

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 17, 2025



HARVARD BIOSCIENCE, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of Incorporation)

001-33957
(Commission File Number)

04-3306140
(I.R.S. Employer Identification No.)

84 October Hill Road
Holliston, MA 01746
(Address of Principal Executive Offices) (Zip Code)

(508) 893-8999
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value	HBIO	The NASDAQ Capital Market

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

Emerging growth company

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

Item Entry into a Material Definitive Agreement.
1.01

Loan and Security Agreement

On December 17, 2025, Harvard Bioscience, Inc. (the “Company”), as borrower, entered into a Loan and Security Agreement (the “Loan Agreement”) with certain financial institutions party thereto as lenders (the “Lenders”) and BroadOak Income Fund, L.P. (“BroadOak”), as the administrative agent and collateral agent (in such capacity, the “Administrative Agent”). The Loan Agreement provides for the following term loans: (i) a term loan in an aggregate principal amount of \$10.0 million (the “Term A Loan”), (ii) a term loan in an aggregate principal amount of \$22.5 million (the “Term B Loan”) and (iii) a term loan in an aggregate principal amount of \$7.5 million (the “Term C Loan” and, together with the Term A Loan and Term B Loan, the “Term Loans”). The Term A Loan and Term B Loan are senior secured obligations maturing on December 17, 2029 (the “Maturity Date”). Commencing December 31, 2027 (the “Amortization Date”), the Company is required to make quarterly principal amortization payments on the Term A Loan and Term B Loan. The Amortization Date and Maturity Date may be extended by one year if the Company achieves a certain adjusted EBITDA milestone. The Term C Loan is a senior secured convertible term loan maturing on the Maturity Date that is convertible, together with accrued and unpaid interest, into shares of common stock of the Company, \$0.01 par value per share (the “Common Stock”) at a conversion price of \$1.00 per share from January 2, 2026 until the maturity of the Term Loans. The conversion right may be exercised at the Lenders’ option, or automatically if the share price of the Common Stock exceeds \$1.50 per share for thirty consecutive trading days. The Term C Loan may not be prepaid by the Company prior to maturity, except in the event of a repayment in full of all of the Term Loans or a change of control of the Company, in which case the Lenders may elect whether to convert their Term C Loans into Common Stock or to be repaid in full in cash. The proceeds of the Term Loans will be used to repay all obligations under the Company’s prior credit facility for which Citizens Bank, N.A. served as administrative agent, to pay transaction fees and expenses and for working capital and other general corporate purposes.

The Term Loans will bear interest at a per annum rate equal to the greater of (i) 12.80% from the date of the Loan Agreement through the Loan Agreement’s second anniversary, then 12.50% thereafter and (ii) the prime rate detailed in the Loan Agreement plus 5.25%. Interest on the Term Loans is payable in cash in arrears on the last calendar day of each month; however, at the Company’s option, interest on the Term C Loans may be payable in kind. If any portion of the Term Loans are prepaid prior to maturity, the Company will be required to pay a prepayment premium in an amount equal to (a) 3.00% of the principal amount of such prepaid Term Loans if such prepayment occurs on or before the first anniversary of the closing of the transaction, (b) 2.00% of the principal amount of such prepaid Term Loans if such prepayment occurs after the first anniversary but on or prior to the second anniversary of the closing of the transaction, (c) 1.00% of the principal amount of such prepaid Term Loans if such prepayment occurs after the second anniversary but on or prior to the third anniversary of the closing of the transaction and (d) 0.00% thereafter. However, no prepayment premium will be payable with respect to any Term A Loans prepaid before March 31, 2027. Additionally, an exit fee of 10.00% will be payable on any Term Loan amounts that are prepaid or repaid, including at maturity, except that no exit fee will be payable with respect to any Term C Loans that convert into Common Stock.

The Company’s obligations under the Loan Agreement are required to be guaranteed by certain of the Company’s domestic subsidiaries. The Company’s obligations under the Loan Agreement are secured by substantially all of the assets of the Company and each guarantor.

The Loan Agreement includes customary affirmative, negative, and financial covenants binding on the Company and its subsidiaries, including delivery of financial statements and other reports and maintenance of existence. The negative covenants limit the ability of the Company and its subsidiaries, among other things, to incur debt, incur liens, make investments, sell assets and pay dividends on its capital stock. The financial covenants set forth in the Loan Agreement include a minimum liquidity covenant, which will apply at all times, and a minimum Adjusted EBITDA covenant, which will be tested at the end of each fiscal quarter of the Company. The Loan Agreement also includes customary events of default.

Pursuant to the Loan Agreement, the Company also issued to the Lenders and its participants warrants to purchase 2,000,000 shares of Common Stock, at an exercise price of \$0.50 per share (the “Warrants”). The Warrants have a seven-year term. Within 45 days of the date of the Loan Agreement, the Company must prepare and file with the U.S. Securities and Exchange Commission (the “Commission”) a registration statement covering the resale of all shares issued and issuable upon conversion of the Term C Loan and exercise of the Warrants (the “Registration Statement”). The Company will use its reasonable best efforts to cause the Registration Statement to be declared effective by the Commission no later than the earlier of: (i) 75 days after the Registration Statement is filed if the Commission notifies the Company that it will review the Registration Statement or (ii) 5 business days after the Company is notified that the Commission will not review, or will not further review, the Registration Statement. The Lenders also received a customary upfront fee upon closing of the financing.

The Loan Agreement provides the Administrative Agent with the right to nominate one member to the Company’s board of directors while the Term Loans are outstanding. In connection with this right, the Board has appointed Mr. William A. Snider, a partner of BroadOak, as a member of the Board and the Compensation Committee of the Board, effective December 17, 2025. The Loan Agreement also contemplates that before March 31, 2026, the Company will establish a Product, Operations and Scientific Advisory Board that will consist of the Chief Executive Officer of the Company, two individuals appointed by the Company’s board of directors and two individuals appointed by the Administrative Agent, to advise the Company regarding commercial and application opportunities, product line planning and life cycle management, manufacturing, supply chain and procurement, and opportunities to enhance commercial performance.

The foregoing description is qualified in its entirety by reference to the form of the Warrant, dated as of December 17, 2025, a copy of which is filed herewith as Exhibit 4.1, and by reference to the Loan Agreement, a copy of which is filed herewith as Exhibit 10.1.

On December 17, 2025, the Company issued a press release regarding the Loan Agreement. A copy of the press release is attached to this Current Report on Form 8-K as Exhibit 99.1.

Item 1.02 Termination of a Material Definitive Agreement.

Effective as of December 17, 2025, upon the closing of the Loan Agreement, the Company’s term loan and senior revolving credit facility for which Citizens Bank, N.A. served as administrative agent has been terminated.

Item 2.03 Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.

See the information set forth in Item 1.01 to this Current Report on Form 8-K.

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

As noted in Item 1.01 above, the Board has appointed Mr. William A. Snider as a member of the Board and the Compensation Committee of the Board, effective December 17, 2025. Mr. Snider shall serve as (1) a Class III Director of the Board, until the Company’s annual meeting of stockholders in 2027 and until his successor is duly elected and qualified or until his earlier death, resignation or removal, and (2) a member of the Compensation Committee of the Board, until his successor is duly elected and qualified, or until his earlier death, resignation or removal.

Mr. Snider, age 56, leads BroadOak’s growth capital investing activities and has worked at BroadOak since 2006. Mr. Snider has more than 30 years of institutional investment experience. Prior to BroadOak, he was a general partner and co-founder of Emerging Technology Partners, LLC (“ETP”), a life science focused venture capital firm. Prior to ETP, he was a vice president and portfolio manager at T. Rowe Price. Mr. Snider has been a director of many life sciences research tools companies and is actively involved in the investment community.

Mr. Snider holds the Chartered Financial Analyst accreditation, and a B.S.E. in Finance, as well as an M.B.A. from the Wharton School at the University of Pennsylvania.

Except as set forth above, there is no arrangement between Mr. Snider and any person pursuant to which he was selected as a director, and there is no family relationship between Mr. Snider and any other director or executive officer of the Company.

In connection with his service on the Board, Mr. Snider will receive standard compensation for non-employee directors of the Board, to be composed of (i) an equity award of 110,000 restricted stock units and (ii) an annual cash retainer of \$91,000.

Item Financial Statements and Exhibits.

9.01

(d) Exhibits

Exhibit No. Description of Exhibit

[4.1 Form of Warrant, dated as of December 17, 2025](#)

[10.1* # Loan and Security Agreement dated as of December 17, 2025 among Harvard Bioscience, Inc., as borrower, the lenders party thereto, and BroadOak Income Fund L.P., as administrative agent.](#)

[99.1 Press Release, dated December 17, 2025](#)

104 Cover Page Interactive Data File (embedded within the Inline XBRL document)

* The schedules and exhibits to this Exhibit have been omitted. The Company agrees to furnish a copy of the omitted schedules and exhibits to the Securities and Exchange Commission on a supplemental basis upon its request.

Pursuant to Item 601(b)(10)(iv) of Regulation S-K promulgated by the SEC, certain portions of this exhibit have been redacted because the Company customarily and actually treats such omitted information as private or confidential and because such omitted information is not material.

SIGNATURE

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

HARVARD BIOSCIENCE, INC.

Date: December 17, 2025

By: /s/ Mark Frost
Mark Frost
Interim Chief Financial Officer

THIS WARRANT AND THE SHARES (THE “**SECURITIES**”) ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR THE SECURITIES LAWS OF ANY STATE AND THE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND MAY NOT BE SOLD, TRANSFERRED OR ASSIGNED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT, (II) SUCH SECURITIES MAY BE SOLD PURSUANT TO RULE 144 UNDER THE SECURITIES ACT (WHICH FOR THE AVOIDANCE OF DOUBT SHALL REQUIRE NEITHER CONSENT NOR THE DELIVERY OF AN OPINION), (III) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT, OR (IV) THE SECURITIES ARE TRANSFERRED WITHOUT CONSIDERATION TO AN AFFILIATE OF SUCH HOLDER OR A CUSTODIAL NOMINEE (WHICH FOR THE AVOIDANCE OF DOUBT SHALL REQUIRE NEITHER CONSENT NOR THE DELIVERY OF AN OPINION). NOTWITHSTANDING THE FOREGOING, THE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES.

WARRANT TO PURCHASE STOCK

This WARRANT TO PURCHASE STOCK (as amended and in effect from time to time, this “**Warrant**”) is issued as of the issue date set forth on Schedule I hereto (the “**Issue Date**”) by the company set forth on Schedule I hereto (the “**Company**”) to [] in connection with that certain Loan and Security Agreement of even date herewith between them (as amended and/or modified and in effect from time to time, the “**Purchase Agreement**”). The parties agree as follows:

SCHEDULE I. WARRANT PROVISIONS.

<u>Warrant Section</u>	<u>Warrant Provision</u>
Recitals – “Issue Date”	December 17, 2025
Recitals – “Company”	Harvard Bioscience, Inc., a Delaware corporation
1.1 – “Class”	Common Stock, \$0.01 par value per share
1.1 – “Exercise Price”	\$0.50 per Share
1.2 – “Shares”	[]
6.1(a) – “Expiration Date”	December 17, 2032

SECTION 1. RIGHT TO PURCHASE SHARES.

1.1 Grant of Right. For good and valuable consideration, the Company hereby grants to [] (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, “**Holder**”) the right, and Holder is entitled, to purchase from the Company up to the number of fully paid and non-assessable shares (as determined pursuant to Section 1.2 below) of the class set forth on Schedule I hereto (the “**Class**”), at a purchase price per Share set forth on Schedule I hereto (the “**Exercise Price**”), subject to the provisions and upon the terms and conditions set forth in this Warrant.

1.2 Number of Shares. This Warrant shall be exercisable for the number of shares of the Class set forth on Schedule I hereto (the “**Shares**”).

1.3 Issuance of Securities; Registration of Warrants. The Company shall register ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

SECTION 2. EXERCISE.

2.1 Method of Exercise. Holder may exercise this Warrant in whole or in part at any time and from time to time prior to the expiration or earlier termination of this Warrant, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 2.2 below, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Exercise Price for the Shares being purchased. Notwithstanding any contrary provision herein, to the extent that the original of this Warrant is an electronic original, in no event shall an original ink-signed paper copy of this Warrant be required for any exercise of a Holder's rights hereunder, nor shall this Warrant or any physical copy hereof be required to be physically surrendered at the time of any exercise hereof. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company to effect an exercise hereunder until the Holder has purchased all of the Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. (It is understood and agreed that to surrender this Warrant to the Company for any purpose under this Warrant, the Holder only needs to e-mail to the Company e-mail address provided in Section 4.4 an electronic copy of the Warrant and state such Holder's intent to surrender the Warrant.) Partial exercise of this Warrant shall have the effect of lowering the outstanding number of Shares purchasable hereunder in an amount equal to the number of Shares set forth in the applicable Notice of Exercise. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases.

2.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Exercise Price in the manner specified in Section 2.1 above, Holder may elect to surrender to the Company Shares having an aggregate value equal to the aggregate Exercise Price. If Holder makes such election, the Company shall issue to Holder such number of fully paid and non-assessable Shares determined by the following formula:

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

where:

X = the number of Shares to be issued to Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Exercise Price);

A = the fair market value (as determined pursuant to Section 2.3 below) of one Share; and

B = the Exercise Price.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Shares issued in a "cashless exercise" transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise).

2.3 Fair Market Value. The fair market value of a Share shall be the closing price or last sale price of a share of the Class reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company.

2.4 Registration of Transfers and New Warrant. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant in a form satisfactory to the Company and duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Subject to compliance with all applicable securities laws, the Company shall, or will cause Computershare, Inc. ("**Transfer Agent**") to, register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, and payment for all applicable transfer taxes (if any). Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a "**New Warrant**") evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall, or will cause its Transfer Agent to, prepare, issue and deliver at the Company's own expense any New Warrant under this Section 2.4. Until due presentment for registration of transfer, the Company may treat the registered Holder hereof as the owner and holder for all purposes, and the Company shall not be affected by any notice to the contrary.

