

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

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

Date of Report (Date of earliest event reported): December 27, 2024

Personalis, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-38943
(Commission
File Number)

27-5411038
(IRS Employer
Identification No.)

6600 Dumbarton Circle
Fremont, California
(Address of Principal Executive Offices)

94555
(Zip Code)

(650) 752-1300
Registrant's Telephone Number, Including Area Code

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	PSNL	The Nasdaq Global Market

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

Emerging growth company

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

Item 8.01 Other Events.

On December 27, 2024, Personalis, Inc. (the “Company”) entered into an Amended and Restated At-the-Market Sales Agreement (the “Amended Sales Agreement”) with Piper Sandler & Co. (“Piper”) and BTIG, LLC (“BTIG”). The Amended Sales Agreement amends and restates the At-the-Market Sales Agreement with BTIG, previously entered into on December 30, 2021, as amended by Amendment No. 1 to the At-the-Market Sales Agreement, dated December 21, 2023, to add Piper as a sales agent (Piper and BTIG, together, the “Sales Agents”), among certain other changes.

Pursuant to the Amended Sales Agreement, the Company may offer and sell shares of the Company’s common stock (“Shares”) from time to time through the Sales Agents.

The foregoing description of the Amended Sales Agreement is not complete and is qualified in its entirety by reference to the full text of the Amended Sales Agreement, a copy of which is filed herewith as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference.

On December 27, 2024, the Company filed a prospectus supplement to the prospectus included in the Company’s shelf registration statement on Form S-3 (Registration No. 333-276204) (the “Registration Statement”), relating to an offering of Shares pursuant to the Amended Sales Agreement. The opinion of Cooley LLP relating to the Shares offered by the foregoing prospectus supplement is filed herewith as Exhibit 5.1 to this Current Report on Form 8-K.

The offering of the Company’s common stock pursuant to the sales agreement prospectus, dated January 9, 2024, included in the Registration Statement is hereby terminated such that no further offers or sales will be made pursuant to such sales agreement prospectus.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit Number</u>	<u>Description</u>
1.1*	Amended and Restated At-the-Market Sales Agreement, dated December 27, 2024, by and among Personalis, Inc., Piper Sandler & Co. and BTIG, LLC.
5.1	Opinion of Cooley LLP.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
104	Cover Page Interactive Data File (embedded within the Inline XBRL Document).

* Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K because such schedules and exhibits do not contain information which is material to an investment or voting decision or which is not otherwise disclosed in the filed agreements. The Company will furnish the omitted schedules and exhibits to the SEC upon request by the SEC.

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 thereunto duly authorized.

Date: December 27, 2024

Personalis, Inc.

By: /s/ Aaron Tachibana
Aaron Tachibana
Chief Financial Officer and Chief Operating Officer

PERSONALIS, INC.
SHARES OF COMMON STOCK
(par value \$0.0001 per share)
AMENDED AND RESTATED
AT-THE-MARKET SALES AGREEMENT

December 27, 2024

Piper Sandler & Co.
800 Nicollet Mall, Suite 800
Minneapolis, Minnesota 55402

BTIG, LLC
350 Bush St, 9th Floor
San Francisco, CA 94104

Ladies and Gentlemen:

Personalis, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with Piper Sandler & Co. and BTIG, LLC (each a “**Sales Agent**” and together the “**Sales Agents**” and the Sales Agents, together with the Company, the “**Parties**”), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell to or through the Sales Agents, each as sales agent, shares (“**Shares**”) of the Company’s common stock, par value \$0.0001 per share (the “**Common Stock**”); provided, however, that in no event shall the Company issue or sell to or through the Sales Agents such number of Shares that would exceed (a) the number or amount of shares of Common Stock then available for offer and sale under the Registration Statement (as defined below) as in effect at such time pursuant to which the offering hereunder is being made, (b) the dollar amount of Common Stock for which the Company has filed a Prospectus (as defined below) and, if applicable, a related Prospectus Supplement (as defined below), (c) the number or dollar amount of Common Stock permitted to be offered and sold by the Company under a registration statement on Form S-3 (including General Instruction I.B.6. thereof, if such instruction is applicable) or (d) the number of authorized but unissued shares of the Company’s Common Stock (the lesser of (a), (b), (c) and (d), the “**Maximum Amount**”). Notwithstanding anything to the contrary contained herein, the Parties acknowledge and agree that compliance with the limitations set forth in this Section 1 on the Maximum Amount of Shares that may be issued and sold under this Agreement shall be the sole responsibility of the Company, and that the Sales Agents shall have no obligation in connection with such compliance. Each transaction pursuant to this Agreement in which the Company determines to sell Shares through either of the Sales Agents is hereinafter referred to as an “**Agency Transaction**.” The issuance and sale of Shares to or through either of the Sales Agents will be effected pursuant to the Registration Statement (as defined below) filed by the Company and after

such Registration Statement has been declared effective under the Securities Act (as defined below) by the U.S. Securities and Exchange Commission (the “**Commission**”), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement (as defined below) to issue Common Stock.

The Company has prepared and filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Securities Act**”), with the Commission a shelf registration statement on Form S-3, including a base prospectus, with respect to offerings of certain securities of the Company, including the Shares, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Exchange Act**”). The Company will file a prospectus supplement to the base prospectus included as part of such registration statement at the time it became effective specifically relating to the offering of the Shares pursuant to this Agreement (together with any subsequently filed prospectus supplement to the Prospectus (defined below) with respect to the offering of the Shares, the “**Prospectus Supplement**”). The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable, with respect to the Shares. The Company will furnish to the Sales Agents, for use by them, copies of the Prospectus, as supplemented by the Prospectus Supplement, if any, relating to the Shares. Except where the context otherwise requires, any such registration statement, as declared effective by the Commission, or when it becomes effective, as applicable, including the information, if any, deemed pursuant to Rule 430B or 430C under the Securities Act, as applicable, to be part of the registration statement and all documents filed as part thereof or incorporated by reference therein, and including any information contained in the Prospectus subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act, collectively, are herein called the “**Registration Statement**,” and any base prospectus or related prospectus included in the Registration Statement at the time it became effective, including all documents incorporated therein by reference to the extent such information has not been superseded or modified in accordance with Rule 412 under the Securities Act (as qualified by Rule 430B(g) of the Securities Act), as it may be supplemented by the Prospectus Supplement, if any, in the form filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act (“**Rule 433**”), relating to the Shares that (i) is required to be filed with the Commission by the Company or (ii) is exempt from filing pursuant to Rule 433(d)(5)(i), 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), is herein called the “**Prospectus**.” If the Company has filed an abbreviated registration statement to register additional securities of the Company pursuant to Rule 462(b) under the Securities Act, then any reference to the Registration Statement in this Agreement shall also be deemed to include such abbreviated registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act. Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein (such documents incorporated or deemed to be incorporated by reference are herein called the “**Incorporated Documents**”). For

purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include any copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval system, or if applicable, the Interactive Data Electronic Applications system when used by the Commission (collectively, “**EDGAR**”).

2. **Placements.** Each time that the Company wishes to issue and sell Shares hereunder in an Agency Transaction (each, a “**Placement**”), it will notify the applicable Sales Agent by email notice (or other method mutually agreed to in writing by the Company and the applicable Sales Agent) of the amount of Shares requested to be sold or the gross proceeds to be raised in a given time period, the time period during which sales are requested to be made, any limitation on the amount of Shares that may be sold in any single day, any minimum price below which sales may not be made or any minimum price requested for sales in a given time period and any other instructions relevant to such requested sales (a “**Placement Notice**”), the form of which is attached hereto as **Schedule 1**. A Placement Notice shall originate from any of the individual representatives of the Company set forth on **Schedule 3**, and shall be addressed to each of the individual representatives of such Sales Agent set forth on **Schedule 3**, as such **Schedule 3** may be amended from time to time in writing. Provided the Company is otherwise in compliance with the terms of this Agreement, the Placement Notice shall be effective unless and until (i) such Sales Agent, in accordance with the notice requirements set forth in **Section 4**, declines to accept the terms contained therein for any reason, in its sole discretion (which, if such decline is received within two (2) Trading Days (as defined below) of the date of the Placement Notice, shall not be deemed a breach of such Sales Agent’s agreement herein), (ii) the entire amount of the Shares thereunder have been sold or the aggregate Shares sold under this Agreement equals the Maximum Amount, whichever occurs first, (iii) the Company, in accordance with the notice requirements set forth in **Section 4**, suspends or terminates the Placement Notice or sales thereunder, (iv) such Sales Agent, in accordance with the notice requirements set forth in **Section 4**, suspends sales under the Placement Notice, (v) the Company issues a subsequent Placement Notice with parameters superseding those on the earlier dated Placement Notice or (vi) this Agreement has been terminated under the provisions of **Section 12**. The amount of any commission to be paid by the Company to such Sales Agent in connection with the sale of the Shares effected through such Sales Agent, as agent, in an Agency Transaction shall be calculated in accordance with the terms set forth in **Schedule 2**. It is expressly acknowledged and agreed that neither the Company nor such Sales Agent will have any obligation whatsoever with respect to a Placement or any Shares unless and until the Company delivers a Placement Notice to such Sales Agent and such Sales Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control. For the avoidance of doubt, the Company agrees that any offer to sell, any solicitation of an offer to buy, or any sales of Shares by the Company shall be effected only by or through one Sales Agent designated by the Company in the Placement Notice for the period of time specified in such Placement Notice or until the Placement Notice with respect to such Sales Agent is terminated in accordance with this **Section 2**.

