several Underwriters or any controlling person thereof, or the Company or any of their respective officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Shares to and by the Underwriters hereunder.

#### **9. Termination of this Agreement**

(a) The Representative shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date or any Option Closing Date (as to the Option Shares to be purchased on such Option Closing Date only), if in the discretion of the Representative, (i) there has occurred any material adverse change in the securities markets or any event, act or occurrence that has materially disrupted, or in the opinion of the Representative, will in the future materially disrupt, the securities markets or there shall be such a material adverse change in general financial, political or economic conditions or the effect of international conditions on the financial markets in the United States as such as to make it, in the judgment of the Representative, inadvisable or impracticable to market the Shares or enforce contracts for the sale of the Shares (ii) trading in the Company's Common Stock shall have been suspended by the Commission or the Nasdaq or trading in securities generally on the Nasdaq Stock Market, the NYSE or the NYSE American shall have been suspended, (iii) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the Nasdaq Stock Market, the NYSE or NYSE American, by such exchange or by order of the Commission or any other governmental authority having jurisdiction, (iv) a banking moratorium shall have been declared by federal or state authorities, (v) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States, any declaration by the United States of a national emergency or war, any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions or any other calamity or crisis, or (vi) the Company suffers any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, or (vii) in the judgment of the Representative, there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, any material adverse change in the assets, properties, condition, financial or otherwise, or in the results of operations, business affairs or business prospects of the Company, whether or not arising in the ordinary course of business. Any such termination shall be without liability of any party to any other party except that the provisions of Section 5(a)(viii) and Section 7 hereof shall at all times be effective and shall survive such termination.

(b) If the Representative elects to terminate this Agreement as provided in this Section, the Company and the other Underwriters shall be notified promptly by the Representative by telephone, confirmed by letter.

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

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the Shares of a defaulting Underwriter or Underwriters on such Closing Date or Option Closing Date as provided in this Section 10, (i) the Company shall have the right to postpone such Closing Date or Option Closing Date for a period of not more than five (5) full business days in order to permit the Company to effect whatever changes in the Registration Statement, the Final Prospectus, or in any other documents or arrangements, which may thereby be made necessary, and the Company agrees to promptly file any amendments to the Registration Statement or the Final Prospectus which may thereby be made necessary, and (ii) the respective numbers of Shares to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or any other Underwriter for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of any non-defaulting Underwriters or the Company, except that the representations, warranties, covenants, indemnities, agreements and other statements set forth in Section 2 and 3, the obligations with respect to expenses to be paid or reimbursed pursuant to Section 5 and the provisions of Section 5(a)(viii) and Section 7 and Sections 11 through 19, inclusive, shall not terminate and shall remain in full force and effect.

As used in this Agreement, the term "Underwriter" shall be deemed to include any person substituted for a defaulting Underwriter under this Section 10. Any action taken under this Section 10 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

**11. Notices.** Except as otherwise provided herein, all communications hereunder shall be in writing and, if to the Representative, shall be mailed, delivered or telecopied to Roth Capital Partners, LLC, 800 San Clemente Drive, Suite 400, Newport Beach, CA 92660, teletype number: (949) 720-7227, Attention: Managing Director; and if to the Company, shall be mailed, delivered or telecopied to it at 1110 NE Circle Blvd., Corvallis, OR 97330, email: doug@crownek.com, Attention: Chief Executive Officer; or in each case to such other address as the person to be notified may have requested in writing. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

**12. Persons Entitled to Benefit of Agreement.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 7. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Shares from any Underwriters.

**13. Absence of Fiduciary Relationship.** The Company acknowledges and agrees that: (a) each Underwriter has been retained solely to act as underwriter in connection with the sale of the Shares and that no fiduciary, advisory or agency relationship between the Company and any Underwriter has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Underwriter has advised or is advising the Company on other matters; (b) the price and other terms of the Shares set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriters and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Underwriters and their affiliates are engaged in a broad range of transactions that may involve interests that differ from those of the Company and that no Underwriter has any obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and (d) it has been advised that each

Underwriter is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of such Underwriter, and not on behalf of the Company.

**14. Amendments and Waivers.** No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver be deemed or constitute a continuing waiver unless otherwise expressly provided.

**15. Partial Unenforceability.** The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision.

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

**17. Submission to Jurisdiction.** The Company irrevocably (a) submits to the jurisdiction of the Supreme Court of the State of New York, Borough of Manhattan or the United States District Court for the Southern District of New York for the purpose of any suit, action, or other proceeding arising out of this Agreement, or any of the agreements or transactions contemplated by this Agreement, the Registration Statement, the Time of Sale Disclosure Package, any Prospectus and the Final Prospectus (each a "Proceeding"), (b) agrees that all claims in respect of any Proceeding may be heard and determined in any such court, (c) waives, to the fullest extent permitted by law, any immunity from jurisdiction of any such court or from any legal process therein, (d) agrees not to commence any Proceeding other than in such courts, and (e) waives, to the fullest extent permitted by law, any claim that such Proceeding is brought in an inconvenient forum. THE COMPANY (ON BEHALF OF ITSELF AND, TO THE FULLEST EXTENT PERMITTED BY LAW, ON BEHALF OF ITS EQUITY HOLDERS AND CREDITORS) HEREBY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY CLAIM BASED UPON, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT, THE REGISTRATION STATEMENT, THE TIME OF SALE DISCLOSURE PACKAGE, ANY PROSPECTUS AND THE FINAL PROSPECTUS.