2.5 Delivery of Warrant Shares.

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than the number of Trading Days comprising the standard settlement period (“**Standard Settlement Period**”) for the national securities exchange or other trading market on which the Class is primarily listed on and quoted for trading (the “**Principal Trading Market**”) following the Exercise Date), upon the request of the Holder, cause the Transfer Agent to credit such aggregate number of shares of Common Stock specified by the Holder in the Exercise Notice and to which the Holder is entitled pursuant to such exercise (the “**Exercise Shares**”) to (i) the Holder’s or its designee’s balance account with The Depository Trust Company (“**DTC**”) through its Deposit Withdrawal At Custodian system or (ii) in book-entry form via a direct registration system (“**DRS**”) maintained by or on behalf of the Transfer Agent, in each case, so long as either (A) there is an effective registration statement permitting the issuance of the Shares to or the resale of such Shares by the Holder or (B) the Exercise Shares are eligible for resale by the Holder without volume or manner-of-sale restrictions pursuant to Rule 144 promulgated under the Securities Act (assuming a “cashless exercise” of this Warrant). If neither (A) nor (B) above are true, the Company shall cause the Transfer Agent to either (i) record the Exercise Shares in the name of the Holder or its designee on the certificates reflecting the Exercise Shares with an appropriate legend regarding restriction on transferability, which shall be issued and dispatched by overnight courier to the address as specified in the Exercise Notice, and on the Company’s share register or (ii) issue such Exercise Shares in the name of the Holder or its designee in restricted book-entry form in the Company’s share register. The Holder, or any Person so designated by the Holder to receive Shares, shall be deemed to have become the holder of record of such Shares as of the Exercise Date, irrespective of the date such Shares are credited to the Holder’s DTC account, the date of the book entry positions or the date of delivery of the certificates evidencing such Exercise Shares, as the case may be.

(b) [Reserved].

(c) To the extent permitted by law, the Company’s obligations to issue and deliver Shares in accordance with and subject to the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Shares. Nothing herein shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver Exercise Shares; provided, however, that the Holder shall not be entitled to both (i) require the Company to reinstate the portion of the Warrant and equivalent number of Shares for which such exercise was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Company had timely complied with its delivery requirements under Section 2.5(a).

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

2.7 Replacement of Warrant.

(a) Paper Original Warrant. To the extent that the original of this Warrant is a paper original, on receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

(b) Electronic Original Warrant. To the extent that the original of this Warrant is an electronic original, if at any time this Warrant is rejected by any person (including, but not limited to, paying or escrow agents) or any such person fails to comply with the terms of this Warrant based on this Warrant being presented to such person as an electronic record or a printout hereof, or any signature hereto being in electronic form, the Company shall, promptly upon Holder's request and without indemnity, execute and deliver to Holder, in lieu of electronic original versions of this Warrant, a new warrant of like tenor and amount in paper form with original ink signatures.

(c) Reservation of Warrant Shares. The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Shares upon exercise of this Warrant as herein provided, the number of Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 3). The Company covenants that all Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed. The Company further covenants that it will not, without the prior written consent of the Holder, take any actions to increase the par value of the Common Stock at any time while this Warrant is outstanding.

2.8 Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity or in which the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting power of the surviving entity immediately after such merger or consolidation, (ii) the Company effects any sale to another Person of all or substantially all of its assets in one or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the voting power of the capital stock of the Company (except for any such transaction in which the stockholders of the Company immediately prior to such transaction maintain, in substantially the same proportions, the voting power of such Person immediately after the transaction) or (v) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 3.1 below) (in any such case, a "**Fundamental Transaction**"), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant (including any Distributions) without regard to any limitations on exercise contained herein (the "**Alternate Consideration**"). The Company shall not effect any Fundamental Transaction in which the Company is not the surviving entity or the Alternate Consideration includes securities of another Person unless (i) the Alternate Consideration is solely cash and the Company provides for the simultaneous "cashless exercise" of this Warrant pursuant to Section 2.2 above or (ii) prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or other Person (including any purchaser of assets of the Company) shall assume the obligation to deliver to the Holder such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. The provisions of this paragraph (d) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction type.

SECTION 3. CERTAIN ADJUSTMENTS TO THE SHARES, CLASS AND EXERCISE PRICE.

3.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in additional shares of the Class (including fractional shares) or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased, even if such number would include fractional shares, and the Exercise Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Exercise Price shall be proportionately increased and the number of Shares shall be proportionately decreased, even if such number would include fractional shares.

3.2 Reclassification, Exchange, Combination or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, "Class" shall mean such securities and this Warrant will be exercisable for the number of such securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, at an aggregate Exercise Price equal to the aggregate Exercise Price in effect as of immediately prior to such event, all subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 3.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

3.3 Adjustment to Exercise Price on Cash Dividend. In the event that the Company at any time or from time to time prior to the exercise in full of this Warrant pays any cash dividend on the outstanding shares of the Class or makes any cash distribution on or in respect of all outstanding shares of the Class, then on and as of the date of each such dividend payment and/or distribution, the Exercise Price shall be reduced by an amount equal to the amount paid or distributed upon or in respect of each outstanding share of the Class; provided that in no event shall the Exercise Price be reduced below the then-par value, if any, of a share of the Class.

3.4 No Fractional Share. No fractional Share shall be issued upon exercise of this Warrant, and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of this Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash an amount equal to (a) such fractional interest, multiplied by (b)(i) the fair market value (as determined in accordance with Section 2.3 above) of a full Share, less (ii) the then-effective Exercise Price (the "**Fractional Share Value**"), unless Holder otherwise elects, in its sole discretion, to waive such payment. Notwithstanding any contrary provision herein, if this Warrant becomes exercisable for a fractional Share interest at any time or from time to time prior to the exercise in full of this Warrant, and the Company eliminates such fractional Share interest prior to any exercise of this Warrant, then the then-effective aggregate Exercise Price shall be reduced by an amount equal to the Fractional Share Value, unless Holder otherwise elects, in its sole discretion, to waive such reduction.

3.5 Certificate as to Adjustments. Within a reasonable time following each adjustment of the Exercise Price, Class and/or number of Shares pursuant to the terms of this Warrant, the Company, at its expense, shall deliver a certificate of its Chief Financial Officer or other authorized officer to Holder setting forth the adjustments to the Exercise Price, Class and/or number of Shares and the facts upon which such adjustments are based. The Company shall, at any time and from time to time within a reasonable time following Holder's written request and at the Company's expense, furnish Holder with a certificate of its Chief Financial Officer or other authorized officer setting forth the then-current Exercise Price, Class and number of Shares and the computations or other determinations thereof.

SECTION 4. MISCELLANEOUS.

4.1 Term.

(a) Subject to the provisions of Section 2.8 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Eastern time, on the expiration date set forth on Schedule I hereto (the “**Expiration Date**”) and shall be void thereafter; provided that if the Company does not deliver to Holder written confirmation of the fair market value of a Share pursuant to Section 6.1(b) below, then the Expiration Date shall automatically be extended until such date as the Company delivers such written confirmation.

4.2 Legends. Each certificate or notice of book entry evidencing Shares shall be imprinted with a legend in substantially the following form:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO [_____] DATED DECEMBER 17, 2025, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

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

4.4 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 4.4. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

[_____]
Attn: Manager
Address: 4800 Montgomery Lane, Suite 230, Bethesda, MD 20814
Email: [***]

All notices to the Company shall be addressed as follows until Holder receives notice of a change in address:

Harvard Bioscience, Inc.
Attn: Mark Frost, Chief Financial Officer
Address: 84 October Hill Road
Holliston, MA 01746
Email: [***]

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

Covington & Burling LLP
30 Hudson Yards
New York, NY 10001
Attn: Megan Gates; Jennifer Uren
Email: [***]

4.5 Amendment and Waiver. Notwithstanding any contrary provision herein or in the Purchase Agreement, this Warrant may be amended and any provision hereof waived (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the parties.

4.6 Counterparts; Electronic Signatures; Status as a Certificated Security. This Warrant may be executed by one or more of the parties hereto in any number of separate counterparts, all of which together shall constitute one and the same instrument. The Company, Holder and any other party hereto may execute this Warrant by electronic means and each party hereto recognizes and accepts the use of electronic signatures and the keeping of records in electronic form by any other party hereto in connection with the execution and storage hereof. To the extent that this Warrant or any agreement subject to the terms hereof or any amendment hereto is executed, recorded or delivered electronically, it shall be binding to the same extent as though it had been executed on paper with an original ink signature, as provided under applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act. The fact that this Warrant is executed, signed, stored or delivered electronically shall not prevent the transfer by any Holder of this Warrant pursuant to Section 2.4 or the enforcement of the terms hereof. To the extent that the original of this Warrant is an electronic original, this Warrant, and any copies hereof, shall NOT be deemed to be a “certificated security” within the meaning of Section 8102(a)(4) of the California Commercial Code. Physical possession of the original of this Warrant or any paper copy thereof shall confer no special status to the bearer thereof.

4.7 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

4.8 Business Days. “**Business Day**” means any day that is not a Saturday, Sunday or a day on which banks in the State of New York are closed.

SECTION 5. GOVERNING LAW, VENUE AND JURY TRIAL WAIVER

5.1 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of New York, without giving effect to its principles regarding conflicts of law.

5.2 Jurisdiction and Venue. The Company and Holder each irrevocably and unconditionally submit to the exclusive jurisdiction of the State and Federal courts in the State of New York; provided, however, that nothing in this Warrant shall be deemed to operate to preclude Holder from bringing suit or taking other legal action in any other jurisdiction to enforce a judgment or other court order in favor of Holder. The Company expressly, irrevocably and unconditionally submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and the Company hereby irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby irrevocably and unconditionally consents to the granting of such legal or equitable relief as is deemed appropriate by such court. The Company hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to the Company in accordance with Section 4.4 of this Warrant and that service so made shall be deemed completed upon the earlier to occur of the Company’s actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

5.3 Jury Trial Waiver. **TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE COMPANY AND HOLDER EACH WAIVES ITS RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS WARRANT, THE PURCHASE AGREEMENT OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR THE PARTIES' AGREEMENT TO THIS WARRANT. EACH PARTY HERETO HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.**

5.4 Survival. This Section 5 shall survive the termination of this Warrant.

SECTION 6. Representations and Warranties of the Holder. The Holder represents and warrants to the Company that, as of the date of the Closing:

6.1 Investment Purpose. The Warrant and the Shares to be acquired by the Holder are being acquired or will be acquired for investment for the Holder's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof in violation of the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), and the Holder has no present intention of selling, granting any participation in, or otherwise distributing the same in violation of the Securities Act. The Holder does not presently have any contract, undertaking, agreement or arrangement with any person or entity to sell, transfer or grant participations to such person or entity or to any other person or entity, with respect to the Warrant or the Shares in violation of the Securities Act. The Holder has not been formed for the specific purpose of acquiring the Warrant or the Shares.

6.2 Accredited Investor Status. The Holder is an "accredited investor," as that term is defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

6.3 Reliance on Exemptions. The Holder understands that the Warrant and the Shares are being offered and sold to it in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying upon the truth and accuracy of, and the Holder's compliance with, the representations, warranties, agreements, acknowledgments and understandings of the Holder set forth herein in order to determine the availability of such exemptions and the eligibility of the Holder to acquire the Warrant and the Shares.

6.4 Information. The Holder and its advisors, if any, have been furnished with all information and considered all factors the Holder deems material in deciding on the advisability of acquiring the Warrant and the Shares. The Holder and its advisors, if any, have been afforded the opportunity to ask questions of the Company, and to obtain additional information to the extent the Company possesses such information or can acquire it without unreasonable effort or expense.

6.5 Restricted Securities. The Holder understands that the Warrant and the Shares have not been registered under the Securities Act, by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of the Holder's representations as expressed herein. The Holder understands that the Warrant and the Shares are characterized as "restricted securities" under applicable U.S. federal and state securities laws and that, pursuant to these laws, the Holder must hold the Warrant and the Shares indefinitely unless the Warrant and the Shares are subsequently registered with the U.S. Securities and Exchange Commission and qualified by state authorities, or an exemption from such registration and qualification requirements is available.

6.6 Residency. The office or offices of the Holder identified on the signature pages hereto as the address of the Holder is the location of its principal place of business and such entity is duly organized in its jurisdiction of formation.

6.7 Investment Experience. The Holder is experienced in investments and business matters, has made investments of a speculative nature and has purchased securities of United States companies in private placements in the past, and, with its representatives, has such knowledge and experience in financial, tax and other business matters as to enable the Holder to utilize the information made available by the Company to evaluate the merits and risks of and to make an informed investment decision with respect to, the proposed acquisition of the Warrant and the Shares, which represents a speculative investment. The Holder is able to bear the economic risk of acquiring the Warrant and the Shares and is able to afford a complete loss of such investment.

6.8 Brokers and Finders. No person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company or the Holder for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Holder.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant To Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

COMPANY:

HARVARD BIOSCIENCE, INC.

By: _____

Name:

Title:

HOLDER:

[_____]

By: _____

Name:

Title:

[Signature page to Warrant To Purchase Stock]

APPENDIX 1

Form of Notice of Exercise of Warrant

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

Ladies and Gentlemen:

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

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

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

- Cash Exercise
- “Cashless Exercise” under Section 2.2 of the Warrant

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

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant. The Warrant Shares shall be delivered (check one):

- to the following DWAC Account Number: _____
- in book-entry form via a direct registration system
- by physical delivery of a certificate to: _____

- in restricted book-entry form in the Company’s share register

(6) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder (i) the Holder is an “accredited investor” as defined in Regulation D promulgated under the Securities Act of 1933, as amended and (ii) will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 11(a) of the Warrant to which this notice relates.