3. **Sale of Shares by a Sales Agent.** On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon the Company’s issuance of a Placement Notice in an Agency Transaction, and unless the sale of the Shares

described therein has been declined, suspended or otherwise terminated in accordance with the terms of this Agreement, the applicable Sales Agent, as sales agent for the Company, will use its commercially reasonable efforts, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Global Market (the “**Exchange**”), for the period specified in the Placement Notice to sell such Shares up to the amount specified by the Company in, and otherwise in accordance with the terms of, such Placement Notice. As sales agent in an Agency Transaction, the applicable Sales Agent will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) next following the Trading Day on which it has made sales of Shares hereunder, setting forth the number of Shares sold on such day, the compensation payable by the Company to such Sales Agent with respect to such sales pursuant to Section 2, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by such Sales Agent (as set forth in Section 5(a)) from the gross proceeds for the Shares that it receives from such sales. The applicable Sales Agent may sell Shares, as sales agent in an Agency Transaction, by any method permitted by law deemed to be an “at-the-market” offering as defined in Rule 415 under the Securities Act, including, without limitation, sales made directly on the Exchange, on any other existing trading market for the Common Stock or to or through a market maker or through an electronic communications network. After consultation with the Company and subject to the terms of a Placement Notice, the applicable Sales Agent may also sell Shares, as sales agent in an Agency Transaction, in privately negotiated transactions. During the term of this Agreement and notwithstanding anything to the contrary herein, the applicable Sales Agent agrees that in no event will it or any of its affiliates engage in any market making, bidding, stabilization or other trading activity with regard to the Common Stock if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Exchange Act. The Company acknowledges and agrees that (i) there can be no assurance that the Sales Agents will be successful in selling Shares in any Agency Transaction hereunder, (ii) the Sales Agents will incur no liability or obligation to the Company or any other person or entity if it does not sell Shares in any Agency Transaction for any reason other than a failure by such Sales Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such Shares as required under this Section 3, and (iii) the Sales Agents shall be under no obligation to purchase Shares on a principal basis pursuant to this Agreement. For the purposes hereof, “**Trading Day**” means any day on which Common Stock is purchased and sold on the principal market on which the Common Stock is listed or quoted.

4. Suspension of Sales.

(a) The Company or the applicable Sales Agent may, upon notice to the applicable Sales Agent or the Company, respectively, in writing (including by email correspondence to each of the individual representatives of the applicable party set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individual representatives of the applicable party set forth on Schedule 3), suspend this offering and any sale of Shares in an Agency Transaction for a period of time (a “**Suspension Period**”); *provided, however*, that, such suspension shall not affect or impair either party’s obligations with respect to any Shares sold hereunder prior to the receipt of such notice. During any Suspension Period, any obligation under Sections 7(1),

7(m), 7(n) and 7(o) with respect to the delivery of certificates, opinions, or comfort letters to the Sales Agents shall be waived as provided in Section 7(m). Each of the Parties agrees that no such notice under this Section 4 shall be effective against the other applicable party unless it is made to one of the individuals named on Schedule 3 hereto, as such Schedule 3 may be amended from time to time in writing. During a Suspension Period, the Company shall not issue any Placement Notices and the Sales Agents shall not sell any Shares hereunder. The party that issued a Suspension Notice shall notify the applicable other party in writing of the Trading Day on which the Suspension Period shall expire not later than twenty-four (24) hours prior to such Trading Day.

(b) Notwithstanding any other provision of this Agreement, the Company shall not offer or sell, or request the offer or sale of, any Shares and, by notice to the Sales Agents given by telephone (confirmed promptly by verifiable facsimile transmission or email), shall cancel any instructions for the offer or sale of any Shares, and the Sales Agents shall not be obligated to offer or sell any Shares, (i) during any period in which the Company is, or may be deemed to be, in possession of material non-public information or (ii) except as expressly provided in Section 4(c) below, at any time from and including the date (each, an “**Announcement Date**”) on which the Company shall issue a press release containing, or shall otherwise publicly announce, its earnings, revenues or other results of operations (each, an “**Earnings Announcement**”) through and including the time that is twenty-four (24) hours after the time that the Company files (a “**Filing Time**”) a quarterly report on Form 10-Q or an annual report on Form 10-K that includes consolidated financial statements as of and for the same period or periods, as the case may be, covered by such Earnings Announcement.

(c) If the Company wishes to offer, sell or deliver Shares at any time during the period from and including an Announcement Date through and including the time that is twenty-four (24) hours after the corresponding Filing Time, the Company shall, as conditions to the giving or continuation of any Placement Notice with respect to an Agency Transaction, (i) prepare and deliver to the Sales Agents (with a copy to counsel to the Sales Agents) a report on Form 8-K which shall include substantially the same financial and related information as was set forth in the relevant Earnings Announcement (other than any earnings or other projections, similar forward-looking data and officers’ quotations) (each, an “**Earnings 8-K**”), in form and substance reasonably satisfactory to the Sales Agents and their counsel, (ii) provide the Sales Agents with the officer’s certificate called for by Section 7(m), dated the date of the Placement Notice for such Agency Transaction, which certificate shall be deemed to remain in effect during the applicable period unless withdrawn by the Company, and the opinion of Company Counsel and Comfort Letter called for by Sections 7(n) and 7(o), respectively, dated the date of the Placement Notice for such Agency Transaction, (iii) afford the Sales Agents the opportunity to conduct a due diligence review in accordance with Section 7(k) hereof, and (iv) file such Earnings 8-K with the Commission (so that it is deemed “filed” for purposes of Section 18 of the Exchange Act). The provisions of clause (ii) of Section 4(b) shall not be applicable for the period from and after the time at which the conditions set forth in the immediately preceding sentence shall have been satisfied (or, if later, the time that is twenty-four (24) hours after the time that the relevant Earnings Announcement was first publicly released) through and including the time that is twenty-four (24) hours after the Filing Time of the

relevant Quarterly Report on Form 10-Q or Annual Report on Form 10-K, as the case may be. For purposes of clarity, the Parties agree that (A) the delivery of any officers' certificate, opinion of Company Counsel and Comfort Letter pursuant to this Section 4(c) shall not relieve the Company from any of its obligations under this Agreement with respect to any quarterly report on Form 10-Q, annual report on Form 10-K, or report on Form 8-K, as the case may be, including, without limitation, the obligation to deliver the officers' certificate, opinion of Company Counsel and Comfort Letter called for by Sections 7(m), 7(n) and 7(o), respectively, which Sections shall have independent application, and (B) this Section 4(c) shall in no way affect or limit the operation of the provisions of clause (i) of Section 4(b), which shall have independent application.

(d) If either the Sales Agents or the Company believes that the exemptive provisions set forth in Rule 101(c)(1) of Regulation M under the Exchange Act are not satisfied with respect to the Company or the Shares, such party shall promptly notify the other Parties thereof, and sales of the Shares under this Agreement and any Placement Notice shall be suspended until such exemptive provisions or such other applicable exemptive provisions have been satisfied in the judgment of each party.

5. Settlement.

(a) Settlement of Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Shares will occur on the first (1st) Trading Day (or such earlier or later day as is industry practice for regular-way trading) following the date on which such sales are made (each, a "Settlement Date"). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Shares sold (the "Net Proceeds") will be equal to the aggregate sales price received by the applicable Sales Agent for the Shares, after deduction for (i) such Sales Agent's commission for such sales payable by the Company pursuant to Section 2 hereof in an Agency Transaction, (ii) any other amounts due and payable by the Company to such Sales Agent hereunder pursuant to Section 7(g) (Expenses) hereof and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(b) Delivery of Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, issue and electronically transfer the Shares being sold by crediting the applicable Sales Agent's or its designee's (provided such Sales Agent shall have given the Company written notice of such designee at least one Trading Day prior to the Settlement Date) account at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the applicable Parties, which Shares in all cases shall be freely tradeable, transferable, registered shares in good deliverable form. On each Settlement Date, such Sales Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company prior to the Settlement Date. The Company agrees that if the Company, or its transfer agent, defaults in its obligation to deliver Shares on a Settlement Date, the Company agrees that, pursuant to the terms of any Agency Transaction, in addition to and in no way limiting the rights and obligations set forth in Section 10(a) (Indemnification by the Company), the Company will hold such Sales Agent, its directors, officers, members, partners, employees and agents of such Sales Agent and each person, if

any, who (A) controls such Sales Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (B) is controlled by or is under common control with such Sales Agent (other than the Company and its Subsidiaries) (a "**Sales Agent Affiliate**"), harmless against any loss, claim, damage, or expense (including reasonable and documented legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to such Sales Agent any commission or other compensation to which it would otherwise have been entitled absent such default.

(c) **Limitations on Offering Size.** Under no circumstances shall the Company cause or request the offer or sale of any Shares pursuant to this Agreement (i) if, after giving effect to the sale of such Shares, the aggregate number of Shares sold pursuant to this Agreement would exceed the lesser of (A) the Maximum Amount and (B) the number or amount authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the applicable Sales Agent in writing, or (ii) at a price lower than the minimum price therefor authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the applicable Sales Agent in writing. Under no circumstances shall the Company cause or request the offer or sale of any Shares in any Agency Transaction pursuant to this Agreement, at a price lower than the minimum price therefor authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the applicable Sales Agent in writing. Under no circumstances shall the aggregate number of Shares sold pursuant to this Agreement exceed the Maximum Amount. Notwithstanding anything to the contrary contained herein, the Parties acknowledge and agree that compliance with the limitations set forth in this Section 5(c) on the number or amount of Shares that may be issued and sold under this Agreement shall be the sole responsibility of the Company, and that the Sales Agents shall have no obligation in connection with such compliance.