**18. Entire Agreement.** This Agreement (together with the other agreements and documents being delivered pursuant to or in connection with this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof. Notwithstanding anything to the contrary set forth herein, it is understood and agreed by the parties hereto that all other terms and conditions of that certain engagement letter between the Company and the Representative, dated May 3, 2022, including, without limitation Sections 4 and 5 with respect to future offerings, shall remain in full force and effect

**19. Counterparts.** This Agreement may be executed and delivered (including by facsimile transmission or electronic mail) in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

[Signature Page Follows]

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

Very truly yours,

**Crown Electrokinetics Corp.**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Confirmed as of the date first above-mentioned by the Representative of the several Underwriters

**ROTH CAPITAL PARTNERS, LLC**

By: \_\_\_\_\_  
Name: Aaron M. Gurewitz  
Title: Head of Equity Capital Markets

[Signature page to Underwriting Agreement]

**SCHEDULE I**

Name	Number of Firm Shares to be Purchased	Number of Option Shares to be Purchased
Roth Capital Partners, LLC	1,250,000	187,500
Total	1,250,000	187,500

**SCHEDULE II**

**Final Term Sheet**

Issuer:	Crown Electrokinetics Corp. (the “Company”)
Symbol:	CRKN
Securities:	1,250,000 shares of common stock, par value \$0.0001 per share (the “Common Stock”), of the Company.
Over-allotment option:	Up to an additional 187,500 shares of Common Stock
Public offering price:	\$0.80 per share of Common Stock
Underwriting discount:	\$0.056 per share of Common Stock
Expected net proceeds:	Approximately \$930,000 (\$1,069,500 if the over-allotment option is exercised in full) (after deducting the underwriting discount and estimated offering expenses payable by the Company).
Trade date:	July 20, 2022
Settlement date:	July 22, 2022
Underwriters:	Roth Capital Partners, LLC

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### SCHEDULE III

#### Free Writing Prospectus

None.

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### SCHEDULE IV

#### List of officers and directors executing lock-up agreements

Douglas Croxall  
Tim Koch  
Joel Krutz  
Dr. DJ Nag  
Edward Kovalik  
Gary Hanna  
Gizman Abbas

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7 Times Square, New York, NY 10036 Tel: 212-421-4100 Fax: 212-326-0806

New York | Los Angeles

www.pryorcashman.com

July 22, 2022

Crown Electrokinetics Corp.  
1110 NE Circle Blvd.  
Corvallis, Oregon 97330

Re: **Registration Statement on Form S-3**  
**(Registration No. 333-262122)**

Ladies and Gentlemen:

We have acted as counsel to Crown Electrokinetics Corp., a Delaware corporation (the “**Company**”), in connection with the above-referenced registration statement (the “**Registration Statement**”), and declared effective by the Securities and Exchange Commission (the “**Commission**”) on January 21, 2021, and the related prospectus contained therein (the “**Prospectus**”) and the prospectus supplement filed with the Commission on July 21, 2022 pursuant to Rule 424(b) promulgated under the Securities Act of 1933, as amended (the “**Prospectus Supplement**”), relating to the offering and sale by the Company of 1,250,000 shares of its common stock (the “**Common Stock**”), \$0.0001 par value per share. This opinion is being delivered at the request of the Company and in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated by the Commission.

For purposes of this opinion, we have examined such documents and reviewed such questions of law as we have considered necessary and appropriate for the purposes of our opinion set forth below. In rendering our opinion, we have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures and the conformity to authentic originals of all documents submitted to us as copies. We have also assumed the legal capacity for all purposes relevant hereto of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties. As to questions of fact material to our opinions, we have relied upon certificates of officers of the Company and of public officials.



Crown Electrokinetics Corp.  
July 22, 2022  
Page 2

Based upon the foregoing and in reliance thereon, and subject to the qualifications, limitations, exceptions and assumptions set forth herein, we are of the opinion that the shares of Common Stock have been duly authorized and, when issued and sold by the Company and delivered by the Company against receipt of the purchase price therefor, as described in the Registration Statement, the Prospectus, and Prospectus Supplement, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion with the SEC as Exhibit 5.1 to the Company’s Current Report on Form 8-K filed on July 22, 2022, which is incorporated by reference in the Registration Statement and the Prospectus Supplement. We also consent to the reference of our firm under the caption “Legal Matters” in the Prospectus Supplement and in each case in any amendment or supplement thereto. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 and Section 11 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

We are admitted to practice in the State of New York, and we express no opinion as to matters governed by any laws other than the laws of the State of New York, the Delaware General Corporation Law and the Federal laws of the United States. The reference and limitation to “Delaware General Corporation Law” includes the statutory provisions, all applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting those laws.

Very truly yours,

/s/ PRYOR CASHMAN LLP