Dated: _____

Name of Holder: _____

By: _____
Name: _____
Title: _____

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

LOAN AND SECURITY AGREEMENT

This LOAN AND SECURITY AGREEMENT (as amended, restated, supplemented or otherwise modified from time to time, this “**Agreement**”) dated as of December 17, 2025 (the “**Closing Date**”) is entered into among HARVARD BIOSCIENCE, INC., a Delaware corporation (“**Borrower**”), each Person party hereto as a guarantor from time to time (collectively, “**Guarantors**”, and each, a “**Guarantor**”), the lenders from time to time party hereto (collectively, “**Lenders**”, and each, a “**Lender**”), and BROADOAK INCOME FUND, L.P., as administrative agent and collateral agent for Lenders (in such capacity, “**Agent**”).

AGREEMENT

Borrower, each Guarantor from time-to-time party hereto, Agent and Lenders hereby agree as follows:

1. ACCOUNTING AND OTHER TERMS

Accounting terms not defined in this Agreement shall be construed in accordance with GAAP, and calculations and determinations shall be made following GAAP, consistently applied. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth on Exhibit A. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. As used in the Loan Documents, the word “shall” is mandatory, the word “may” is permissive, the word “or” is not exclusive, the words “includes” and “including” are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative. Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. For purposes of the Loan Documents, whenever a representation or warranty is made to a Person’s knowledge or awareness, knowledge or awareness means the actual knowledge, after reasonable investigation, of any Responsible Officer of such Person. For all purposes under the Loan Documents, in connection with any Division or plan of Division under Delaware law (or any comparable event under a different jurisdiction’s laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its Equity Interests at such time.

Any reference in any Loan Document to a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale, disposition or transfer, or similar term, shall be deemed to apply to a Division of or by a limited liability company, or an allocation of assets to a series of a limited liability company (or the unwinding of such a Division or allocation), as if it were a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale or transfer, or similar term, as applicable, to, of or with a separate Person. Any Division of a limited liability company shall constitute a separate Person under the Loan Documents (and each Division of any limited liability company that is a Subsidiary, joint venture or any other like term shall also constitute such a Person or entity) on the first date of its existence. In connection with any Division, if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then such asset shall be deemed to have been transferred from the original Person to the subsequent Person.

2. LOAN AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay Agent, for the ratable benefit of Lenders, the outstanding principal amount of all Loans, accrued and unpaid interest, fees and charges thereon and all other amounts owing hereunder as and when due in accordance with this Agreement.

2.2 Availability and Repayment of the Loans.**(a) Availability.**

(i) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Closing Date in an aggregate principal amount of Ten Million Dollars (\$10,000,000) according to each Lender’s Term A Loan Commitment (such term loans are hereinafter referred to singly as a “**Term A Loan**”, and collectively as the “**Term A Loans**”). After repayment, no Term A Loan may be re-borrowed.

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Closing Date in an aggregate principal amount of Twenty Two Million Five Hundred Thousand Dollars (\$22,500,000) according to each Lender's Term B Loan Commitment (such term loans are hereinafter referred to singly as a "**Term B Loan**", and collectively as the "**Term B Loans**"). After repayment, no Term B Loan may be re-borrowed.

(iii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Closing Date in an aggregate principal amount of Seven Million Five Hundred Thousand Dollars (\$7,500,000) according to each Lender's Term C Loan Commitment (such term loans are hereinafter referred to singly as a "**Term C Loan**", and collectively as the "**Term C Loans**"; each Term A Loan, Term B Loan or Term C Loan is hereinafter referred to singly as a "**Term Loan**" and the Term A Loans, the Term B Loans and the Term C Loans are hereinafter referred to collectively as the "**Term Loans**"). After repayment, no Term C Loan may be re-borrowed.

(iv) The aggregate outstanding Term Loans shall not exceed the Term Loan Commitments. Each Term Loan of each Lender shall not exceed its respective Term Loan Commitment.

(b) Repayment. Commencing on the Amortization Date, and continuing thereafter on the last day of each fiscal quarter, Borrower shall make consecutive quarterly payments of principal in an amount equal to 5% of the principal amount of the Term A Loans and the Term B Loans outstanding on the Amortization Date plus accrued and unpaid interest, plus the applicable Exit Fee. Subject to the same becoming due and payable on any earlier date set forth herein, any and all unpaid Obligations, including principal and accrued and unpaid interest in respect of the Term Loans, any Prepayment Fee, the Exit Fee, and any other fees and sums under this Agreement, if any, shall be due and payable in full on the Term Loan Maturity Date. The Term Loans may only be prepaid in accordance with Sections 2.2(c), (d) or (f). For the avoidance of doubt, amortization payments shall not be required (or except as provided in the preceding sentence, permitted) for the Term C Loans.

(c) Mandatory Prepayment Upon an Acceleration. If the Loans are accelerated following the occurrence and during the continuance of an Event of Default, Borrower shall immediately pay to Agent, for the ratable benefit of Lenders, an amount equal to the sum of:

- (i) all outstanding principal plus accrued and unpaid interest thereon, plus
- (ii) the Prepayment Fee, plus
- (iii) the Exit Fee, plus
- (iv) all other sums, if any, that shall have become due and payable, including interest at the Default Rate, if applicable.

(d) Optional Prepayment of Loans. Borrower shall have the option to prepay all, or a portion of, of the Loans in a minimum amount of \$5,000,000; provided Borrower provides written notice to Agent (whereupon Agent shall promptly provide written notice thereof to Lenders) of its election to prepay the Loans at least five (5) days prior to such prepayment, and pay, on the date of such prepayment, to Agent, for the ratable benefit of Lenders, an amount equal to the sum of:

- (i) all outstanding principal of such prepaid Loans, plus accrued and unpaid interest thereon, plus
- (ii) the Prepayment Fee, plus
- (iii) the Exit Fee, plus
- (iv) all other sums, if any, that shall have become due and payable, including interest at the Default Rate, if applicable.

Notwithstanding the foregoing, (i) the Term C Loans may not be prepaid without the prior written consent of the Lenders, except in connection with a Change of Control or a repayment in full of all Obligations under this Agreement, in which case upon receipt of Borrower's written notice, Lenders may elect to optionally convert the Term C Loans prior to the proposed prepayment date or have the Term C Loans repaid in cash on the proposed repayment date; and (ii) no Prepayment Fee shall be payable in connection with a prepayment of the Term A Loans on or prior to March 31, 2027.

(e) Use of Proceeds. Borrower shall use the proceeds of the Loans (i) to refinance Borrower's Existing Indebtedness in full on the Closing Date, (ii) to pay transaction costs and expenses in connection with the transactions contemplated by this Agreement and any strategic transaction pursued in parallel, and (iii) for working capital and other general corporate purposes.

(f) Term C Loan Conversion.

(i) Optional Conversion. During the period beginning on January 2, 2026 through the Term Loan Maturity Date, the Lenders may elect (in its discretion) to convert all or a portion (in a minimum conversion amount of \$3,750,000, or such less amount if such lesser amount constitutes the remaining outstanding Term C Loans) of the outstanding principal amount of the Term C Loans, plus any accrued and unpaid interest thereon, into shares of Borrower's common stock ("**Common Stock**") by providing written notice to the Borrower (the "**Election Notice**") and specifying the date on which Lender requests the conversion to occur (which shall be at least 5 Business Days after the date the Borrower receives the Election Notice) and the principal amount of the Term C Loan to be converted. Upon Borrower's receipt of such Election Notice, the outstanding principal amount of the Term C Loans to be converted, including any accrued and unpaid interest thereon, shall convert into that number of shares of Common Stock as is equal to the quotient of (a) the outstanding principal amount of the Term C Loans to be converted, including any accrued and unpaid interest thereon, divided by (b) \$1.00 (the "**Conversion Price**"). Borrower shall pay cash to Lenders in lieu of issuing any fractional shares in connection with any such conversion. Conversions hereunder shall have the effect of reducing the outstanding principal amount of the Term C Loans (and any accrued and unpaid interest thereon) in an amount equal to the applicable principal amount of the Term C Loans so converted (and the applicable accrued and unpaid interest thereon).

(ii) Automatic Conversion. Notwithstanding anything to the contrary herein, (x) if as of June 30, 2026 ("**Automatic Conversion Start Date**"), the outstanding principal amount of the Term C Loans has not been fully repaid or converted pursuant to the terms of this Agreement and, if beginning on the Automatic Conversion Start Date, the closing stock price of the Common Stock, on the principal stock exchange such securities are listed on, remains above \$1.50 for thirty (30) consecutive trading days, or (y) a Change in Control occurs and the Lenders elect to not require the Term C Loans to be repaid in cash, then the Term C Loans shall automatically convert in whole without any further action by any Lender, into that number of shares of Common Stock as is equal to the quotient of (a) the then outstanding principal amount of the Term C Loans, including any accrued and unpaid interest thereon, divided by (b) the Conversion Price. Borrower shall pay cash to Lenders in lieu of issuing any fractional shares in connection with any such conversion.

(iii) Adjustment for Stock Splits and Stock Dividends; No Fractional Shares; Conversion Timing. The Conversion Price and the number of shares of Common Stock to be issued upon conversion pursuant to this Section 2.2(f) shall each be proportionally adjusted to reflect any stock dividend, stock split, reverse stock split or other similar event affecting the number of outstanding shares of Common Stock without the payment of consideration to the Borrower therefor at any time before the applicable conversion. No fractional shares shall be issued upon conversion of the Term C Loans. Borrower shall deliver the shares of Common Stock in respect of any conversion pursuant to this Section 2.2(f) within 5 Business Days of the conversion thereof. Lender is aware of its obligations to keep non-public information confidential in accordance with this Agreement.

(iv) Securities Not Registered. The Lenders acknowledge and agree that the securities issuable upon the conversion of the Term C Loans are being offered in a transaction not involving any public offering within the meaning of the Securities Act, and the Lenders understand that such securities have not been registered under the Securities Act, by reason of their issuance by the Borrower in a transaction exempt from the registration requirements of the Securities Act, and that such securities must continue to be held and may not be offered, resold, transferred, pledged or otherwise disposed of by the Lenders unless a subsequent disposition thereof is registered under the Securities Act or is exempt from such registration and in each case in accordance with any applicable securities laws of any state of the United States. The Lenders understand that the exemptions from registration afforded by Rule 144 (the provisions of which are known to it) promulgated under the Securities Act depend on the satisfaction of various conditions including, but not limited to, the time and manner of sale, the holding period and on requirements relating to the Borrower which are outside of the Lender's control and which the Borrower may not be able to satisfy, and that, if applicable, Rule 144 may afford the basis for sales only in limited amounts. The Lenders acknowledge and agree that it has been advised to consult legal counsel prior to making any offer, resale, transfer, pledge or disposition of any of such securities.

(v) Maximum Shares. Notwithstanding any of the foregoing, the aggregate number of shares of Common Stock (a) issued upon conversion of the Term C Loans pursuant to this Section 2.2(f), and (b) issued to any Lender upon the exercise of a Warrant, taken together, shall not, at the time issued, cause the amount of Common Stock owned by such Lender to exceed 19.99% of the outstanding shares of the Borrower, except upon written consent by a majority of the Borrower's stockholders.

(vi) Mandatory Registration. The Borrower shall, as promptly as reasonably practicable and in any event no later than 45 days after the Closing Date, prepare and file with the U.S. Securities and Exchange Commission (the "SEC") an initial Registration Statement (the "**Initial Registration Statement**") covering the resale of all shares of Borrower's common stock issued or issuable pursuant to the conversion of the Term C Loans and upon the exercise of the Warrant, including any shares of Common Stock issued or issuable with respect to the shares as a result of any stock split or subdivision, stock dividend, recapitalization, exchange or similar event (the "**Registrable Securities**"). Before filing the Registration Statement, the Borrower shall furnish to the Lenders a copy of the Registration Statement. The Lenders shall have at least three Business Days prior to the anticipated filing date of a Registration Statement to review and comment upon such Registration Statement and any amendment or supplement to such Registration Statement and any related Prospectus, prior to its filing with the SEC. Such Registration Statement also shall cover, to the extent allowable under the 1933 Act and the rules promulgated thereunder (including Rule 416), such indeterminate number of additional shares of Common Stock resulting from stock splits, stock dividends or similar transactions with respect to the Registrable Securities. Such Registration Statement shall not include any shares of Common Stock or other securities for the account of any other holder of securities of the Borrower without the prior written consent of the Lenders holding a majority of the outstanding principal amount of the Term C Loans. The Borrower shall (a) use commercially reasonable efforts to address in each such document prior to being so filed with the SEC such comments as the Lenders reasonably propose, and (b) not file any Registration Statement or Prospectus or any amendment or supplement thereto containing information regarding any Lender to which such Lender reasonably objects, unless such information is required to comply with any applicable law or regulation. The Lenders shall furnish all information reasonably requested by the Borrower and as shall be reasonably required in connection with any registration referred to in this Agreement.

(vii) Effectiveness. The Borrower shall use its reasonable best efforts to have the Initial Registration Statement and any amendment declared effective by the SEC as promptly as possible after the filing thereof, but no later than the earlier of (a) the 75th calendar day following the initial filing date of the Initial Registration Statement if the SEC notifies the Borrower that it will "review" the Initial Registration Statement and (b) the fifth Business Day after the date on which the Borrower is notified (orally or in writing, whichever is earlier) by the SEC that the Initial Registration Statement will not be "reviewed" or will not be subject to further review, it being understood that the period shall be extended by such number of days, if any, following the initial filing date of the Initial Registration Statement, as the SEC is unable to review or declare effective the Registration Statement as a result of a government shutdown. The Borrower shall notify the Lenders by e-mail as promptly as practicable, and in any event, within 24 hours, after the Registration Statement is declared effective or is supplemented and shall provide the Lenders with copies of any Prospectus to be used in connection with the sale or other disposition of the securities covered thereby. The Borrower shall use reasonable best efforts to keep the Initial Registration Statement continuously effective pursuant to Rule 415 promulgated under the Securities Act and available for the resale by the Lenders of all of the Registrable Securities covered thereby at all times until the earlier to occur of the following events: (i) the date on which the Lenders shall have resold all the Registrable Securities covered thereby pursuant to Rule 144 or pursuant to the Initial Registration Statement; and (ii) the date on which the Registrable Securities may be resold by the Lenders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Borrower to be in compliance with the current public information requirement under Rule 144 under the Securities Act or any other rule of similar effect. The Initial Registration Statement (including any amendments or supplements thereto and prospectuses contained therein) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading.