(d) **Sales Through Sales Agents.** The Company agrees that any offer to sell, any solicitation of an offer to buy, or any sales of Shares or any other equity security of the Company shall only be effected by or through a Sales Agent, and only a single Sales Agent, on any single given date, and in no event shall the Company request that more than one Sales Agent sell Shares on the same day; *provided, however*, that (i) the foregoing limitation shall not apply to the use of an agent in connection with the (A) exercise of any option, warrant, right or any conversion privilege set forth in the terms governing such securities, or (B) sales solely to employees, directors or security holders of the Company or its Subsidiaries, or to a trustee or other person acquiring such securities for the accounts of such person and (ii) such limitation shall not apply (a) on any day during which no sales are made pursuant to this Agreement or (b) during a period in which the Company has notified the Sales Agents that it will not sell Shares under this Agreement and (1) no Placement Notice is pending or (2) after a Placement Notice has been withdrawn.

6. **Representations and Warranties of the Company.** The Company represents and warrants to, and agrees with, each of the Sales Agents that, as of the date of this Agreement, and the Company represents and warrants to, and agrees with, the applicable Sales Agent that, as of

(i) each Representation Date (as defined in Section 7(m)) on which a certificate is required to be delivered to the applicable Sales Agent pursuant to Section 7(m), (ii) the date on which any Placement Notice is delivered by the Company hereunder to the applicable Sales Agent, and (iii) each time of sale of Shares by the applicable Sales Agent pursuant to this Agreement (each such time of sale, an “**Applicable Time**”), as the case may be:

(a) Registration Statement and Prospectus. The Company and, assuming no act or omission on the part of the Sales Agents that would make such statement untrue, the transactions contemplated by this Agreement comply with all of the conditions to the use of Form S-3 in connection with the offering and sale of the Shares as contemplated hereby. The Registration Statement meets, and the offering and sale of Shares as contemplated hereby comply with, the requirements of Rule 415(a)(1)(x) under the Securities Act. The Registration Statement has been declared effective under the Securities Act by the Commission, and any post-effective amendment thereto has also been declared effective. The Company has not received from the Commission any notice pursuant to Rule 401(g)(1) under the Securities Act objecting to the use of the shelf registration statement form. No stop order of the Commission preventing or suspending the use of the base prospectus, the Prospectus Supplement or the Prospectus, or the effectiveness of the Registration Statement, has been issued, and no proceedings for such purpose have been instituted or are pending or, to the Company’s knowledge, are contemplated by the Commission. At the time of the filing of the Registration Statement, the Company paid the required Commission filing fees relating to the Shares in accordance with Rules 456(a) and 457(o) under the Securities Act. Copies of the Registration Statement, the Prospectus, and any such amendments or supplements and Incorporated Documents that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to the Sales Agents and their counsel.

(b) No Material Misstatement or Omission. At the respective times the Registration Statement and each amendment thereto became or becomes effective, at each deemed effective date with respect to the Sales Agents pursuant to Rule 430B(f)(2) under the Securities Act, and at each Settlement Date, as the case may be, the Registration Statement complied, complies and will comply, in all material respects with the requirements of the Securities Act (including Rule 415(a)(1)(x) under the Act), and did not and will not, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus, when so filed with the Commission under Rule 424(b) under the Securities Act, complied, complies and will comply in all material respects with the requirements of the Securities Act, and each Prospectus furnished to the Sales Agents for use in connection with the offering of the Shares was identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T. Neither the Prospectus nor any amendments or supplements thereto, at the time the Prospectus or any such amendment or supplement was issued, as of the date hereof, at each Representation Date, and at each Applicable Time, as the case may be, included, includes or will include an untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties in this subsection shall not apply to statements in or omissions from the

Registration Statement, the Prospectus or any amendments or supplements thereto made in reliance upon and in conformity with written information furnished to the Company by the Sales Agents expressly for use therein.

(c) Incorporated Documents. Each Incorporated Document heretofore filed, when it was filed (or, if any amendment with respect to any such document was filed, when such amendment was filed), conformed in all material respects with the requirements of the Exchange Act, and any further Incorporated Documents so filed and incorporated after the date of this Agreement will, when they are filed, conform in all material respects with the requirements of the Exchange Act; no such Incorporated Document when it was filed (or, if an amendment with respect to any such document was filed, when such amendment was filed), contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and no such Incorporated Document, when it is filed, will contain an untrue statement of a material fact or will omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

(d) Free Writing Prospectuses. The Company has not distributed and will not distribute any “prospectus” (within the meaning of the Securities Act) or offering material in connection with the offering or sale of the Shares other than the then most recent Prospectus Supplement and any “issuer free writing prospectus” (as defined in Rule 433) reviewed and consented to by the Sales Agents (which consent shall not be unreasonably withheld or delayed), in each case accompanied by the then most recent base prospectus. Each issuer free writing prospectus (as defined in Rule 433), as of its issue date and as of each Applicable Time, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any Incorporated Document deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to any statements in or omissions from any issuer free writing prospectus made in reliance upon and in conformity with written information furnished to the Company by the Sales Agents expressly for use in such issuer free writing prospectus. The Company is not disqualified, by reason of subsection (f) or (g) of Rule 164 under the Securities Act, from using, in connection with the offer and sale of the Shares, issuer free writing prospectuses pursuant to Rules 164 and 433 under the Securities Act. The Company was not and is not an “ineligible issuer” as defined in Rule 405 under the Securities Act at the times specified in Rules 164 and 433 under the Securities Act in connection with the offering of the Shares. Any issuer free writing prospectus that the Company is required to file pursuant to Rule 433 has been, or will be, timely filed with the Commission in accordance with the requirements of Rule 433. Each issuer free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433 or that was prepared by or on behalf of or used by the Company complies or will comply in all material respects with the requirements of the Securities Act.

(e) Capitalization; Description of Shares. The authorized capital stock of the Company conforms as to legal matters to the description thereof contained in each of the Registration Statement and the Prospectus as of the dates referred to therein. The shares of Common Stock outstanding prior to the issuance of the Shares have been duly authorized and are validly issued, fully paid and non-assessable. The Company's Common Stock has been registered pursuant to Section 12(b) of the Exchange Act and is authorized for trading on the Exchange, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock from the Exchange, nor has the Company received any notification that the Commission or the Exchange is contemplating terminating such registration or listing. The Company is in compliance with the current listing standards of the Exchange. If required by the Exchange, the Company has filed a Notification of Listing of Additional Shares with the Exchange with respect to the Shares. Subsequent to the respective dates as of which information is given in each of the Registration Statement and the Prospectus or in the documents incorporated by reference therein, (i) the Company and its Subsidiaries have not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction; (ii) the Company has not purchased any of its outstanding capital stock, other than from its employees or other service providers in connection with the termination of their service pursuant to equity compensation plans or agreements described in the Registration Statement and the Prospectus or in connection with the exercise of the Company's right of first refusal upon a proposed transfer, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock other than ordinary and customary dividends; and (iii) there has not been any material change in the capital stock (other than the exercise of equity awards or grants of equity awards or forfeiture of equity awards outstanding as of such respective dates as of which information is given in each of the Registration Statement and the Prospectus, in each case granted pursuant to the equity compensation plans described in the Registration Statement and the Prospectus), short-term debt or long-term debt of the Company and its Subsidiaries taken as a whole, except in each case as described in each of the Registration Statement and the Prospectus, respectively.

(f) Organization of the Company. The Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the State of Delaware, has the corporate power and authority to own or lease its property and to conduct its business as described in the Registration Statement and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not, individually or in the aggregate, either (i) have or reasonably be expected to have a material adverse effect on the business, operations, properties, financial condition, results of operations or prospects of the Company and its Subsidiaries (as defined below), taken as a whole, or (ii) prevent, materially interfere with or materially delay consummation of the transactions contemplated hereby (the effects described in the foregoing clauses (i) and (ii) being herein referred to as a "**Material Adverse Effect**")

(g) Subsidiaries. Each subsidiary of the Company (each a "**Subsidiary**" and collectively, the "**Subsidiaries**") has been duly organized, is validly existing and in good standing under the laws of the jurisdiction of its organization (to the extent the concept of good standing is applicable in such jurisdiction), has the corporate or other organizational power and authority to own or lease its property and to conduct its business as described

in the Registration Statement and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction (to the extent the concept of good standing is applicable in such jurisdiction) in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole; all of the issued shares of capital stock of each Subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable (to the extent such concepts are applicable in such jurisdiction) and are owned directly by the Company or a Subsidiary of the Company, free and clear of all liens, encumbrances, equities or claims.

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

(i) Authorization. This Agreement has been duly authorized, executed and delivered by the Company and constitutes a valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally and by general principles of equity. This Agreement conforms in all material respects to the descriptions thereof in the Registration Statement and Prospectus.

(j) Absence of Defaults and Conflicts. The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene any provision of (i) applicable law, (ii) the certificate of incorporation or bylaws of the Company, (iii) any agreement or other instrument binding upon the Company or any of its Subsidiaries that is material to the Company and its Subsidiaries, taken as a whole, or (iv) any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any Subsidiary, except that in the case of clauses (i), (iii) and (iv) as would not, individually or in the aggregate, have a Material Adverse Effect on the Company and its Subsidiaries taken as a whole.

(k) Absence of Further Requirements. No consent, approval, authorization or order of, or qualification with, any governmental body or agency is required for the performance by the Company of its obligations under this Agreement, except such as may be required by the securities or "blue sky" laws of the various states or foreign jurisdictions or the rules and regulations of the Financial Industry Regulatory Authority ("FINRA") in connection with the offer and sale of the Shares.

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

(m) **Intellectual Property.** Except as described in the Registration Statement, and the Prospectus, the Company and its Subsidiaries own, possess or license, or can acquire on commercially reasonable terms, sufficient rights to use all material patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names, domain names and other intellectual property including all registrations and applications for registrations of any of the foregoing and all goodwill associated with any of the foregoing (collectively, the “**Intellectual Property**”) currently employed by them in connection with the business as currently operated by them, or as proposed to be operated by them in the Registration Statement and the Prospectus, except where the failure to own, possess, have the right to use or the ability to acquire any of the foregoing would not result in a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries has received any notice of infringement, misappropriation, or violation of or conflict with the asserted rights of others with respect to any of the foregoing which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole. To the knowledge of the Company, (i) neither the Company nor any of its Subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property of any third party and (ii) the Intellectual Property of the Company or any of its Subsidiaries has not been infringed, misappropriated or otherwise violated by any person in any material respect. Except as described in the Registration Statement and the Prospectus, neither the Company nor any of its Subsidiaries has received any notice challenging the ownership, validity, enforceability or scope of any Intellectual Property owned by or exclusively licensed to the Company or any of its Subsidiaries. To the knowledge of the Company, all material Intellectual Property owned by or exclusively licensed to the Company and its Subsidiaries is valid and enforceable. The Company and its Subsidiaries have taken reasonable steps in accordance with customary industry practice to maintain the confidentiality of all Intellectual Property, the value of which to the Company or any of its Subsidiaries is contingent upon maintaining the confidentiality thereof.

(n) **Open Source Software.** Except as would not, individually or in the aggregate, have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, (i) the Company and its Subsidiaries use and have used any and all software and other materials distributed under a “free,” “open source,” or similar licensing model (including but not limited to the MIT License, Apache License, GNU General Public License, GNU Lesser General Public License and GNU Affero General Public License) (“**Open Source Software**”) in compliance with all license terms applicable to such Open Source Software; and (ii) neither the Company nor any of its Subsidiaries uses or distributes or has used or distributed any Open Source Software in any manner that requires or has required (A) the Company or any of its Subsidiaries to permit reverse engineering of any software code or other technology owned by the Company or any of its Subsidiaries or (B) any software code or other technology owned by the Company or any of its Subsidiaries to be (1) disclosed or distributed in source code form, (2) licensed for the purpose of making derivative works or (3) redistributed at no charge.

(o) **Information Technology.** The Company's and its Subsidiaries' information technology and computer systems, networks, hardware, software, internet web sites, and data and databases (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of the Company and its Subsidiaries) are adequate for, and operate and perform in all material respects as required in connection with, the operation of the business of the Company and its Subsidiaries. The Company and each of its Subsidiaries have taken all reasonable technical and organizational measures necessary to protect the information technology systems and Data used in connection with the operation of the Company's and its Subsidiaries' businesses. Without limiting the foregoing, the Company and its Subsidiaries have used reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or Data (as defined below) used in connection with the operation of the Company's and its Subsidiaries' businesses ("**Breach**"). To the knowledge of the Company, there has been no such Breach that would have a Material Adverse Effect on the Company and its Subsidiaries. The Company and its Subsidiaries have not been notified of and have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(p) **Data Security.** (i) The Company and its Subsidiaries have complied, and are presently in compliance, in all material respects, with all internal and external privacy policies, contractual obligations, applicable industry standards, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any legal obligations regarding the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company and its Subsidiaries of personal, personally identifiable, household, sensitive, confidential or regulated data ("**Data Security Obligations**", and such data, "**Data**"); (ii) neither the Company nor any of its Subsidiaries has received any notification of or complaint regarding, and are aware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation; and (iii) there is no pending, or to the knowledge of the Company, threatened, action, suit or proceeding by or before any court or governmental agency, authority or body pending or threatened alleging non-compliance with any Data Security Obligation. To the knowledge of the Company, except as disclosed in the Registration Statement and the Prospectus or as would not individually or in the aggregate have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, there has been no unauthorized access to such information.

(q) Possession of Licenses and Permits. The Company and its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses, including, without limitation, from the Regulatory Authorities, and neither the Company nor any of its Subsidiaries has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, except as described in the Registration Statement and Prospectus.

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

(s) Independent Accountants. Deloitte & Touche LLP and BDO USA, P.C., which have expressed their respective opinions with respect to the financial statements of the Company filed with the Commission and included or incorporated by reference in the Registration Statement and the Prospectus, are independent registered public accounting firms with respect to the Company within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) ("PCAOB") and as required by the Securities Act.

(t) Financial Statements. The consolidated financial statements (including the related notes thereto) of the Company included or incorporated by reference in the Registration Statement and the Prospectus comply in all material respects with the applicable requirements of the Securities Act and present fairly in all material respects the consolidated financial position of the Company and its Subsidiaries as of the dates indicated and the results of their operations and cash flows for the periods specified. Such financial statements have been prepared in conformity with United States generally accepted accounting principles ("U.S. GAAP") applied on a consistent basis throughout the periods covered thereby; and any supporting schedules included or incorporated by reference in the Registration Statement and the Prospectus present fairly in all material respects the information required to be stated therein; the other financial information included or incorporated by reference in the Registration Statement and the Prospectus has been derived from the accounting records of the Company and its Subsidiaries and presents fairly in all material respects the information shown thereby.

(u) No Material Adverse Change in Business. There has not occurred any material adverse change, or any development involving a prospective material adverse change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its Subsidiaries, taken as a whole, from that set forth in the Registration Statement and the Prospectus.

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

(w) Property. The Company and its Subsidiaries do not own any real property. The Company and its Subsidiaries have good and marketable title to all personal property owned by them that is material to the business of the Company and its Subsidiaries, taken as a whole, in each case free and clear of all liens, encumbrances and defects except such as are described in the Registration Statement and the Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its Subsidiaries, in any material respect; and any real property and buildings held under lease by the Company and its Subsidiaries are held by them under valid, subsisting and, to the Company’s knowledge, enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its Subsidiaries, in each case except as described in the Registration Statement and the Prospectus.

(x) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (“**Environmental Laws**”), (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole. There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole.

(y) Insurance. The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are, in the reasonable judgment of the Company, prudent and customary in the businesses

in which they are engaged; neither the Company nor any of its Subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its Subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, except as described in the Registration Statement and the Prospectus.

(z) Accounting Controls and Disclosure Controls. The Company and each of its Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that i) transactions are executed in accordance with management's general or specific authorizations; ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with U.S. 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 reference in the Registration Statement and the Prospectus is accurate. Except as described in the Registration Statement and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (i) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (ii) 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.

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

(bb) Compliance with the Sarbanes-Oxley Act. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any applicable provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans and Sections 302 and 906 related to certifications.

(cc) Actively-Traded Security. The Common Stock is an "actively-traded security" exempted from the requirements of Rule 101 of Regulation M under the Exchange Act by subsection (c)(1) of such rule.

(dd) Payment of Taxes. The Company and each of its Subsidiaries have filed all federal, state, local and foreign tax returns required to be filed by them through the date of this Agreement or have requested extensions thereof (except where the failure to file would not, individually or in the aggregate, have a Material Adverse Effect on the Company and its Subsidiaries taken as a whole) and have paid all taxes required to be paid thereon (except

for cases in which the failure to pay would not, individually or in the aggregate, have a Material Adverse Effect on the Company and its Subsidiaries taken as a whole, or, except as currently being contested in good faith and for which reserves required by U.S. GAAP have been created in the financial statements of the Company), and no unpaid tax deficiency has been determined adversely to the Company or any of its Subsidiaries which has had (nor does the Company nor any of its Subsidiaries have any notice or knowledge of any unpaid tax deficiency which would reasonably be expected to be determined adversely to the Company or its Subsidiaries and which would reasonably be expected to have) a Material Adverse Effect on the Company and its Subsidiaries taken as a whole.

(ee) Stock Transfer Taxes. On each Settlement Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Shares to be sold hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with.

(ff) Statistical and Market-Related Data. The statistical, industry-related and market-related data included or incorporated by reference in the Registration Statement and the Prospectus are based on or derived from sources that the Company reasonably and in good faith believes are reliable and accurate and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(gg) Anti-Corruption. (i) Neither the Company nor any of its Subsidiaries or controlled affiliates, nor any director, officer or employee thereof, nor, to the Company's knowledge, any agent or representative of the Company or of any of its Subsidiaries or controlled affiliates, has taken any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any government official (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) to improperly influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and its Subsidiaries and controlled affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor its Subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(hh) Money Laundering Laws. The operations of the Company and its Subsidiaries are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions

where the Company and its Subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency having jurisdiction over the Company or any of its Subsidiaries (collectively, the “**Anti-Money Laundering Laws**”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(ii) **Sanctions.** (i) Neither the Company nor any of its Subsidiaries, nor any director, officer or employee thereof, nor, to the Company’s knowledge, any agent, affiliate or representative of the Company or any of its Subsidiaries, is an individual or entity (“**Person**”) that is, or is owned or controlled by a Person that is:

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

2) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, the so-called Donetsk People’s Republic, the so-called Luhansk People’s Republic, the Crimea Region of Ukraine, the non-government controlled areas of the Zaporizhzhia and Kherson Regions, Cuba, Iran, North Korea and Syria) (each a “**Sanctioned Country**”);

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

1) to fund or facilitate any activities or business of or with any Sanctioned Country or with any Person that, at the time of such funding or facilitation, is the subject of applicable Sanctions; or

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

iii) Since April 24, 2019, the Company and its Subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(jj) **ERISA.** Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, (i) each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), that is sponsored, maintained, administered or contributed to by the Company has been

maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the “**Code**”), and (ii) neither the Company nor any member of its “Controlled Group” (defined as any trade or business, whether or not incorporated, that would be regarded as a single employer with the Company under Section 414 of the Code) (x) has ever sponsored, maintained, contributed to or has had any obligation to contribute to, any employee benefit plan that is subject to Title IV of ERISA or any “multiemployer plan” as defined in Section 3(37) of ERISA or (y) has incurred, or reasonably expects to incur, any liability under Title IV of ERISA.