(viii) Rule 144. With a view to making available to the Lenders the benefits of Rule 144 (or its successor rule) and any other rule or regulation of the SEC that may at any time permit the Lenders to sell shares of Common Stock to the public without registration, the Borrower covenants and agrees to: (i) make and keep adequate current public information available, as those terms are understood and defined in Rule 144, until the earlier of (A) six months after such date as all of the Registrable Securities may be sold without restriction by the holders thereof pursuant to Rule 144 or any other rule of similar effect or (B) such date as there are no longer Registrable Securities; (ii) file with the SEC in a timely manner all reports and other documents required of the Borrower under the Exchange Act; and (iii) furnish electronically to each Lender upon request, as long as such Lender owns any Registrable Securities, (A) a written statement by the Borrower that it has complied with the reporting requirements of the Exchange Act, (B) a copy of or electronic access to the Borrower's most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q, and (C) such other information as may be reasonably requested in order to avail such Lender of any rule or regulation of the SEC that permits the selling of any such Registrable Securities without registration.

(ix) Cooperation. The Borrower shall cooperate with the holders of the Registrable Securities to facilitate the timely preparation and delivery of certificates or uncertificated shares representing the Registrable Securities to be sold pursuant to such Registration Statement or Rule 144 free of any restrictive legends and representing such number of shares of Common Stock and registered in such names as the holders of the Registrable Securities may reasonably request to the extent permitted by such Registration Statement or Rule 144 to effect sales of Registrable Securities, subject to receipt of documents reasonably requested by the Borrower; for the avoidance of doubt, the Borrower may satisfy its obligations hereunder without issuing physical stock certificates through the use of The Depository Trust Company's Direct Registration System.

2.3 Payment of Interest.

(a) Interest Rate. Subject to Section 2.3(b), the outstanding principal amount of the Loans shall accrue interest from and after its Funding Date, at the Applicable Rate, and Borrower shall pay such interest in cash monthly in arrears on each Payment Date. At Borrower's option, interest on the Term C Loans may be payable in kind at the Applicable Rate ("**PIK Interest**"). Borrower shall deliver written notice to Agent ten (10) days prior to the beginning of each month of its election of either PIK Interest or cash interest for such month with respect to the Term C Loans; provided that in the absence of any such notice, the previous month's interest election shall continue to apply.

(b) Default Rate. Upon the occurrence and during the continuance of an Event of Default, at the election of the Required Lenders, the Obligations shall bear interest at a rate per annum which is three percentage points (3.0%) above the rate that is otherwise applicable thereto (the "**Default Rate**"). Fees and expenses which are required to be paid by Borrower pursuant to the Loan Documents (including, without limitation, Lender Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Agent or Lenders.

(c) Payment; Interest Computation. Interest is payable monthly in arrears on the Payment Date of the following month and shall be computed on the basis of a 360-day year for the actual number of days elapsed. PIK Interest shall be added automatically to the outstanding principal balance of the Term C Loans on the Payment Date of the following month and shall continue to accrue interest in accordance with the terms of this Agreement. In computing interest, (i) all payments received after 5:00 p.m. Eastern Time on any day may, at Agent's discretion, be deemed received at the opening of business on the next Business Day, and (ii) the date of the making of any Loan shall be included and the date of payment shall be excluded. Changes to the Applicable Rate based on changes to the applicable Prime Rate shall be effective as of the Payment Date immediately following such change.

(d) Maximum Interest. Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (the "**Maximum Rate**"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to or for the benefit of Lenders an amount of interest in excess of the amount that would have been payable if all of the Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of principal outstanding in respect of the Loans; second, after all principal is repaid, to the payment of accrued interest, third, to the payment of Lender Expenses and any other Obligations; and fourth, after all Obligations are repaid, the excess (if any) shall be refunded to Borrower or paid to whomsoever may be legally entitled thereto; provided that amounts payable to Lenders, shall be paid ratably.

2.4 Fees and Charges. Borrower shall pay to Agent, for the ratable benefit of Lenders:

- (a) **Term Loan Closing Fee.** A closing fee (the “**Term Loan Closing Fee**”) in the amount of 2.00% of the aggregate principal amount of the Term Loans, due and payable on the Closing Date;
- (b) **Prepayment Fee.** The Prepayment Fee, as and when due pursuant to Sections 2.2(b), 2.2(c) and 2.2(d); Borrower agrees that the Prepayment Fee is a reasonable calculation of Lenders’ lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Loans;
- (c) **Exit Fee.** The Exit Fee, as and when due pursuant to Sections 2.2(b), 2.2(c) and 2.2(d); and
- (d) **Lender Expenses.** All Lender Expenses (including reasonable attorneys’ fees and expenses for documentation and negotiation of this Agreement and the other Loan Documents) incurred through and after the Closing Date, when due (or, if no stated due date, within two (2) Business Days after demand by Agent); provided that attorneys’ fees and expenses incurred through the Closing Date that are subject to reimbursement by the Borrower under this Section 2.4 shall not exceed \$175,000.
- (e) **Fees Fully Earned.** Unless otherwise expressly provided in this Agreement, the fees and charges specified in (i) clause (a) and (c) above are fully-earned as of the Closing Date and due and payable pursuant to the terms of this Agreement and (ii) clauses (b) and (d) above are earned, due and payable pursuant to the terms of this Agreement, and in no event shall Borrower be entitled to any credit, rebate, refund, reduction, proration or repayment of any fees or charges earned by each Lender pursuant to this Agreement notwithstanding any termination of this Agreement or the suspension or termination of a Lender’s obligation to make loans and advances hereunder and notwithstanding the required payment date for such fees or charges. Agent, on behalf of Lenders, may debit and deduct amounts owing by Borrower under the clauses of this Section 2.4 pursuant to the terms of Section 2.5(c).

2.5 Payments; Application of Payments; Automatic Payment Authorization.

- (a) All payments to be made in cash by Borrower under any Loan Document, including payments of principal and interest and all fees, charges, expenses, indemnities and reimbursements, shall be made in immediately available funds in Dollars, without setoff, recoupment or counterclaim, before 5:00 p.m. Eastern Time on the date when due. Payments of principal and/or interest received after 5:00 p.m. Eastern Time may, at Agent’s discretion, be considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment shall be due the next Business Day, and additional fees or interest, as applicable, shall continue to accrue until paid.
- (b) No Borrower shall have a right to specify the order or the loan accounts to which Agent or any Lender shall allocate or apply any payments made by Borrower to or for the benefit of such Lender or otherwise received by such Lender under this Agreement when any such allocation or application is not expressly specified elsewhere in this Agreement.
- (c) Taxes.
- (i) Payments received by Agent or any Lender from any of the Loan Parties under this Agreement will be made free and clear of and without deduction for any Tax. However, if at any time any applicable law requires any Loan Party to make any withholding or deduction from any such payment or other sum payable hereunder to Agent or any Lender, as applicable (as determined in the good faith discretion of the applicable Loan Party), the Loan Parties shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority and, if such Tax is an Indemnified Tax, then such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, Agent or such Lender, as applicable, receives a net sum equal to the sum that would have been received had no withholding or deduction been made. The applicable Loan Party will, upon request, furnish Agent and the affected Lender with proof reasonably satisfactory to Agent and the affected Lender indicating that such Loan Party has made such withholding payment.

(ii) Borrower shall timely pay to the relevant Governmental Authority in accordance with applicable law, or at the option of Agent timely reimburse it for the payment of, any Other Taxes.

(iii) Borrower shall indemnify each Lender and Agent, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section 2.5) payable or paid by such Lender or Agent, as applicable, or required to be withheld or deducted from a payment to such Lender or Agent and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to Borrower by a Lender (with a copy to Agent), or by Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(iv) (x) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Borrower and Agent, at the time or times reasonably requested by the Borrower or Agent, such properly completed and executed documentation reasonably requested by the Borrower or Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Borrower or Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by the Borrower or Agent as will enable the Borrower or Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Section 2.5(c)(iii)(y)(A), (y)(B) and (y)(D)) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender. (y) Without limiting the generality of the foregoing, in the event that the Borrower is a U.S. Person,

(A) any Lender that is a U.S. Person shall deliver to the Borrower and Agent on or about the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(B) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and Agent (in such number of copies as shall be requested by the recipient) on or about the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or Agent), whichever of the following is applicable:

(1) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(2) executed copies of IRS Form W-8ECI;

(3) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Internal Revenue Code, (x) a certificate substantially in the form of Exhibit G-1 to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Internal Revenue Code, a "10 percent shareholder" of any Loan Party within the meaning of Section 871(h)(3)(B) of the Internal Revenue Code, or a "controlled foreign corporation" related to any Loan Party described in Section 881(c)(3)(C) of the Internal Revenue Code (a "**U.S. Tax Compliance Certificate**") and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E;
or

(4) to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit G-2 or Exhibit G-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit G-4 on behalf of each such direct and indirect partner;

(C) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and Agent (in such number of copies as shall be requested by the recipient) on or about the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit the Borrower or Agent to determine the withholding or deduction required to be made; and

(D) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), such Lender shall deliver to the Borrower and Agent at the time or times prescribed by law and at such time or times reasonably requested by the Borrower or Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested by the Borrower or Agent as may be necessary for the Borrower and Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (D), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower and Agent in writing of its legal inability to do so.

(v) If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section 2.5(c) (including by the payment of additional amounts pursuant to this Section 2.5(c)), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this paragraph (v) (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (v), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this paragraph (v) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This paragraph shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

(vi) The agreements and obligations of the Loan Parties, the Lender and Agent contained in this Section 2.5(c) shall survive the termination of this Agreement.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Loan. Each Lender's obligation to make the initial Loan is subject to the condition precedent that Agent shall have received, in form and substance reasonably satisfactory to Agent, such documents, and completion of such other matters, as Agent may reasonably deem necessary or appropriate, including, without limitation:

- (a) duly executed signatures to this Agreement;
- (b) duly executed original signatures to the Warrants;
- (c) duly executed signatures to the IP Security Agreement;
- (d) duly executed signatures to the Pledge Agreement;

(e) for Borrower, a certificate duly executed by a Responsible Officer of Borrower, certifying and attaching (i) the Operating Documents of Borrower, (ii) resolutions duly approved by the Board of Borrower, (iii) any resolutions, consent or waiver duly approved by the requisite holders of Borrower's Equity Interests, if applicable (or certifying that no such resolutions, consent or waiver is required), (iv) a schedule of incumbency and (v) a good standing certificate from Borrower's jurisdiction of organization or formation dated within 10 days of the Closing Date;

(f) a payoff letter from Citizens Bank, N.A. in respect of the Existing Indebtedness;

(g) evidence that (i) the Liens securing the Existing Indebtedness will be terminated and (ii) the documents and/or filings evidencing the perfection of such Liens, including without limitation any financing statements and/or control agreements, have or will, substantially concurrently with the funding of the Term Loans, be terminated;

(h) the Perfection Certificate of Loan Parties, together with the duly executed signature thereto;

(i) evidence reasonably satisfactory to Agent, that the insurance policies required by Section 6.5 are in full force and effect;

(j) a legal opinion of New York counsel to the Loan Parties;

(k) all documentation and other information that Agent or any Lender reasonably requires in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act, to include a duly executed copy of an IRS Form W-9 or other such applicable IRS Forms;

(l) a Disbursement Letter, duly executed by Borrower;

(m) payment of the Term Loan Closing Fee and Lender Expenses invoiced at least one day prior to the Closing Date as specified in Section 2.4(a) and Section 2.4(d), respectively;

(n) evidence of receipt of all Governmental Approvals and approvals and consents of other third parties necessary in connection with the Loans and Loan Documents; and

(o) the completion of such matters and delivery of such documents as Agent may reasonably require.

3.2 Conditions Precedent to all Loans. Each Lender's obligation to make each Loan is subject to the following conditions precedent:

(a) timely receipt of an executed Loan Request by Agent (whereupon Agent shall promptly notify all applicable Lenders);

(b) the representations and warranties in this Agreement and the other Loan Documents shall be true, accurate, and complete in all material respects on the date of the Loan Request and on the Funding Date of each Loan; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;

(c) no Default or Event of Default shall have occurred and be continuing or result from the Loan; and

(d) there has not been any event or circumstance that has had or could reasonably be expected to have a Material Adverse Effect.

3.3 Covenant to Deliver.

(a) Loan Parties agree to deliver to Agent each item required to be delivered to Agent under this Agreement as a condition precedent to any Loan. Loan Parties expressly agree that a Loan made prior to the receipt by Agent of any such item shall not constitute a waiver by Agent of a Loan Party's obligation to deliver such item, and the making of any Loan in the absence of a required item shall be in Agent's sole discretion.

(b) Loan Parties agree to deliver the items set forth on Schedule 2 hereto within the timeframe set forth therein (or by such other date as Agent may approve in writing), in each case, in form and substance reasonably acceptable to Agent.

3.4 Procedures for Borrowing. To obtain a Loan, Borrower shall deliver a completed Loan Request to Agent (which may be delivered by email) no later than 5:00 p.m. Eastern Time, on the Business Day prior to the date such Loan is requested to be made (whereupon Agent shall promptly notify all affected Lenders). On the Funding Date, each applicable Lender shall fund the applicable Loan in the manner requested by the Loan Request; provided that each of the conditions precedent to such Loan is satisfied.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Each Loan Party hereby grants to Agent, for itself and the ratable benefit of the Lenders, to secure the prompt payment and performance in full of all of the Obligations, a valid, continuing security interest in, and pledges to Agent, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. If this Agreement is terminated, Agent's Lien in the Collateral shall continue until the Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist) are repaid in full in cash.