(kk) **Health Care Laws**. The Company has operated at all times and is currently in compliance in all material respects with all applicable statutes, rules, regulations and policies of the U.S. Food and Drug Administration (the “**FDA**”) and other applicable U.S. and foreign regulatory authorities, including the UK Medicines & Healthcare products Regulatory Agency (collectively, the “**Regulatory Authorities**”), including, without limitation, if and to the extent applicable:

- i) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder;
- ii) all applicable federal, state, local and foreign health care laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and all foreign criminal laws relating to health care fraud and abuse, including but not limited to the U.S. False Claims Law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“**HIPAA**”) (42 U.S.C. Section 1320d et seq.), the exclusion law (42 U.S.C. Section 1320a-7), the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes;
- iii) the Standards for Privacy of Individually Identifiable Health Information, the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or any other law or regulation the purpose of which is to protect the privacy of individuals or prescribers;
- iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, and the regulations promulgated thereunder;
- v) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.);

- vi) the Clinical Laboratories Improvement Act of 1967, as amended);
- vii) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and
- viii) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company and the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product under development, manufactured or distributed by the Company; (clauses (i) through (viii), collectively, “**Health Care Laws**”).

(ll) Clinical Studies. (i) The studies conducted by the Company in support of the validity or utility of the Company’s NeXT Platform and other current and potential offerings, were, and if still pending are, being conducted in all material respects in accordance with standard medical and experimental protocols, procedures and controls pursuant to accepted professional scientific research standards and procedures; (ii) the descriptions of the results of such studies contained in the Registration Statement and the Prospectus are accurate and complete in all material respects; and (iii) the Company has no knowledge of any other studies not described in the Registration Statement and the Prospectus, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement and the Prospectus.

(mm) Healthcare Regulation. (i) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, the Company has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and, all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were timely, complete, accurate and not misleading on the date filed (or were corrected or supplemented by a subsequent submission); (ii) the Company has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or Regulatory Authority, other governmental entity or third party alleging that any Company or product operation or activity is in violation of any Health Care Laws, including, without limitation, any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other Regulatory Authority or governmental entity, nor, to the Company’s knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (iii) the Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any Regulatory Authority or other governmental entity; and (iv) neither the Company nor any of its employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to an inquiry, investigation, proceeding or other similar action by a Regulatory Authority or other governmental entity that could reasonably be expected to result in debarment, suspension, or exclusion.

(nn) Laboratory Test Regulation. The Company's clinical laboratory tests are conducted in compliance in all material respects with all applicable Health Care Laws, and, to the extent applicable, the respective counterparts thereof promulgated by governmental authorities in countries outside the United States. The Company has not received notice from the FDA, U.S. Department of Health and Human Services or other governmental authority alleging or asserting material noncompliance with any applicable Health Care Law. To the Company's knowledge, neither the FDA nor any other governmental authority is considering such action.

(oo) Labor Disputes. No material labor dispute with the employees of the Company or any of its Subsidiaries exists, except as described in the Registration Statement and Prospectus, or, to the knowledge of the Company, is imminent; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could reasonably be expected to have a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole.

(pp) Market Capitalization. As of the close of trading on the Exchange on the Trading Day immediately prior to the date of this Agreement, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Securities Act Rule 405) of the Company held by persons other than affiliates of the Company (within the meaning of Securities Act Rule 144) (the "**Non-Affiliate Shares**"), was greater than \$75.0 million (calculated by multiplying (x) the highest price at which the common equity of the Company was last sold on the Exchange on a Trading Day within 60 days prior to the date of this Agreement times (y) the number of Non-Affiliate Shares).

(qq) No Material Defaults. Neither the Company nor any of the Subsidiaries has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

(rr) Absence of Manipulation. Neither the Company, nor any of its Subsidiaries, nor any of its or their respective directors, officers or, to the knowledge of the Company, controlling persons has taken, directly or indirectly, any action designed to stabilize or manipulate, or which has constituted or might 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.

(ss) Director Independence. Each of the independent directors (or independent director nominees, once appointed, if applicable) named in the Registration Statement and Prospectus satisfies the independence standards established by the Exchange and, with respect to members of the Company's audit committee, the enhanced independence standards contained in Rule 10A-3(b)(1) promulgated by the Commission under the Exchange Act.

(tt) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other "at-the-market" or continuous equity transaction or any "equity line" transaction.

(uu) No Reliance. The Company has not relied upon the Sales Agents or their legal counsel for any legal, tax or accounting advice in connection with the offering and sale of the Shares.

(vv) No Integration. Except as described in the Registration Statement and the Prospectus, the Company has not sold, issued or distributed any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(ww) No Rated Debt. Neither the Company nor any of its Subsidiaries has any securities rated by any "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Exchange Act.

Any certificate signed by an officer of the Company and delivered to the Sales Agents or to counsel for the Sales Agents pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company to the Sales Agents as to the matters set forth therein as of the date or dates indicated therein.

7. Covenants of the Company. The Company covenants and agrees with the Sales Agents that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Shares is required to be delivered by the Sales Agents under the Securities Act (without regard to the effects of Rules 153, 172 and 173 under the Securities Act) (the "**Prospectus Delivery Period**"), (i) the Company will notify the Sales Agents promptly of the time when any subsequent amendment to the Registration Statement, other than the Incorporated Documents, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information, (ii) the Company will prepare and file with the Commission, promptly upon the Sales Agents' request, any amendments or supplements to the Registration Statement or Prospectus that, in the Sales Agents' reasonable judgment, may be necessary or advisable in connection with the distribution of the Shares by the Sales Agents (*provided, however*, that the failure

of the Sales Agents to make such request shall not relieve the Company of any obligation or liability hereunder, as applicable, or affect the Sales Agents' right to rely on the representations and warranties made by the Company in this Agreement and *provided, further*, that the only remedy the Sales Agents shall have with respect to the failure to make such filing, other than any other remedy expressly provided for under this Agreement, shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus relating to the Shares (except for the Incorporated Documents) unless a copy thereof has been submitted to the Sales Agents a reasonable period of time before the filing and the Sales Agents have not reasonably objected thereto (*provided, however*; (A) that the failure of the Sales Agents to make such objection shall not relieve the Company of any obligation or liability hereunder, as applicable, or affect the Sales Agents' right to rely on the representations and warranties made by the Company in this Agreement, (B) that, if the Sales Agents object thereto, the Sales Agents may cease making sales of Shares pursuant to this Agreement and/or may terminate this Agreement and (C) that the Company has no obligation to provide the Sales Agents any advance copy of such filing or to provide the Sales Agents an opportunity to object to such filing if such filing does not name the Sales Agents or does not relate to the transactions contemplated hereunder; (iv) the Company will furnish to the Sales Agents at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (v) the Company will cause each amendment or supplement to the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act (without reliance on Rule 424(b)(8) of the Securities Act) or, in the case of any Incorporated Document, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company).

(b) Notice of Commission Stop Orders. During the Prospectus Delivery Period, the Company will advise the Sales Agents, promptly after it receives notice or obtains knowledge thereof, of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any notice objecting to, or other order preventing or suspending the use of, the Prospectus, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, or of the initiation of any proceeding for any such purpose or any examination pursuant to Section 8(e) of the Securities Act, or if the Company becomes the subject of a proceeding under Section 8A of the Securities Act in connection with the offering of the Shares; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. Until such time as any stop order is lifted, the Sales Agents may cease making offers and sales under this Agreement.

(c) Delivery of Prospectus; Subsequent Changes. During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by

the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If the Company has omitted any information from the Registration Statement pursuant to Rule 430A under the Securities Act, it will use its best efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to said Rule 430A and to notify the Sales Agents promptly of all such filings. If during the Prospectus Delivery Period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Sales Agents to suspend the offering of Shares during such period, and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance; *provided, however*, that the Company may delay any such amendment or supplement if, in the judgment of the Company, it is in the best interest of the Company to do so, provided that no Placement Notice is in effect during such time.

(d) Listing of Shares. During the Prospectus Delivery Period, the Company will use its commercially reasonable efforts to cause the Shares to be listed on the Exchange. The Company will timely file with the Exchange all material documents and notices required by the Exchange of companies that have or will issue securities that are traded on the Exchange.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Sales Agents and their counsel (at the expense of the Company) electronic copies of the Registration Statement, the Prospectus (including all Incorporated Documents) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during the Prospectus Delivery Period, including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein, in each case, as soon as reasonably practicable via e-mail in “.pdf” format to an e-mail account designated by each of the Sales Agents and, at the Sales Agents’ request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to the Sales Agents to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 16 months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Securities Act), an earnings statement of the Company and its Subsidiaries (which need not be audited) complying with Section 11(a) and Rule 158 of the Securities Act. The terms “earnings statement” and “make generally available to its security holders” shall have the meanings set forth in Rule 158 under the Securities Act.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated in accordance with the provisions of Section 12 hereunder, will pay all reasonable and documented expenses incident to the performance of its obligations hereunder, including, but not limited to, expenses relating to: (i) the preparation, printing, filing and delivery to the Sales Agents of the Registration Statement and each amendment and supplement thereto, of each Prospectus and of each amendment and supplement thereto, and of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Shares; (ii) the preparation, issuance and delivery of the Shares, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Shares to the Sales Agents; (iii) the fees and disbursements of the counsel, accountants and other advisors to the Company in connection with the transactions contemplated by this Agreement; (iv) the reimbursement for reasonable and documented out-of-pocket expenses incurred by the Sales Agents, including the fees and disbursements of one counsel to the Sales Agents, in connection with the transactions contemplated by this Agreement, in an amount not to exceed \$25,000; *provided, however*, that the Company shall reimburse the Sales Agents for all such reasonable and documented out-of-pocket expenses incurred in connection with each Representation Date (as defined below) in an amount not to exceed an additional \$10,000 per calendar quarter; (v) the qualification of the Shares under securities laws in accordance with the provisions of Section 7(x), including filing fees, if any, (vi) the fees and expenses incurred in connection with the listing or qualification of the Shares for trading on the Exchange; (vii) the fees and expenses of the transfer agent or registrar for the Common Stock; and (viii) filing fees and expenses, if any, of the Commission and FINRA.