4.2 Priority of Security Interest. Each Loan Party represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Agent's Lien under this Agreement). If a Loan Party shall acquire a commercial tort claim with a potential recovery in excess of Fifty Thousand Dollars (\$50,000), Borrower shall promptly notify Agent in writing and deliver such other information and documents as Agent may require to perfect Agent's security interest in such commercial tort claim. If a Loan Party shall acquire a certificate with respect to Shares or any instrument, such Loan Party shall promptly notify Agent in writing and deliver the same together with a stock power or instrument of transfer and any necessary endorsement, all in form reasonably satisfactory to Agent, in accordance with the terms of the Pledge Agreement.

4.3 Authorization to File Financing Statements. Each Loan Party hereby authorizes Agent to file at any time financing statements, continuation statements and amendments thereto with all appropriate jurisdictions to perfect or protect Agent's interest or rights hereunder. Such financing statements may describe the Collateral as all assets of such Loan Party. Loan Parties shall from time to time execute and deliver to Agent, at the request of Agent, all financing statements and other documents Agent may reasonably request, in form reasonably satisfactory to Agent, to perfect and continue Agent's perfected security interests in the Collateral and in order to consummate fully all of the transactions contemplated under the Loan Documents.

5. REPRESENTATIONS AND WARRANTIES

Each Loan Party represents and warrants to Agent and the Lenders as follows:

5.1 Due Organization, Authorization; Power and Authority; Binding Effect.

(a) Each Loan Party and each of its Subsidiaries are duly organized, validly existing and in good standing as a Registered Organization in their respective jurisdictions of formation and are qualified and licensed to do business and are in good standing in any other jurisdiction in which the conduct of their respective business or ownership of property require that they be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Effect. In connection with this Agreement, Borrower has delivered to Agent a completed certificate signed by Borrower entitled “**Perfection Certificate**”. Except to the extent Borrower has provided notice of a legal name change to Agent in accordance with Section 7.2, (i) each Loan Party’s exact legal name is that indicated on the Perfection Certificate and on the signature page of each Loan Document to which it is a party; (ii) each Loan Party is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (iii) the Perfection Certificate accurately sets forth each Loan Party’s organizational identification number or accurately states that such Loan Party has none; (iv) the Perfection Certificate accurately sets forth each Loan Party’s place of business, or, if more than one, its chief executive office as well as such Loan Party’s mailing address (if different than its chief executive office); (v) except as set forth in the Perfection Certificate, each Loan Party (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (vi) all other information set forth on the Perfection Certificate pertaining to each Loan Party and each of its Subsidiaries is accurate and complete in all material respects (it being understood and agreed that each Loan Party may from time to time update certain information in the Perfection Certificate after the Closing Date, such updated Perfection Certificate subject to the review and approval of the Agent (not to be unreasonably withheld)).

(b) Each Loan Party has full corporate power, authority and legal right to execute, deliver and perform each Loan Document to which it is a party, and the execution, delivery and performance hereof and thereof have been duly authorized by all necessary action. This Agreement constitutes, and each other Loan Document when so delivered will constitute, a legal, valid and binding obligation of the Loan Parties, enforceable against each Loan Party in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, receivership, moratorium or other laws affecting creditors’ rights generally and by general principles of equity.

(c) The execution, delivery and performance by each Loan Party of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with such Loan Party’s Operating Documents or other organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which such Loan Party or any of its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect and the filing of UCC-1 financing statements and recordings with the United States Patent and Trademark Office and United States Copyright Office to perfect Agent’s Lien in the Collateral), (v) result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens, or (vi) conflict with, contravene, constitute a default or breach under, or result in or permit the termination or acceleration of, any material agreement by which such Loan Party is bound. No Loan Party is in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a Material Adverse Effect.

5.2 Collateral.

(a) Each Loan Party has good title to, and rights in, and the power to grant a Lien on each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens. Each Loan Party has the power and authority to grant to Agent a Lien in the Collateral as security for the Obligations.

(b) Except for the Collateral Accounts described in the Perfection Certificate or in a notice timely delivered pursuant to Section 6.6, no Loan Party has any Collateral Accounts or other investment accounts at or with any bank, broker or other financial institution, and, subject to Section 3.3(b), each Loan Party has taken such actions as are necessary to give Agent a perfected security interest therein as required pursuant to the terms of Section 6.6(b).

(c) The Collateral is located only at the locations identified in the Perfection Certificate and other Permitted Locations. The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate or as disclosed in writing pursuant to Section 6.12.

(d) Each Loan Party is the sole owner of the Intellectual Property which it owns or purports to own, except for (i) non-exclusive licenses granted to its customers in the ordinary course of business and (ii) over-the-counter software that is commercially available to the public, free and clear of any and all Liens except Permitted Liens. Each Patent (other than patent applications) which it owns or purports to own and which is material to such Loan Party's business is valid and enforceable, and no part of the Intellectual Property which a Loan Party owns or purports to own and which is material to the Loan Parties' business has been judged invalid or unenforceable, in whole or in part. To the best of each Loan Party's knowledge, no claim has been made that any part of the Intellectual Property violates the rights of any third party except to the extent such claim could not reasonably be expected to have a Material Adverse Effect. Except as noted on the Perfection Certificate or as disclosed pursuant to Section 6.7(b), no Loan Party is a party to, nor is it bound by, any Restricted License. No Subsidiary which is not a Loan Party owns any Intellectual Property which is material to the business of the Loan Parties. It will not be necessary to use any inventions of any of such Loan Party's employees or consultants (or Persons it currently intends to hire) made prior to their employment by such Loan Party. Each current and prior employee, consultant or other Affiliate thereof has entered into an invention assignment agreement or similar agreement with such Loan Party with respect to all intellectual property rights he or she owns that are related to the Loan Parties' business. Borrower shall provide written notice to Agent within ten (10) days of any Loan Party entering into or becoming bound by any license or agreement with respect to which such Loan Party is the licensee (other than over-the-counter software that is commercially available to the public).

5.3 Accounts; Material Agreements. The Accounts are bona fide existing obligations. The property or services giving rise to such Accounts have been delivered or rendered. No Loan Party has received any notice of actual or imminent insolvency of an Account Debtor that is responsible for more than \$250,000 of outstanding Accounts in the aggregate. The material licenses and agreements to which any Loan Party or any of its Subsidiaries is a party are in good standing and in full force and effect and no Loan Party is in material breach with respect thereto.

5.4 Litigation and Proceedings. There are no actions, suits, investigations, litigation or proceedings, at law or in equity, pending, or, to the knowledge of any Responsible Officer, threatened in writing, by or against any Loan Party or any of its Subsidiaries, officers or directors involving more than, individually or in the aggregate for all related proceedings, Two Hundred Fifty Thousand Dollars (\$250,000) or in which any adverse decision has had or could reasonably be expected to have a Material Adverse Effect.

5.5 Financial Statements; Financial Condition. All consolidated financial statements for the Loan Parties and each of their Subsidiaries delivered to Agent fairly present, in accordance with GAAP, in all material respects the consolidated financial condition and results of operations of the Loan Parties and each of their Subsidiaries as of the respective dates and for the respective periods then ended, and there are no material liabilities (including any contingent liabilities) which are not reflected in such financial statements. There has not been any material deterioration in the consolidated financial condition of the Loan Parties and their respective Subsidiaries or the Collateral since the date of the most recent financial statements submitted to Agent.

5.6 Solvency. The fair salable value of the assets (including goodwill minus disposition costs) of the Loan Parties and each of their Subsidiaries, on a consolidated basis, exceeds the fair value of liabilities of the Loan Parties' and each of their Subsidiaries, on a consolidated basis; no Loan Party is left with unreasonably small capital after the transactions in this Agreement; and each Loan Party is able to pay its debts (including trade debts) as they mature.

5.7 Consents; Approvals. Each Loan Party and each of its Subsidiaries have obtained all third party consents, approvals, waivers, made all declarations or filings with, given all notices to, and obtained all consents, licenses, permits or other approvals from all Governmental Authorities that are necessary (i) to enter into the Loan Documents and consummate the transactions contemplated thereby, and (ii) to continue their respective businesses as currently conducted, except (with respect to this clause (ii)) where failure to do so could not reasonably be expected to result in a Material Adverse Effect and except for such the filing of UCC-1 financing statements and recordings with the United States Patent and Trademark Office and United States Copyright Office to perfect Agent's Lien in the Collateral.

5.8 Subsidiaries; Investments. No Loan Party has any Subsidiaries, except as noted on the Perfection Certificate or as disclosed to Agent pursuant to Section 6.11 below. No Loan Party owns any stock, partnership, or other ownership interest or other Equity Interests except for Permitted Investments. No Immaterial US Subsidiary has assets in excess of \$75,000 on an individual basis and all Immaterial US Subsidiaries do not have assets in excess of \$100,000 on an aggregate basis.

5.9 Tax Returns and Payments. Each Loan Party and each of its Subsidiaries have timely filed all required Tax returns and reports (or appropriate extensions therefor), and such Loan Party and each of its Subsidiaries has timely paid all foreign, federal, state and local Taxes owed by such Loan Party or such Subsidiary, as applicable, except (a) to the extent such Taxes are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted, so long as such reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made therefor, or (b) if such Taxes do not, individually or in the aggregate, exceed Twenty Five Thousand Dollars (\$25,000). No Loan Party is aware of any claims or adjustments proposed for any prior Tax years of any Loan Party or any of its Subsidiaries which could result in a material amount of additional Taxes becoming due and payable by a Loan Party or any of its Subsidiaries.

5.10 Shares. Each Loan Party has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit such Loan Party from pledging the Shares pursuant to this Agreement. There are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and non assessable. The Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and such Loan Party knows of no reasonable grounds for the institution of any such proceedings.

5.11 Compliance with Laws.

(a) No Loan Party or Subsidiary of Loan Party is an “investment company” or an “affiliated person” of, or “promoter” or “principal underwriter” for, an “investment company”, as such terms are defined in the Investment Company Act of 1940 as amended.

(b) No Loan Party or Subsidiary of a Loan Party is engaged, nor will it engage, principally or as one of its important activities, in the business of extending credit for the purpose of “purchasing” or “carrying” any “margin security” as such terms are defined in Regulation U of the Federal Reserve Board as now and from time to time hereafter in effect (such securities being referred to herein as “**Margin Stock**”). None of the proceeds of the Loans or other extensions of credit under this Agreement have been (or will be) used, directly or indirectly, for the purpose of purchasing or carrying any Margin Stock, for the purpose of reducing or retiring any Indebtedness which was originally incurred to purchase or carry any Margin Stock or for any other purpose which might cause any of the Loans or other extensions of credit under this Agreement to be considered a “purpose credit” within the meaning of Regulation T, U or X of the Federal Reserve Board.

(c) No Loan Party has taken or permitted to be taken any action which might cause any Loan Document to violate any regulation of the Federal Reserve Board. Neither the making of the Loans hereunder nor Borrower’s use of the proceeds thereof will violate the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) or any enabling legislation or executive order relating thereto. No Loan Party, nor any of its Subsidiaries, nor any Affiliate of any Loan Party or of any Subsidiary, nor any present holder of Equity Interests of any of the foregoing (i) is, or will become, a Person described or designated in the Specially Designated Nationals and Blocked Persons List of the Office of Foreign Assets Control of the United States Department of Treasury (“**OFAC**”) or in Section 1 of the Anti-Terrorism Order or similar sanctions laws of any other Governmental Authority including of any other applicable jurisdiction, (ii) is, or will become, a citizen or resident of any country that is subject to embargo or trade sanctions enforced by OFAC, (iii) is, or will become, a Person whose property or interest in property is blocked or subject to blocking pursuant to Section 1 of the Anti-Terrorism Order, or (iv) engages or will engage in any dealings or transactions, or is or will be otherwise associated, with any such Person.

(d) Each Loan Party and its Subsidiaries are in compliance, in all material respects, with the USA Patriot Act. No part of the proceeds from the Loans made hereunder has been (or will be) used, directly or indirectly, for any payments to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

(e) No Reportable Event or Prohibited Transaction, as defined in ERISA has occurred or is reasonably expected to occur, and no Loan Party has failed to meet the minimum funding requirements of ERISA. No Loan Party has violated any applicable environmental laws in any material respect, maintains any properties or assets which have been designated in any manner pursuant to any environmental protection statute as a hazardous materials disposal site, or has received any notice, summons, citation or directive from the Environmental Protection Agency or any other similar Governmental Authority.

5.12 Reserved.

5.13 UCC Matters. This Agreement creates in favor of Agent, for the benefit of the Lenders, a legal, valid and continuing and enforceable security interest in the Collateral, the enforceability of which is subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditor's rights generally and subject to general principles of equity (but solely, with respect to any Pledged Collateral (as defined in the Pledge Agreement) with respect to Foreign Subsidiaries, to the extent a security interest can be created under the Code). To the knowledge of each Loan Party, upon Agent filing UCC-1 financing statements with the central filing location in the state of such Loan Party's formation or incorporation and/or the State of such Loan Party's chief executive office, Agent, for the benefit of the Lenders, will have a perfected first priority Lien on and security interest in the Collateral to the extent a Lien over such Collateral can be perfected by the filing of a UCC-1 financing statement.

5.14 Use of Proceeds. Borrower shall use the proceeds of the Term Loans solely in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes.

5.15 Full Disclosure. No written representation, warranty or other statement of a Loan Party or any of its Subsidiaries in any certificate or written statement by or on behalf of a Loan Party or any of its Subsidiaries in connection with this Agreement, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading in light of the circumstances under which they were made (it being recognized that the projections and forecasts provided by any Loan Party in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each Loan Party and any Subsidiary to, do all of the following:

6.1 Government Compliance. Maintain its and, except in connection with a transaction permitted by this Agreement, all its Subsidiaries', legal existence and (except with respect to the Immaterial US Subsidiaries and any Immaterial Foreign Subsidiaries where the failure to be in good standing could not reasonable be expected to result in a Material Adverse Effect on the Loan Parties) good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Effect; comply, and cause each Subsidiary to comply, with all laws, ordinances and regulations to which it is subject except where a failure to do so could not reasonably be expected to have a Material Adverse Effect; obtain all of the Governmental Approvals required in connection with such Loan Party's business and for the performance by each Loan Party of its obligations under the Loan Documents to which it is a party and the grant of a security interest to Agent in accordance therewith, and comply with all terms and conditions with respect to such Governmental Approvals.

6.2 Financial Statements, Reports, Certificates. Provide Agent with the following:

(a) **Monthly Financial Statements.** Within thirty (30) days after the last day of each month, upon Agent's request, a company-prepared consolidated balance sheet, income statement and statement of cash flows covering Borrower and its Subsidiaries' operations for such month, with a level of detail substantially similar to that which has historically been set forth in the Borrower's Form 10-Q for the applicable month and in form acceptable to Agent, certified by a Responsible Officer as having been prepared in accordance with GAAP, consistently applied, except for the absence of footnotes, and subject to normal quarterly and year-end adjustments.

(b) **Quarterly Financial Statements.** Within 45 days after the end of each of the first three fiscal quarters of each fiscal year, the Borrower's Form 10-Q containing the unaudited consolidated balance sheet of the Borrower and its Subsidiaries and the related unaudited statements of income, comprehensive income, stockholders' equity and cash flows as of the end of and for such fiscal quarter and the then elapsed portion of the fiscal year, setting forth in each case in comparative form the figures for the corresponding period or periods of (or, in the case of the balance sheet, as of the end of) the previous fiscal year, all certified by a Responsible Officer as presenting fairly in all material respects the financial condition and results of operations of the Borrower and its Subsidiaries on a consolidated basis in accordance with GAAP consistently applied, subject to normal year-end audit adjustments and the absence of footnotes; provided, that delivery by the Borrower to the Agent of the Borrower's quarterly report on Form 10-Q to the SEC with respect to any fiscal quarter, or the Borrower's notice to the Agent (email being sufficient) of the availability of such report on the SEC's EDGAR website or the Borrower's website (to the extent such report complies with the requirements of this clause (b)), within the period specified above shall be deemed to be compliance by the Borrower with this Section 6.2(b).

(c) Annual Forecast. Within 60 days after the beginning of each fiscal year, an annual consolidated forecast for the Borrower and its Subsidiaries for such fiscal year, including projected consolidated statements of income and comprehensive income of the Borrower and its Subsidiaries, all in reasonable detail acceptable to the Agent.

(d) Annual Audited Financial Statements. Within 90 days after the end of each fiscal year, the Borrower's Form 10-K containing the audited consolidated balance sheet of the Borrower and its Subsidiaries together with the related statements of income, comprehensive income, stockholders' equity and cash flows as of the end of and for such year, setting forth in each case in comparative form the figures for the previous fiscal year, all reported on by Grant Thornton LLP or another registered independent public accounting firm of recognized national standing (without a "going concern" or like qualification, exception or point of emphasis and without any qualification or exception as to the scope of such audit, except a "going concern" or like qualification, exception or point of emphasis solely due to the upcoming maturity of the Loans in the following 12 months) to the effect that such consolidated financial statements present fairly in all material respects the financial condition and results of operations of the Borrower and its Subsidiaries on a consolidated basis in accordance with GAAP consistently applied; provided, that delivery by the Borrower to the Agent of the Borrower's annual report on Form 10-K to the SEC with respect to any fiscal year, or the Borrower's notice to the Agent (email being sufficient) of the availability of such report on the SEC's EDGAR website or the Borrower's website (to the extent such report complies with the requirements of this clause (d)), within the period specified above shall be deemed to be compliance by the Borrower with this Section 6.2(d).

(e) Other Statements. Within five (5) days of delivery, copies of all statements, reports and notices generally made available to all Borrower's and its Subsidiaries' Equity Interest holders or to any holders of Subordinated Debt; provided that the Borrower's notice to the Agent (email being sufficient) of the availability of such report on the SEC's EDGAR website or the Borrower's website (to the extent such report complies with the requirements of this clause (e)), within the period specified above shall be deemed to be compliance by the Borrower with this Section 6.2(e).

(f) Legal Action Notice. A prompt report of any legal actions pending or threatened in writing against any Loan Party or any of its Subsidiaries that could result in damages or costs to any Loan Party or any of its Subsidiaries, individually or in the aggregate for all related proceedings, of Two Hundred Fifty Thousand Dollars (\$250,000) or more, or of any Loan Party or any of its Subsidiaries taking or threatening legal action against any third person with respect to a material claim, and with respect to any pending action or threatened action, a prompt report of any material development with respect thereto.

(g) Intellectual Property Report. Together with the Compliance Certificate delivered at the end of each calendar quarter, a report in form reasonably acceptable to Agent, listing any applications or registrations that any Loan Party or any of its Subsidiaries has made or filed in respect of any Patents, Copyrights or Trademarks and the status of any outstanding applications or registrations, as well as any material change in any Loan Party or any of its Subsidiaries' Intellectual Property.

(h) Compliance Certificates. Together with the financial statements delivered pursuant to Section 6.2(a), (b) and (d), a duly completed Compliance Certificate signed by a Responsible Officer.

(i) Audit Reports. Concurrently with any delivery of financial statements under clause (d) above, a certificate of the accounting firm that reported on such financial statements stating whether they obtained knowledge during the course of their examination of such financial statements of any Default (which certificate may be limited to the extent required by accounting rules or guidelines).

Agent may require Borrower and its Subsidiaries to provide any required reports, notices and certificates through various electronic means, including Agent's portfolio monitoring online portal.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition and free from defects, in each case in all material respects. Returns and allowances between a Loan Party and its Account Debtors shall follow such Loan Party's customary practices as they exist at the Closing Date. Borrower shall promptly notify Agent of all returns, recoveries, disputes and claims that involve more than Two Hundred Fifty Thousand Dollars (\$250,000) of Inventory.

6.4 Taxes; Pensions. Timely file, and cause each of its Subsidiaries to timely file, all required Tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state and local Taxes owed by such Loan Party and each of its Subsidiaries, except for deferred payment of any Taxes contested pursuant to the terms of Section 5.9 and shall deliver to Agent, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

6.5 Insurance.

(a) Keep, and cause each Subsidiary to keep, its business and the Collateral insured for risks and in amounts standard for companies in the Loan Parties' industry and location and as Agent may reasonably request. Insurance policies shall be in a form, with financially sound and reputable insurance companies that are not Affiliates of any Loan Party, and in amounts that are reasonably satisfactory to Agent.

(b) Ensure that proceeds payable under any property policy with respect to Collateral are, at Agent's option, payable to Agent on account of the Obligations. To that end, subject to Section 3.3(b), all property policies shall have a lender's loss payable endorsement showing Agent as lender loss payable, all liability policies shall show, or have endorsements showing, Agent as an additional insured, in each case, in form reasonably satisfactory to Agent.

(c) Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, the Loan Parties shall have the option of applying the net cash proceeds of any casualty policy toward the replacement or repair of destroyed or damaged property within 180 days of the receipt of such proceeds; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Agent has been granted a first priority security interest and (b) after the occurrence and during the continuance of an Event of Default, all such proceeds shall, at the option of Agent, be payable to Agent on account of the Obligations; provided further than any such net cash proceeds that remain unused after the end of the applicable 180 day reinvestment period shall be payable to the Agent on account of the Obligations.

(d) At Agent's request, Borrower shall deliver certified copies of insurance policies and evidence of all premium payments. Each provider of any such insurance required under this Section 6.5 shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to Agent, that it will give Agent thirty (30) days prior written notice before any such policy or policies shall be canceled (or ten (10) days' notice for cancellation for non-payment of premiums).

(e) If any Loan Party fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons and Agent, Agent may make all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Agent deems prudent.

6.6 Deposit and Securities Accounts.

(a) Maintain Collateral Accounts only at the banks and other financial institutions identified in the Perfection Certificate or as disclosed pursuant to a notice timely delivered pursuant to subsection (b) below.

(b) Provide Agent five (5) days prior written notice before establishing any Collateral Account at or with any bank, broker or other financial institution, and upon opening such account, provide Agent with a written notice identifying the name, address of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor. At Agent's request and subject to Section 3.3(b), for each Collateral Account that any Loan Party at any time maintains (other than Excluded Accounts), such Loan Party shall cause the applicable bank, broker or financial institution at or with which any Collateral Account is maintained to execute and deliver an Account Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Agent's Lien in such Collateral Account in accordance with the terms hereunder.

6.7 Intellectual Property.

(a) Protect, defend and maintain the validity and enforceability of its Intellectual Property material to its business; promptly advise Agent in writing of material infringements or any other event that could reasonably be expected to materially and adversely affect the value of its Intellectual Property material to its business; not suffer any material claim of infringement that could reasonably be expected to have a Material Adverse Effect unless such claim is dismissed within thirty days from initiation thereof or Loan Parties have demonstrated to Agent's satisfaction that such proceedings are without merit and adequate reserves have been taken; and not allow any Intellectual Property material to the Loan Parties' business to be abandoned, forfeited or dedicated to the public without Agent's written consent.

(b) If any Loan Party (i) obtains any Patent, registered Trademark, registered Copyright, registered mask work, or any pending application for any of the foregoing, whether as owner or licensee, or (ii) applies for any Patent or the registration of any Trademark, then Borrower shall, as part of the next Compliance Certificate delivered pursuant to delivered pursuant to Section 6.2(h), provide written notice thereof to Agent and shall execute such intellectual property security agreements and other documents and take such other actions as Agent may request to perfect and maintain a first priority perfected security interest in favor of Agent in such property. If a Loan Party decides to register any Copyrights or mask works in the United States Copyright Office, Borrower shall: (x) provide Agent with at least fifteen (15) days prior written notice of such Loan Party's intent to register such Copyrights or mask works together with a copy of the application it intends to file with the United States Copyright Office (excluding exhibits thereto); and (y) execute an intellectual property security agreement and such other documents and take such other actions as Agent may request to perfect and maintain a first priority perfected security interest in favor of Agent in the Copyrights or mask works intended to be registered with the United States Copyright Office.

(c) Provide written notice to Agent within ten (10) days of any Loan Party entering or becoming bound by any Restricted License (other than off the shelf software and services that are commercially available to the public). Each Loan Party shall, and shall cause each Loan Party to, take such steps as Agent requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (i) any Restricted License to be deemed "Collateral" and for Agent to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, whether now existing or entered into in the future, and (ii) Agent to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with Agent's rights and remedies under this Agreement and the other Loan Documents.

6.8 Litigation Cooperation. From the Closing Date and continuing through the termination of this Agreement, make available to Agent and Lenders, without expense to Agent or Lenders, each Loan Party and its officers, employees and agents and each Loan Party's books and records, to the extent that Agent or any Lender may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Agent or any Lender with respect to any Collateral or relating to such Loan Party. Notwithstanding anything to the contrary, no Loan Party shall be required to disclose or otherwise make available any books and records (i) in respect of which disclosure is prohibited by law, (ii) constituting trade secrets or (iii) that are subject to attorney-client or similar privilege or that constitute attorney work product.

6.9 Access to Collateral; Books and Records. Allow Agent, or its agents, to inspect the Collateral and audit and copy such Loan Party's Books in accordance with Section 6.13. Such inspections or audits shall be conducted no more often than once per calendar year unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Agent shall determine is necessary. The foregoing inspections and audits shall be at Loan Parties' expense. Notwithstanding anything to the contrary, no Loan Party shall be required to disclose or otherwise make available any books and records (i) in respect of which disclosure is prohibited by law, (ii) constituting trade secrets or (iii) that are subject to attorney-client or similar privilege or that constitute attorney work product.

6.10 Financial Covenants.

(a) Minimum Liquidity. Borrower must maintain at all times Liquidity of at least \$3,000,000.

(b) Minimum Adjusted EBITDA. Beginning December 31, 2025, tested as of the last day of each fiscal quarter, Loan Parties, on a consolidated basis, must achieve Adjusted EBITDA, measured on a trailing twelve month basis, of at least (i) \$6,000,000 for the fiscal quarters ending December 31, 2025 through and including September 30, 2027 and (ii) \$8,000,000 for each fiscal quarter ending thereafter.

6.11 Joinder of Subsidiaries. No later than fifteen (15) days after such time as a Loan Party or any of its Subsidiaries forms any direct or indirect Domestic Subsidiary (other than an Immaterial US Subsidiary) or acquires any direct or indirect Domestic Subsidiary (other than an Immaterial US Subsidiary) after the Closing Date (including any new Domestic Subsidiary formed by Division), or at any time an Immaterial US Subsidiary fails to comply with the limitations set forth in Section 7.13: (a) promptly, and in any event within five (5) days of creation, acquisition or request, as applicable, provide written notice to Agent together with certified copies of the Operating Documents for such Subsidiary, and (b) promptly, and in any event within fifteen (15) days of formation or creation, or upon Agent's request, as applicable: (i) take all such action as may be reasonably required by Agent to cause the applicable Subsidiary to either: (A) provide to Agent a joinder to this Agreement pursuant to which such Subsidiary becomes a Loan Party hereunder, or (B) guarantee the Obligations of Loan Parties under the Loan Documents and grant a security interest in and to the collateral of such Subsidiary (substantially as described on Exhibit B), in each case together with such Account Control Agreements and other documents, instruments and agreements reasonably requested by Agent, all in form and substance reasonably satisfactory to Agent (including being sufficient to grant Agent a first priority Lien, subject to Permitted Liens) in and to the assets of such Subsidiary and to pledge all of the direct or beneficial Equity Interests in such Subsidiary; it being agreed that if such new Subsidiary is formed by a Division, the foregoing requirements shall be satisfied substantially concurrently with the formation of such Subsidiary. Any document, agreement, or instrument executed or issued pursuant to this Section 6.11 shall be a Loan Document.