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(i) Other Sales. Without the prior written consent of each applicable Sales Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the fifth (5th) Trading Day immediately prior to the date on which any Placement Notice is delivered to a Sales Agent hereunder and ending on the fifth (5th) Trading Day immediately following the final Settlement Date with respect to Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Shares covered by a Placement Notice, the date of such suspension or termination); and will not, without the prior written consent of the Sales Agents, directly or indirectly in any other "at-the-market" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock prior to the later of the termination of this Agreement and the twentieth (20th) day immediately following the final Settlement Date with respect to Shares sold pursuant to such Placement Notice; *provided, however*, that such restrictions will not be required in connection with the Company's issuance or sale of (i) Common Stock, options to purchase Common Stock, other equity awards to acquire Common Stock, or Common Stock issuable upon the exercise or vesting of options or other equity awards,

pursuant to any employee or director equity awards or benefits plan, stock ownership plan or dividend reinvestment plan (but not Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (ii) Common Stock issuable upon conversion of securities or the exercise or vesting of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to the Sales Agents and (iii) Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, other business combinations or strategic alliances, or offered and sold in a privately negotiated transaction to vendors, customers, lenders, investors, strategic partners or potential strategic partners, occurring after the date of this Agreement which are not issued primarily for capital raising purposes.

(j) Change of Circumstances. The Company will, at any time during the term of this Agreement, advise the Sales Agents promptly after it shall have received notice or obtained knowledge of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document required to be provided to the Sales Agents pursuant to this Agreement.

(k) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Sales Agents or their agents in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Sales Agents may reasonably request.

(l) Required Filings Relating to Placement of Shares. The Company agrees that (i) as promptly as practicable after the close of each of the Company's fiscal quarters, or on such other dates as required under the Securities Act or under interpretations by the Commission thereof, the Company shall prepare a prospectus supplement, which will set forth the number of Shares sold to or through the Sales Agents during such quarterly period (or other relevant period), the Net Proceeds to the Company and the compensation paid or payable by the Company to the Sales Agents with respect to such sales of Shares and shall file such prospectus supplement pursuant to Rule 424(b) under the Securities Act (and within the time periods required by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act, as applicable) and shall file any issuer free writing prospectus that is required to be filed with the Commission within the applicable time period prescribed for such filing by Rule 433 of the Securities Act or (ii) if such prospectus supplement is not so filed with respect to a particular fiscal quarter, the Company shall disclose the information referred to in clause (i) above in its annual report on Form 10-K or its quarterly report on Form 10-Q, as applicable, in respect of such quarterly period and shall file such report with the Commission within the applicable time period prescribed for such report under the Exchange Act. The Company shall not file any such prospectus supplement or issuer free writing prospectus relating to such sales, and shall not file any report containing disclosure relating to such sales, unless a copy of such prospectus supplement or issuer free writing prospectus or disclosure relating to such sales to be included in a Form 10-K or Form 10-Q (it being acknowledged and agreed that the Company shall not submit any portion of any Form 10-K or Form 10-Q other than the specific disclosure relating to any sales of Shares),

as applicable, has been submitted to the Sales Agents a reasonable period of time before the filing and the Sales Agents has not reasonably objected thereto (provided, however, (A) that the failure of the Sales Agents to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Sales Agents' right to rely on the representations and warranties made by the Company in this Agreement, and (B) that, if the Sales Agents object thereto, the Sales Agents may cease making sales of Shares pursuant to this Agreement). The Company shall provide copies of the Prospectus and such prospectus supplement and any issuer free writing prospectus to the Sales Agents via e-mail in ".pdf" format on such filing date to an e-mail account designated by the applicable Sales Agent and shall also furnish copies of the Prospectus and such prospectus supplement to each exchange or market on which sales of the Shares may be made as may be required by the rules or regulations of such exchange or market.

(m) Representation Dates; Certificate. On or prior to the date the first Placement Notice is given pursuant to this Agreement and each time the Company (i) files the Prospectus relating to the Shares or amends or supplements the Registration Statement or the Prospectus relating to the Shares (other than (A) a prospectus supplement filed in accordance with Section 7(l) or (B) a supplement or amendment that relates to an offering of securities other than the Shares) by means of a post-effective amendment, sticker, or supplement, but not by means of incorporation of document(s) by reference in the Registration Statement or the Prospectus relating to the Shares; (ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K); (iii) files a quarterly report on Form 10-Q under the Exchange Act; or (iv) files a report on Form 8-K containing amended financial information (other than information "furnished" pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassifications of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Representation Date**"); the Company shall furnish the Sales Agents within three (3) Trading Days after each Representation Date (but in the case of clause (iv) above only if the Sales Agents reasonably determine that the information contained in such Form 8-K is material) with a certificate, in the form attached hereto as Exhibit 7(m). The requirement to provide a certificate under this Section 7(m) shall be automatically waived for any Representation Date occurring at a time at which no Placement Notice is pending or during any Suspension Period, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date), the expiration of any applicable Suspension Period and the next occurring Representation Date; *provided, however*, that such waiver shall not apply for any Representation Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Representation Date when the Company relied on such waiver and did not provide the applicable Sales Agent with a certificate under this Section 7(m), then before the Company delivers the Placement Notice or the applicable Sales Agent sells any Shares in an Agency Transaction, the Company shall provide the applicable Sales Agent with a certificate, in the form attached hereto as Exhibit 7(m), dated the date of the Placement Notice for such Agency Transaction.

(n) **Legal Opinions.** On or prior to the date the first Placement Notice is given pursuant to this Agreement, (i) the Company shall cause to be furnished to the Sales Agents the written opinions and negative assurance of Cooley LLP, as issuer's counsel to the Company, or other counsel reasonably satisfactory to the Sales Agents ("**Company Counsel**"), in form and substance reasonably satisfactory to the Sales Agents and their counsel, and the written opinion of internal counsel ("**Internal Counsel**") of the Company as to certain intellectual property matters as intellectual property counsel to the Company, in form and substance reasonably satisfactory to the Sales Agents and their counsel; and (ii) Davis Polk & Wardwell LLP, as counsel to the Sales Agents ("**Sales Agents Counsel**"), shall deliver to the Sales Agent its written opinions and negative assurance, in form and substance reasonably satisfactory to the Sales Agents, provided that the Company shall have furnished to the Sales Agents Counsel such documents as they reasonably request for the purpose of enabling them to pass upon such matters. Thereafter, within three (3) Trading Days after each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as **Exhibit 7(m)** for which no waiver is applicable pursuant to **Section 7(m)**, and not more than once per calendar quarter, (i) the Company shall cause to be furnished to the Sales Agents the written opinions and negative assurance of Company Counsel, in form and substance reasonably satisfactory to the Sales Agents and their counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; and (ii) the Sales Agents Counsel shall furnish to the Sales Agents the written opinions and negative assurance of the Sales Agents Counsel, in form and substance reasonably satisfactory to the Sales Agents, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented, and provided that the Company shall have furnished to the Sales Agents Counsel such documents as they reasonably request for the purpose of enabling them to pass upon such matters.

(o) **Comfort Letter.** On or prior to the date the first Placement Notice is given pursuant to this Agreement and within three (3) Trading Days after each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as **Exhibit 7(m)** for which no waiver is applicable pursuant to **Section 7(m)**, the Company shall cause BDO USA, P.C. (or any successor independent registered public accounting firm of the Company) to furnish the Sales Agents a letter, dated as of such date (the "**Comfort Letter**"), in form and substance reasonably satisfactory to the Sales Agents and their counsel, (i) confirming that it is an independent registered public accounting firm within the meaning of the Securities Act, the Exchange Act and the rules and regulations of the PCAOB and is in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X of the Commission, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters in connection with registered public offerings (the first such letter, the "**Initial Comfort Letter**") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(p) Market Activities. The Company shall not, and shall cause its Subsidiaries and its and their respective directors, officers and controlling persons not to, directly or indirectly, (i) take any action designed to stabilize or manipulate, or which constitutes or might 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 or (ii) sell, bid for, or purchase the Shares to be issued and sold pursuant to this Agreement, or pay anyone any compensation for soliciting the purchases of the Shares, other than the Sales Agents.

(q) Insurance. The Company and its Subsidiaries shall maintain, or cause to be maintained, insurance in such amounts and covering such risks the Company reasonably deems adequate.

(r) Compliance with Laws. The Company and each of its Subsidiaries shall maintain, or cause to be maintained, all material permits, licenses and other authorizations required by federal, state and local law in order to conduct their businesses as described in the Prospectus, and the Company and each of its Subsidiaries shall conduct their businesses, or cause their businesses to be conducted, in substantial compliance with such permits, licenses and authorizations and with applicable laws, except where the failure to maintain or be in compliance with such permits, licenses and authorizations could not reasonably be expected to have a Material Adverse Effect.

(s) Securities Act and Exchange Act. The Company will comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the continuance of sales of, or dealings in, the Shares as contemplated by the provisions hereof and the Prospectus. Without limiting the generality of the foregoing, during the Prospectus Delivery Period, the Company will file all documents required to be filed with the Commission pursuant to the Exchange Act within the time periods required by the Exchange Act (giving effect to permissible extensions in accordance with Rule 12b-25 under the Exchange Act).

(t) Sarbanes-Oxley Act. The Company, and each of the Significant Subsidiaries, as such term is defined under the Securities Act, will maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded book value for assets is compared with the fair market value of such assets (computed in accordance with generally accepted accounting principles) at reasonable intervals and appropriate action is taken with respect to any differences. The Company will comply with all requirements imposed upon it by the Sarbanes-Oxley Act and the rules and regulations of the Commission and the Exchange promulgated thereunder.

(u) No Offer To Sell. Other than a free writing prospectus (as defined in Rule 405 under the Securities Act) approved in advance in writing by the Company and the Sales Agents in their capacities as agent hereunder, neither the Sales Agents nor the Company (including its agents and representatives other than the Sales Agents in their capacities as such) will, directly or indirectly, make, use, prepare, authorize, approve or refer to any free writing prospectus relating to the Shares to be sold by the Sales Agents as agents hereunder.

(v) Investment Company Act. The Company shall conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its Subsidiaries will be or become, at any time prior to the termination of this Agreement, an "investment company," as such term is defined in the Investment Company Act.

(w) Transfer Agent. The Company shall maintain, at its sole expense, a registrar and transfer agent for the Common Stock.

(x) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Sales Agents, to qualify the Shares for offering and sale, or to obtain an exemption for the Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Sales Agents may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Shares (but in no event for less than one year from the date of this Agreement); *provided, however,* that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Shares (but in no event for less than one year from the date of this Agreement).

(y) [Reserved].

(z) Consent to a Sales Agent Purchases. The Company acknowledges and agrees that each of the Sales Agents may, to the extent permitted under the Securities Act and the Exchange Act (including, without limitation, Regulation M promulgated thereunder), purchase and sell shares of Common Stock for its own account and for the account of its clients while this Agreement is in effect, including, without limitation, at the same time any Placement Notice is in effect or any sales of Shares occur pursuant to this Agreement; provided that such Sales Agent acknowledges and agrees that any such transactions are not being, and shall not be deemed to have been, undertaken at the request or direction of, or for the account of, the Company, and that the Company has and shall have no control over any decision by such Sales Agent and its affiliates to enter into any such transactions.

(aa) Listing. During any Prospectus Delivery Period, the Company will use its reasonable efforts to cause the Shares to be listed on the Exchange.

(bb) Filings with the Exchange. The Company will timely file with the Exchange all material documents and notices required by the Exchange of companies that have or will issue Shares that are traded on the Exchange.

(cc) Reporting Requirements. The Company, during any Prospectus Delivery Period, will file all documents required to be filed with the Commission pursuant to the Exchange Act within the time periods required by the Exchange Act.

8. Representations and Covenants of the Sales Agents. Each of the Sales Agents represents and warrants that it is duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Shares will be offered and sold, except such states in which such Sales Agent is exempt from registration or such registration is not otherwise required. Each of the Sales Agents shall continue, for the term of this Agreement, to be duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Shares will be offered and sold, except in such states in which such Sales Agent is exempt from registration or such registration is not otherwise required, during the terms of this Agreement. Each of the Sales Agents will comply with all applicable laws and regulations in connection with the sale of Shares pursuant to this Agreement, including, but not limited to, Regulation M under the Exchange Act.

9. Conditions to the Sales Agents' Obligations. The obligations of the Sales Agents hereunder with respect to a Placement in any Agency Transaction will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, as applicable, to the completion by the Sales Agents of a due diligence review satisfactory to the Sales Agents in their reasonable judgment, and to the continuing satisfaction (or waiver by the Sales Agents in their sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for the offer and sale of all Shares that have been issued or are contemplated to be issued pursuant to all Placement Notices that have been delivered to the Sales Agents by the Company.

(b) Prospectus Supplement. The Company shall have filed with the Commission the Prospectus Supplement 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 date of this Agreement.

(c) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or other order preventing or suspending the use of the Prospectus or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension

of the qualification or exemption from qualification of any of the Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, related Prospectus or documents so that, in the case of the Registration Statement, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, that in the case of the Prospectus, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) No Amendments or Supplements. No prospectus or amendment or supplement to the Registration Statement, the Prospectus or any issuer free writing Prospectus shall be filed to which the Sales Agents shall have reasonably objected in writing.

(e) No Misstatement or Material Omission. The Sales Agents shall not have been advised by the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Sales Agents' reasonable opinion is material, or omits to state a fact that in the Sales Agents' reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(f) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Effect or any development that could reasonably be expected to cause a Material Adverse Effect or a downgrading in or withdrawal of the rating assigned to any of the Company's securities by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities, the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of the Sales Agents (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Shares on the terms and in the manner contemplated by this Agreement and the Prospectus.

(g) Legal Opinion. The Sales Agents shall have received the opinions and negative assurances required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such opinions is required pursuant to Section 7(n).

(h) Comfort Letter. The Sales Agents shall have received the Comfort Letter required to be delivered pursuant to Section 7(o) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(o).

(i) Representation Certificate. The Sales Agents shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(j) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange and the Common Stock shall not have been delisted from the Exchange.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to the Sales Agents such appropriate further information, certificates and documents as the Sales Agents may have reasonably requested. All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof. The Company shall have furnished the Sales Agents with such conformed copies of such opinions, certificates, letters and other documents as the Sales Agents shall have reasonably requested.

(l) Securities Act Filings Made. All filings with the Commission required by Rule 424(b) and Rule 433 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424(b) (without reliance on Rule 424(b)(8) of the Securities Act) and Rule 433.

(m) Approval for Listing. The Shares shall have been approved for listing on the Exchange, subject only to notice of issuance.

(n) No Termination Event. There shall not have occurred any event that would permit the Sales Agents to terminate this Agreement pursuant to Section 12(a).

10. Indemnification and Contribution.

(a) Indemnification by the Company. The Company agrees to indemnify and hold harmless each of the Sales Agents, their respective directors, officers, members, partners, employees and agents and each Sales Agent Affiliate, if any, as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any "issuer free writing prospectus" (as defined in Rule 433 under the Securities Act) or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body,

commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel chosen by the Sales Agents), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission, or alleged untrue statement or omission, made in reliance upon and in conformity with information relating to the Sales Agents that has been furnished in writing to the Company by the Sales Agents expressly for inclusion in any document described in clause (i) of this Section 10(a). This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) Indemnification by the Sales Agents. Each of the Sales Agents agrees, severally but not jointly, to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company, against any and all losses, liabilities, claims, damages and expenses described in the indemnity contained in Section 10(a), as and when incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), any “issuer free writing prospectus” (as defined in Rule 433 under the Securities Act) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with written information relating to the Sales Agents that has been furnished to the Company by the Sales Agents expressly for inclusion in any document as described in clause (i) of Section 10(a).

(c) Procedure. Any indemnified party that proposes to assert the right to be indemnified under this Section 10 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 10, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 10 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 10 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party

of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel to the indemnified party) 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, (3) 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 (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred after the indemnifying party receives a written invoice relating to the fees, disbursements and other charges. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 10 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding and (2) 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) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 10 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or either of the Sales Agents, the Company and such Sales Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted) to which the Company and such Sales Agent may be subject in such proportion

as shall be appropriate to reflect the relative benefits received by the Company on the one hand and such Sales Agent on the other. The relative benefits received by the Company on the one hand and such Sales Agent on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Shares (net of commissions to such Sales Agent but before deducting expenses) received by the Company bear to the total compensation received by such Sales Agent from the sale of Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and such Sales Agent, on the other, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or such Sales Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Sales Agents agree that it would not be just and equitable if contributions pursuant to this Section 10(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 10(d) shall be deemed to include, for the purpose of this Section 10(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 10(c) hereof. Notwithstanding the foregoing provisions of this Section 10(d), a Sales Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 10(d), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, members, partners, employees or agents of each of the Sales Agents, will have the same rights to contribution as that party, and each officer and director of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 10(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 10(d) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 10(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 10(c) hereof.

11. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 10 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Sales Agents, any controlling persons, or the Company (or any of their respective officers, directors or controlling persons), (ii) delivery and acceptance of the Shares and payment therefor or (iii) any termination of this Agreement.

12. Termination.

(a) Each of the Sales Agents shall have the right, by giving notice as hereinafter specified in Section 13 to the Company and the other Sales Agent, at any time to terminate this Agreement with respect to itself if: (i) any Material Adverse Effect, or any development that has actually occurred and that would reasonably be expected to result in a Material Adverse Effect, has occurred that, in the reasonable judgment of such Sales Agent, may materially impair the ability of such Sales Agent to sell the Shares hereunder or as contemplated by the Prospectus; (ii) there has occurred any (A) material adverse change in the financial markets in the United States or the international financial markets, (B) outbreak of hostilities or escalation thereof or other calamity or crisis or (C) change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which, in the reasonable judgment of such Sales Agent, may materially impair the ability of such Sales Agent to sell the Shares hereunder or as contemplated by the Prospectus; (iii) trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited (including automatic halt in trading pursuant to market-decline triggers other than those in which solely program trading is temporarily halted), or minimum prices for trading have been fixed on the Exchange; (iv) any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing; (v) a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing; or (vi) a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination pursuant to this Section 12(a) shall be without liability of any party to any other party, except that the provisions of Section 7(g) (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 12(f), Section 17 (Applicable Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination.

(b) The Company shall have the right, by giving ten (10) days notice as hereinafter specified in Section 13, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party, except that the provisions of Section 7(g) (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 12(f), Section 17 (Applicable Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination.

(c) Each of the Sales Agents shall have the right, by giving ten (10) days notice as hereinafter specified in Section 13 to the Company and the other Sales Agent, to terminate this Agreement with respect to itself in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g) (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 12(f), Section 17 (Applicable Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 12, this Agreement shall automatically terminate upon the issuance and sale of all of the Shares to or through the Sales Agents on the terms and subject to the conditions set forth herein; *provided* that the provisions of Section 7(g) (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 12(f), Section 17 (Applicable Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 12(a), (b), (c), or (d) above or otherwise by mutual agreement of the Parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 7(g) (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 12(f), Section 17 (Applicable Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Sales Agents or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Shares, such termination shall not become effective until the close of business on such Settlement Date and such Shares shall settle in accordance with the provisions of this Agreement.