6.12 Property Locations.

(a) Provide to Agent at least ten (10) days' prior written notice before adding any new offices or business or Collateral locations, including warehouses (unless such new offices or business or Collateral locations qualify as Excluded Locations).

(b) With respect to any property or assets of a Loan Party located with a third party, including a bailee, datacenter or warehouse (other than Excluded Locations), such Loan Party shall, at the request of Agent, cause such third party to execute and deliver a Collateral Access Agreement for such location, including an acknowledgment from each of the third parties that it is holding or will hold such property for Agent's benefit. Loan Parties shall deliver to Agent each warehouse receipt, where negotiable, covering any such property.

(c) With respect to any property or assets of a Loan Party located on leased premises (other than Excluded Locations), Loan Parties shall, at the request of Agent, cause such third party to execute and deliver a Collateral Access Agreement for such location.

6.13 Further Assurances.

(a) Execute any further instruments and take further action as Agent reasonably requests to perfect or continue Agent's Lien in the Collateral or to effect the purposes of this Agreement.

(b) Deliver to Agent and Lenders, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Loan Parties' business or otherwise could reasonably be expected to have a Material Adverse Effect.

6.14 Board Representation and Advisory Board.

(a) Agent shall have the right to nominate one member to Borrower's board of directors, which shall be subject to the approval of Borrower's board of directors (such approval not to be unreasonably withheld, conditioned or delayed). Notwithstanding anything to the contrary herein, in the event that the Obligations have been paid in full (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist), Agent's right to nominate a member to Borrower's board of directors shall terminate and any director appointed to Borrower's board of directors pursuant to this Section 6.14 shall immediately tender their resignation.

(b) Borrower and Agent shall establish, prior to March 31, 2026, a Product, Operations and Scientific Advisory Board that includes Borrower's CEO, two individuals appointed by Borrower's board of directors and two individuals appointed by Agent, to provide advice regarding commercial and application opportunities, product line planning and life cycle management, manufacturing, supply chain and procurement, and opportunities to enhance commercial performance.

7. NEGATIVE COVENANTS

No Borrower shall, or shall cause or permit any of its Subsidiaries to, do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, “**Transfer**”) all or any part of its business or property (including, without limitation, pursuant to a Division), except for Permitted Transfers. Notwithstanding the foregoing, no Loan Party shall Transfer any asset or property to any Immaterial US Subsidiary.

7.2 Changes in Business, Management, or Ownership. (a) Engage in any business other than the businesses currently engaged in by such Person, as applicable, or reasonably related thereto; (b) cease doing business, or liquidate or dissolve (except that Borrower may wind down, liquidate or dissolve any Immaterial US Subsidiary or any Immaterial Foreign Subsidiary); (c) fail to provide notice to Agent of any Key Person departing from or ceasing to be employed by a Loan Party within five (5) days after departure from such Loan Party; (d) permit or suffer a Change in Control, or (e) without at least thirty (30) days prior written notice to Agent (i) change its jurisdiction of organization, chief executive office or principal place of business, (ii) change its organizational structure or type, (iii) change its legal name, or (iv) change its organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate with any other Person, or acquire all or substantially all of the capital stock or property of another Person or business line of another Person (including, without limitation, by the formation of any Subsidiary) or enter into any agreement to do any of the same; provided that a Subsidiary may merge or consolidate into another Subsidiary or into a Loan Party; provided, further, that in any merger or consolidation involving a Loan Party, Loan Party shall always be the surviving entity, and in any transaction involving Borrower, Borrower shall be the surviving entity.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, other than Permitted Indebtedness; provided that no Immaterial US Subsidiary may incur any Indebtedness. Loan Parties and their Subsidiaries shall not prepay any Indebtedness other than the Obligations, except that (i) this shall not restrict or prohibit any scheduled repayments in accordance with the terms of such Permitted Indebtedness as long as, other than Permitted Indebtedness under clause (e), (h), or (i) thereof, no Default or Event of Default is outstanding on the date of such payment and (ii) the Loan Parties shall be permitted to repay and reborrow under any Revolving Facility permitted under this Section 7.4 in accordance with the terms of the intercreditor agreement applicable thereto. Borrower shall not repay in cash any Indebtedness owing to any Subsidiary outstanding as of the Closing Date.

7.5 Encumbrance. (a) Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, except for Permitted Liens; provided that no Immaterial US Subsidiary may create, incur, allow or suffer any Lien on any of their assets, (b) otherwise permit any Collateral not to be subject to the first priority security interest granted herein, except in connection with Permitted Liens permitted to have priority over Agent’s Lien, or (c) enter into any agreement with any Person other than Agent not to grant a security interest in, or otherwise encumber, any of its property, or permit any Subsidiary to do so.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6(b).

7.7 Distributions; Investments. (a) Pay any dividends or make any distribution or payment in respect of its Equity Interests or redeem, retire or purchase any of its Equity Interests other than Permitted Restricted Payments; or (b) directly or indirectly make any Investment (including, without limitation, by the formation of any Subsidiary), other than Permitted Investments. Notwithstanding the foregoing, no Loan Party may make any Investment in any Immaterial US Subsidiary.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of a Loan Party, except for (a) transactions that are in the Ordinary Course of Business and on fair and reasonable terms that are no less favorable to such Person than would be obtained in an arm’s length transaction with a non-affiliated Person; (b) reasonable and customary director, officer and employee compensation and other customary benefits including retirement, health, stock option and other benefit plans and indemnification and expense reimbursement arrangements approved by the Board; and (c) [***].

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except as permitted pursuant to the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject; or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof, provide for earlier or greater principal, interest, or other payments thereon, or adversely affect the subordination thereof to the Obligations.

7.10 Compliance.

(a) Become an “investment company” or a company controlled by an “investment company”, under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Loan for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Effect; withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of a Loan Party or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency; become subject to any other federal or state law or regulation which purports to restrict or regulate its ability to borrow money.

(b) Agent hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Agent’s policies and practices, Agent is required to obtain, verify and record certain information and documentation that identifies Borrower and each of its Subsidiaries and their principals, which information includes the name and address of Borrower and each of its Subsidiaries and their principals and such other information that will allow Agent to identify such party in accordance with Anti-Terrorism Laws. No Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Borrower and each of its Subsidiaries shall immediately notify Agent if Borrower or such Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. No Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to the Anti-Terrorism Order or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in the Anti-Terrorism Order or other Anti-Terrorism Law.

7.11 Amendments to Agreements. Amend, supplement or otherwise modify (pursuant to waiver or otherwise) any Operating Documents in any respect that could reasonably be expected to be adverse to the interests of the Lenders in any material respect.

7.12 Permitted Locations. Move any Collateral from the Permitted Locations except in compliance with Section 5.2 above or transfers permitted by clause (i) of the definition of Permitted Transfers.

7.13 Immaterial US Subsidiaries. Borrower shall not permit any Immaterial US Subsidiary at any time to hold assets in excess of \$75,000 on an individual basis and shall not permit all Immaterial US Subsidiaries at any time to hold assets in excess of \$100,000 on an aggregate basis. No Immaterial US Subsidiary shall hold or have rights to any Intellectual Property, conduct any operations or have any revenue.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an “**Event of Default**”) under this Agreement:

8.1 Payment Default. Any Loan Party fails to (i) make any payment of principal on the Loans when due and payable or (ii) pay any other Obligations within three Business Days after such Obligations are due and payable.

8.2 Covenant Default.

(a) A Loan Party or any Subsidiary fails or neglects to perform any obligation in Section 2.2(e), Section 3.3(b), Section 4.2, Section 6.1, Section 6.2, Section 6.4, Section 6.5, Section 6.6, Section 6.7, Section 6.10, Section 6.11, Section 6.12, Section 6.14 or violates any covenant in Section 7; or

(b) A Loan Party or any Subsidiary fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within twenty (20) days after the occurrence thereof; provided, that no Loans shall be made during such cure period.

8.3 Material Adverse Effect. A Material Adverse Effect has occurred.

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of a Loan Party or of any of its Subsidiaries or of any entity under control of a Loan Party or any of its Subsidiaries on deposit with any Lender or any Lender's Affiliates or any bank or other institution at with such Loan Party or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy or assessment is filed against the assets of any Loan Party or any of its Subsidiaries by any Governmental Authority, and the same under clauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Loans shall be made during any ten (10) day cure period; or

(b) (i) Any material portion of the assets of a Loan Party or any of its Subsidiaries is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents a Loan Party or any of its Subsidiaries from conducting any part of its business.

8.5 Insolvency. (a) A Loan Party or any of its Subsidiaries, as a whole, is unable to pay its debts (including trade debts) as they become due or otherwise becomes insolvent; (b) the realizable value of the Loan Parties' assets is less than the aggregate sum of its liabilities; (c) a Loan Party or any of its Subsidiaries begins an Insolvency Proceeding; or (d) an Insolvency Proceeding is begun against a Loan Party or any of its Subsidiaries and is not dismissed or stayed within sixty (60) days (but no Loans shall be made while any of the conditions described in this Section 8.5 exist and/or until any Insolvency Proceeding is dismissed).

8.6 Other Agreements. There is (a) (i) a default under any agreement to which a Loan Party or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of Two Hundred Fifty Thousand Dollars (\$250,000) (except if such third party is restricted from accelerating the maturity of such Indebtedness, including pursuant to the terms of a subordination or similar agreement in favor of Agent); or (ii) any breach or default by a Loan Party or a Subsidiary of such Loan Party under any agreement to which it is a party, the result of which could have a Material Adverse Effect or (b) a revocation or termination of a Material Agreement.

8.7 Judgments; Penalties. One or more fines, penalties or final judgments, orders or decrees for the payment of money in an amount, individually or in the aggregate, of at least Two Hundred Fifty Thousand Dollars (\$250,000) shall be rendered against a Loan Party or any of its Subsidiaries by any Governmental Authority (which shall not be fully covered (without taking into account any applicable deductibles) by, or for which such Loan Party or Subsidiary has received notice of denial of coverage by, insurance from an unaffiliated insurance company with an A.M. Best financial strength rating of at least A-), and the same are not, within thirty (30) days after the entry, assessment or issuance thereof, vacated, or after execution thereof, stayed or bonded pending appeal (provided that no Loans will be made prior to the vacation, stay, or bonding of such fine, penalty, judgment, order or decree).

8.8 Misrepresentations. Any Loan Party or any Person acting for such Loan Party makes any representation, warranty or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Agent or any Lender or to induce any Lender to enter this Agreement or any Loan Document, and such representation, warranty or other statement is incorrect in any material respect when made.

8.9 Subordinated Debt. Any Subordination Agreement governing any Subordinated Debt shall for any reason be revoked or invalidated or otherwise cease to be in full force and effect, any party thereto shall be in breach thereof or contest in any manner the validity or enforceability thereof or deny that it has any further obligation thereunder, or the Obligations shall for any reason not have the priority contemplated by this Agreement.

8.10 Governmental Approval. Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner or not renewed for a full term, and such revocation, rescission, suspension, modification or non-renewal has, or could have, a Material Adverse Effect.

8.11 Loan Documents. Any of the Loan Documents shall cease to be, or any Loan Party shall assert that any of the Loan Documents is not, a legal, valid and binding obligation of the Loan Parties enforceable in accordance with its terms, or any provision of this Agreement or any Lien or security interest of Agent in the Collateral ceases for any reason to be valid, binding and in full force and effect other than as expressly permitted hereunder.

8.12 Guaranty. (a) Any Guaranty terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty; or (c) the liquidation, winding up, or termination of existence of any Guarantor.

8.13 Assignment by Loan Parties. Any assignment is made by a Loan Party or any attempt by a Loan Party to assign any of its duties or rights hereunder.

8.14 Consolidation. Any Loan Party is consolidated with, merged with, or sells its properties and assets substantially as an entity to another entity without Agent's and Required Lenders' prior written consent; provided that no consent of Agent or Required Lender shall be required if, in connection with such merger or sale of properties and assets the Obligations will be paid in full.

8.15 Change in Control. There is a Change in Control, unless, as a condition to the closing of such Change in Control the Obligations will be paid in full.

8.16 Delisting. The shares of common stock of Borrower are delisted from the principal stock exchange on which they were initially listed because of failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on any other nationally recognized stock exchange in the United States having listing standards at least as restrictive as the NASDAQ Capital Market; provided that, for the avoidance of doubt, Borrower's failure to maintain NASDAQ's minimum bid price of \$1.00 per share shall not constitute an Event of Default unless the Borrower fails to achieve compliance with the required minimum bid price before the expiration of the compliance period approved by NASDAQ (as such compliance period may be extended or reinstated by NASDAQ) and Borrower's common stock is actually delisted.

9. AGENT'S RIGHTS AND REMEDIES

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Agent may, at its option, or upon election by Required Lenders, shall, without notice or demand, do any or all of the following:

- (a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Agent or any Lender);
- (b) stop advancing money or extending credit for any Loan Party's benefit under this Agreement (and each Lender's Commitment shall be deemed terminated as long as an Event of Default has occurred and is continuing);
- (c) verify the amount of, demand payment of and performance under, and collect any Accounts and General Intangibles, settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Agent considers advisable, and notify any Person owing a Loan Party money of Agent's security interest in such funds;
- (d) make any payments and do any acts it considers, in its reasonable judgment, necessary or reasonable to protect the Collateral and/or its security interest in the Collateral;
- (e) ratably apply to the Obligations any amount held by Agent or any Lender owing to or for the credit or the account of a Loan Party;
- (f) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral;
- (g) deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Account Control Agreement or similar agreements providing control of any Collateral;

(h) demand and receive possession of any Loan Party's Books; and

(i) exercise all rights and remedies available to Agent under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

Loan Parties shall assemble the Collateral if Agent requests and make it reasonably available as Agent designates. After the occurrence and during the continuance of an Event of Default, Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Each Loan Party grants Agent a license to enter and occupy any of its premises, without charge, to exercise any of Agent's rights or remedies after the occurrence and during the continuance of an Event of Default. Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, a Loan Party's labels, Patents, Copyrights, mask works, rights of use of any name, trade secrets, trade names, Trademarks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Agent's exercise of its rights under this Section, a Loan Party's rights under all licenses and all franchise agreements inure to Agent's benefit, in each case after the occurrence and during the continuance of an Event of Default.