13. Notices.

All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified, and if sent to the Sales Agents, shall be delivered to

Piper Sandler & Co.
U.S. Bancorp Center
800 Nicollet Mall, Suite 800
Minneapolis, Minnesota 55402
Attention: Piper Legal
Email: LegalCapMarkets@psc.com

BTIG, LLC
350 Bush St, 9th Floor
San Francisco, CA 94104
Attention: Equity Capital Markets
Email: BTIGUSATMTrading@btig.com

with copies (which shall not constitute notice) to:

BTIG, LLC
600 Montgomery Street, 6th Floor
San Francisco, CA 94111
Attention: General Counsel and Chief Compliance Officer
Email: BTIGcompliance@btig.com
legal@btig.com

and:

Davis Polk & Wardwell LLP
900 Middlefield Road, Suite 200
Redwood City, CA 94063
Attention: Alan F. Denenberg
Email: alan.denenberg@davispolk.com
Facsimile: (650) 752-3604

and if to the Company, shall be delivered to:

Personalis, Inc.
6600 Dumbarton Circle
Fremont, CA 94555
Attention: Chief Financial Officer

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

Cooley LLP
1700 Seventh Ave, Suite 1900
Seattle, WA 98101-1355
Attention: Laura Berezin and Asa Henin
Email: lberezin@cooley.com and ahenin@cooley.com

Each party may change such address for notices by sending to the other party to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

An electronic communication (“**Electronic Notice**”) shall be deemed written notice for purposes of this Section 13 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives confirmation of receipt by the receiving party (other than pursuant to auto-reply). Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form (“**Nonelectronic Notice**”) which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

14. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Sales Agents and their respective successors and permitted assigns and, as to Sections 5(b) and 10, the other indemnified parties specified therein. References to any of the Parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any other person any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that each of the Sales Agents may assign its rights and obligations hereunder to a Sales Agent Affiliate of such Sales Agent without obtaining the Company’s consent.

15. Adjustments for Stock Splits. The Parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any stock split, stock dividend or similar event effected with respect to the Common Stock.

16. Entire Agreement; Amendment; Severability; Waiver. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the Parties with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Sales Agents. In the event that any one or more of the terms or provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such term or provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the Parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder. Upon the effectiveness of this Agreement, the At-the-Market Sales Agreement, dated December 30, 2021, by and between the Company and BTIG, LLC, as amended by that certain Amendment No. 1 to the At-the-Market Sales Agreement, dated December 21, 2023, shall be deemed amended and restated and superseded and replaced in its entirety by this Agreement, and shall be of no further force or effect.

17. **GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH OF THE COMPANY AND THE SALES AGENTS HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

18. **CONSENT TO JURISDICTION.** EACH PARTY HEREBY IRREVOCABLY SUBMITS TO THE NON-EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH ANY TRANSACTION CONTEMPLATED HEREBY, AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, THAT SUCH SUIT, ACTION OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH PARTY HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) TO SUCH PARTY AT THE ADDRESS IN EFFECT FOR NOTICES TO IT UNDER THIS AGREEMENT 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.

19. **Absence of Fiduciary Relationship.** The Company acknowledges and agrees that:

(a) each of the Sales Agents is acting solely as agent in connection with the sale of the Shares in an Agency Transaction contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and each of the Sales Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether either of the Sales Agents has advised or is advising the Company on other matters, and each of the Sales Agents has no obligation to the Company with respect to the transactions contemplated by this Agreement, except the obligations expressly set forth in this Agreement;

(b) 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) either of the Sales Agents has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement, and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) the Company is aware that each of the Sales Agents and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company, and neither of the Sales Agents has any obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

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

20. Effect of Headings; Knowledge of the Company. The section and exhibit headings herein are for convenience only and shall not affect the construction hereof. All references in this Agreement to the “knowledge of the Company” or the “Company’s knowledge” or similar qualifiers shall mean the actual knowledge of the directors and officers of the Company, after due inquiry.

21. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

[Signature Page Follows]

If the foregoing correctly sets forth the understanding between the Company and the Sales Agents, please so indicate in the space provided below for that purpose, whereupon this agreement shall constitute a binding agreement between the Company and the Sales Agents.

Very truly yours,

Personalis, Inc.

By: /s/Aaron Tachibana

Name: Aaron Tachibana

Title: Chief Financial Officer and Chief
Operating Officer

ACCEPTED as of the date first-above written:

Piper Sandler & Co.

By: /s/ Connor Leahey

Name: Connor Leahey

Title: Director

BTIG, LLC

By: /s/ Mark Secrest

Name: Mark Secrest

Title: Managing Director, Healthcare
Investment Banking

FORM OF PLACEMENT NOTICE

From: []
Cc: []
To: []
Subject: Placement Notice

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Amended and Restated Sales Agreement between Personalis, Inc. (the “**Company**”) and Piper Sandler & Co. and BTIG, LLC (each a “**Sales Agent**” and together “**the Sales Agents**”) dated December 27, 2024 (the “**Agreement**”), I hereby request on behalf of the Company that you, as a Sales Agent, sell up to [[] shares] [\$[] worth of shares] of the Company’s common stock, par value \$0.0001 per share, subject to the Maximum Amount (the “**Shares**”), at market prices not lower than \$[] per share, during the time period beginning [month, day, time] and ending [month, day, time].¹

The Company represents and warrants that each representation, warranty, covenant and other agreement of the Company contained in the Agreement is true and correct on the date hereof, and that the Prospectus, including the documents incorporated by reference therein, and any applicable issuer free writing prospectus, as of the date hereof, do not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

Terms used herein and not defined herein have the meanings ascribed to them in the Agreement.

¹ Add any limitation on the number of shares that may be sold in a single day (if applicable).

COMPENSATION

Each Sales Agent shall be paid compensation up to three percent 3.00% of the gross proceeds from each sale of Shares by such Sales Agent pursuant to the terms of this Agreement.

SCHEDULE 2

PIPER SANDLER & CO.

[*]

BTIG, LLC

[*]

Personalis, Inc.

[*]

SCHEDULE 3

FORM OF OFFICER'S CERTIFICATE

The undersigned, the duly qualified and appointed [●] of Personalis, Inc., a Delaware corporation (the "**Company**"), does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(m) of the Amended and Restated Sales Agreement, dated December 27, 2024 (the "**Sales Agreement**"), between the Company, Piper Sandler & Co. and BTIG, LLC, that:

- (i) the representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Effect, such representations and warranties are true and correct on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, with the same force and effect as if expressly made on and as of the date hereof, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, such representations and warranties are true and correct in all material respects as of the date hereof as if made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, with the same force and effect as if expressly made on and as of the date hereof;
- (ii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof;
- (iii) as of the date hereof, (i) the Registration Statement does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, (ii) the Prospectus does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading and (iii) no event has occurred as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein not untrue or misleading for clauses (i) and (ii) above, respectively, to be true and correct;
- (iv) there has been no material adverse change since the date as of which information is given in the Prospectus, as amended or supplemented;
- (v) the Company does not possess any material non-public information; and
- (vi) the aggregate offering price of the Shares that may be issued and sold pursuant to the Sales Agreement and the maximum number or amount of Shares that may be sold pursuant to the Sales Agreement have been duly authorized by the Company's board of directors or a duly authorized committee thereof.

Terms used herein and not defined herein have the meanings ascribed to them in the Sales Agreement.

By: _____

Name:

Title:

Date: _____



Laura Berezin
+1 650 842 5128
lberezin@cooley.com

December 27, 2024

Personalis, Inc.
6600 Dumbarton Circle
Fremont, CA 94555

Ladies and Gentlemen:

We have acted as counsel to Personalis, Inc., a Delaware corporation (the "**Company**"), in connection with the offering by the Company of shares of its common stock, par value \$0.0001 per share, having an aggregate offering price of up to \$50,000,000 (the "**Shares**"), pursuant to the Registration Statement on Form S-3 (No. 333-276204) (the "**Registration Statement**"), filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Securities Act**"), the prospectus included in the Registration Statement (the "**Base Prospectus**"), and the prospectus supplement with respect to the Shares filed with the Commission pursuant to Rule 424(b) under the Securities Act (together with the Base Prospectus, the "**Prospectus**"). The Shares are to be sold by the Company pursuant to the Amended and Restated At-the-Market Sales Agreement, dated December 27, 2024, by and among the Company, Piper Sandler & Co. and BTIG, LLC (the "**Agreement**").

In connection with this opinion, we have examined and relied upon (i) the Registration Statement and the Prospectus, (ii) the Agreement, (iii) the Company's certificate of incorporation and bylaws, each as currently in effect, and (iv) such other records, documents, opinions, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

We have assumed (i) that each sale of the Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the "**DGCL**"), (ii) that no more than 15,000,000 Shares will be sold under the Agreement pursuant to the Prospectus and (iii) that the price at which the Shares are sold will equal or exceed the par value per share of the Common Stock. We express no opinion to the extent that future issuances of securities of the Company, anti-dilution adjustments to outstanding securities of the Company or other matters cause the number of shares of the Common Stock available for issuance by the Company to be less than the number of shares then issuable under the Agreement.

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Personalis, Inc.
December 27, 2024
Page Two

Our opinion is expressed solely with respect to the DGCL. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, and subject to the qualifications stated herein, we are of the opinion that the Shares, when sold and issued against payment therefor in accordance with the Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid, and nonassessable.

This opinion is limited to the matters expressly set forth in this letter, and no opinion has been or should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof, and we have no obligation or responsibility to update or supplement this letter to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

We hereby consent to the reference to our firm under the heading “Legal Matters” in the Prospectus and to the filing of this opinion as an exhibit to the Company’s Current Report on Form 8-K to be filed with the Commission for incorporation by reference into the Registration Statement. In giving such consents, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations of the Commission thereunder.

Sincerely,

Cooley LLP

By: /s/ Laura A. Berezin
Laura A. Berezin

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