9.2 Power of Attorney. Each Loan Party hereby irrevocably appoints Agent (and any of Agent's partners, managers, officers, agents or employees) as its lawful attorney-in-fact, with full power of substitution, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) send requests for verification of Accounts or notify Account Debtors of Agent's security interest and Liens in the Collateral; (b) endorse such Loan Party's or any of its Subsidiaries' name on any checks or other forms of payment or security; (c) sign such Loan Party's or any of its Subsidiaries' name on any invoice or bill of lading for any Account or drafts against Account Debtors schedules and assignments of Accounts, verifications of Accounts, and notices to Account Debtors; (d) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Agent determines reasonable; (e) make, settle, and adjust all claims under such Loan Party's insurance policies; (f) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; (g) transfer the Collateral into the name of Agent or a third party as the Code permits; and (h) dispose of the Collateral. Each Loan Party further hereby appoints Agent (and any of Agent's partners, managers, officers, agents or employees) as its lawful attorney-in-fact, with full power of substitution, regardless of whether or not an Event of Default has occurred or is continuing to: (i) sign such Loan Party's or any of its Subsidiaries' name on any documents and other Security Instruments necessary to perfect or continue the perfection of, or maintain the priority of, Agent's security interest in the Collateral, (ii) take all such actions which such Loan Party is required, but fails, to do under the covenants and provisions of the Loan Documents; (iii) take any and all such actions as Agent may reasonably determine to be necessary or advisable for the purpose of maintaining, preserving or protecting the Collateral or any of the rights, remedies, powers or privileges of Agent under this Agreement or the other Loan Documents. Agent's foregoing appointment as each Loan Party's attorney in fact, and all of Agent's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist) have been fully repaid, in cash, and otherwise fully performed and all commitments to make Loans hereunder have been terminated.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which such Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Agent may obtain such insurance or make such payment, and all amounts so paid by Agent are Lender Expenses and immediately due and payable, bearing interest at the then highest rate applicable to the Obligations, and secured by the Collateral. Agent will make reasonable efforts to provide Borrower with notice of Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No payments by Agent are deemed an agreement to make similar payments in the future or Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds Upon Default. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) each Loan Party irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Agent from or on behalf of the Loan Parties of all or any part of the Obligations, and, as between the Loan Parties on the one hand and Agent and Lenders on the other, Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Agent may deem advisable notwithstanding any previous application by Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lender Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of the Loan Parties owing to Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Loan Parties or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation “ratably,” “proportionally” or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender’s portion of any Term Loan and the ratable distribution of interest, fees and reimbursements paid or made by Borrower. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender’s ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders’ claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Agent and other Lenders for purposes of perfecting Agent’s security interest therein.

9.5 Agent’s Liability for Collateral. So long as Agent and the Lenders comply with reasonable secured lender practices regarding the safekeeping of the Collateral in the possession or under the control of Agent and the Lenders, as the case may be, neither Agent nor any Lender shall be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Loan Parties bear all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Any failure by Agent or any Lender, at any time or times, to require strict performance by each Loan Party of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Agent or Lenders thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by the party granting the waiver and then is only effective for the specific instance and purpose for which it is given. Agent and Lenders’ rights and remedies under this Agreement and the other Loan Documents are cumulative. Agent has all rights and remedies provided under the Code, by law, or in equity. Agent or any Lender’s exercise of one right or remedy is not an election and shall not preclude Agent or any Lender from exercising any other remedy under this Agreement or other remedy available at law or in equity, and any waiver of any Event of Default is not a continuing waiver. Any delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Each Loan Party waives, to the fullest extent permitted by law, presentment, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Agent or any Lender on which any Loan Party is liable.

9.8 Shares. Each Loan Party recognizes that Agent may be unable to effect a public sale of any or all the Shares, by reason of certain prohibitions contained in federal securities laws and applicable state securities laws or otherwise, and may be compelled to resort to one or more private sales thereof to a restricted group of purchasers which will be obliged to agree, among other things, to acquire such securities for their own account for investment and not with a view to the distribution or resale thereof. Each Loan Party acknowledges and agrees that any such private sale may result in prices and other terms less favorable than if such sale were a public sale and, notwithstanding such circumstances, agrees that any such private sale shall be deemed to have been made in a commercially reasonable manner. Agent shall be under no obligation to delay a sale of any of the Shares for the period of time necessary to permit the issuer thereof to register such securities for public sale under federal securities laws or under applicable state securities laws, even if such issuer would agree to do so.

10. NOTICES

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document shall be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, or email address indicated below. Agent and Loan Parties may change their respective mailing or electronic mail addresses by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Loan Parties: HARVARD BIOSCIENCE, INC.
84 October Hill Road
Holliston, MA 01746
Attention: Mark Frost, Chief Financial Officer
Email: [***]

With a copy, Covington & Burling LLP
not constituting notice, to: 30 Hudson Yards
New York, NY 10001
Attention: Jennifer Uren
Email: [***]

If to Agent: BROADOAK INCOME FUND, L.P.
4800 Montgomery Lane
Suite 230
Bethesda, MD 20814
Attention: Manager
Email: [***]

With a copy, Cooley LLP
not constituting notice, to: 1299 Pennsylvania Ave NW, Suite 700
Washington, DC 20004
Attention: Mike Tollini
Email: [***]

11. CHOICE OF LAW, VENUE; JURY TRIAL WAIVER; JUDICIAL REFERENCE

Except as otherwise expressly provided in any of the Loan Documents, this Agreement and the other Loan Documents shall be governed by, and construed in accordance with, the laws of the State of New York without regard to principles of conflicts of law (excluding those loan documents that by their own terms are expressly governed by the laws of another jurisdiction). Each Loan Party hereby submits to the exclusive jurisdiction of the State and Federal courts in New York County, City of New York, New York; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Agent from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Agent or any Lender. Each Loan Party expressly submits and consents in advance to the jurisdiction in any action or suit commenced in any such New York State or Federal court, and each Loan Party hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such New York State or Federal court. Each Loan Party hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to such Loan Party at the address set forth in, or subsequently provided by such Loan Party in accordance with, Section 10 and that service so made shall be deemed completed upon the earlier to occur of such Loan Party's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid. Each Loan Party hereby expressly waives any claim to assert that the laws of any other jurisdiction govern this Agreement.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, EACH OF THE PARTIES HERETO EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR THE PARTIES TO ENTER INTO THIS AGREEMENT. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT OR ANYWHERE ELSE, EACH LOAN PARTY AGREES THAT IT SHALL NOT SEEK FROM AGENT OR ANY LENDER UNDER ANY THEORY OF LIABILITY (INCLUDING ANY THEORY IN TORTS), ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

This Section 11 shall survive the termination of this Agreement.

12. GENERAL PROVISIONS

12.1 Termination Prior to Term Loan Maturity Date; Survival. All covenants, representations and warranties made in this Agreement continue in full force until this Agreement has terminated pursuant to its terms and all Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied in full, in cash and all commitments to extend credit pursuant to this Agreement have terminated. So long as Loan Parties have satisfied the Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist and any other obligations which, by their terms, are to survive the termination of this Agreement), this Agreement and any remaining commitments to extend credit may be terminated prior to the Term Loan Maturity Date by Loan Parties, by written notice of termination to Agent (whereupon Agent shall promptly provide a copy of such notice to Lenders). Those obligations that are expressly specified in this Agreement as surviving this Agreement's termination shall continue to survive notwithstanding this Agreement's termination.

12.2 Successors and Assigns.

(a) Successors and Assigns Generally. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. No Loan Party may assign this Agreement or any rights or obligations under it without Agent's and Required Lenders' prior written consent (which may be granted or withheld in Agent's and Required Lenders' discretion).

(b) Assignments by Lenders. Each Lender has the right, without the consent of or notice to Loan Parties, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, such Lender's obligations, rights, and benefits under this Agreement and the other Loan Documents (other than any Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof). Notwithstanding the foregoing, so long as no Event of Default shall have occurred and is continuing, Lender shall not assign its interest in the Loans and Loan Documents (i) to any Person who in the reasonable estimation of Agent is a direct competitor of a Loan Party or (ii) without the consent of the Borrower, such consent not to be unreasonably withheld, conditioned or delayed (except that any Lender may assign its interests in the Loans and Loan Documents to one or more of its Affiliates or Approved Funds without the consent of Borrower).

(c) Proportionate Amounts. Each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Loan or the Commitment assigned.

(d) Required Consents. No consent shall be required for any assignment except (i) the consents required pursuant to Section 12.2(a) and (b), and (ii) the consent of Agent (such consent not to be unreasonably withheld or delayed) shall be required for assignments in respect of any Loans to a Person who is not a Lender, an Affiliate of a Lender or an Approved Fund.

(e) Assignment Agreement. The parties to each assignment shall execute and deliver to Agent an Assignment Agreement. The assignee, if it is not a Lender, shall deliver to Agent an administrative questionnaire, all required tax forms and any and all documentation and other information with respect to the assignee that is required by regulatory authorities under applicable anti-money-laundering laws.

(f) No Assignment to Certain Persons. Without Agent's consent, no such assignment shall be made to (A) Loan Parties or any of Loan Parties' Affiliates or Subsidiaries or (B) to any defaulting Lender or any of its Subsidiaries, or any Person who, upon becoming a Lender hereunder, would constitute any of the foregoing Persons described in this clause (B).

(g) No Assignment to Natural Persons. No such assignment shall be made to a natural Person (or a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of, a natural Person).

(h) Certain Additional Payments. In connection with any assignment of rights and obligations of any defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or sub-participations, or other compensating actions, including funding, with the consent of Borrower and Agent, the applicable pro rata share of Loans previously requested but not funded by the defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such defaulting Lender to Agent and each other Lender hereunder (and interest accrued thereon), and (y) acquire (and fund as appropriate) its full pro rata share of all Loans in accordance with its Pro Rata Share thereof. Notwithstanding the foregoing, in the event that any assignment of rights and obligations of any defaulting Lender hereunder shall become effective under applicable law without compliance with the provisions of this paragraph, then the assignee of such interest shall be deemed to be a defaulting Lender for all purposes of this Agreement until such compliance occurs.

(i) Register. Agent, acting solely for this purpose as a non-fiduciary agent of Borrower, shall maintain at one of its offices a copy of each Assignment Agreement delivered to it and a register for the recordation of the names and addresses of Lenders, the Commitments of, and principal amounts (and stated interest) of the Loans owing to, each Lender pursuant to the terms hereof from time to time (the "**Register**"). The entries in the Register shall be conclusive absent manifest error, and Borrower, Agent and Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior written notice.

12.3 Indemnification.

(a) Each Loan Party agrees to indemnify, defend and hold Agent and each Lender and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Agent or any Lender (each, an "**Indemnified Person**") harmless against: (i) all obligations, demands, claims, judgments, costs, disbursements, and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort) (collectively, "**Claims**") claimed or asserted by any other party as a result of, in connection with, relating to, following from, consequential to, or arising from, out of or under the transactions contemplated by the Loan Documents; and (ii) all losses or expenses (including Lender Expenses) in any way suffered, incurred, or paid by such Indemnified Person as a result of, in connection with, relating to, following from, consequential to, or arising from, out of or under transactions among Agent, Lenders and Loan Parties (including reasonable attorneys' fees and expenses), except for Claims and/or losses to the extent directly caused by such Indemnified Person's gross negligence or willful misconduct, as finally determined by a court of competent jurisdiction. Each Loan Party agrees to pay, and to save Agent and each Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Agent or Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement. This Section 12.3 shall survive until all statutes of limitation with respect to the Claims, losses, and expenses for which indemnity is given shall have run.

(b) Each Loan Party agrees to pay all amounts due under this Section 12.3 promptly on notice thereof from Agent. To the extent that any Loan Party may make or provide, to Agent's satisfaction, for payment of all amounts due under this Section 12.3, such Loan Party shall be subrogated to Agent's rights with respect to such events or conditions. So long as no Event of Default has occurred and is continuing, such Loan Party may defend any claims with counsel of its own choosing reasonably acceptable to Agent, provided, if the claim creates a significant exposure for the Agent or the Lenders in the Agent's sole judgment, or attempts to establish legal principle adverse to any Lender or Agent, Agent, on behalf of Lenders, shall select the defense counsel. Any Loan Party may settle any claims against Agent or a Lender; provided, such settlement includes a complete release of Agent and Lenders from any claims at no cost to Agent or Lenders and shall not include an admission of guilt on the part of Agent or any Lender.

12.4 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.5 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.6 Correction of Loan Documents. Agent may correct patent errors and fill in any blanks in the Loan Documents consistent with the agreement of the parties.

12.7 Amendments in Writing; Waiver; Integration. No purported amendment or modification of any Loan Document, or waiver, discharge or termination of any obligation under any Loan Document, shall be enforceable or admissible unless, and only to the extent, expressly set forth in a writing signed by the party against which enforcement or admission is sought (with copies to Agent). Without limiting the generality of the foregoing, no oral promise or statement, nor any action, inaction, delay, failure to require performance or course of conduct shall operate as, or evidence, an amendment, supplement or waiver or have any other effect on any Loan Document. Any waiver granted shall be limited to the specific circumstance expressly described in it, and shall not apply to any subsequent or other circumstance, whether similar or dissimilar, or give rise to, or evidence, any obligation or commitment to grant any further waiver. The Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations among the parties about the subject matter of the Loan Documents merge into the Loan Documents.

12.8 Counterparts; Electronic Execution of Documents. This Agreement and any other Loan Documents, except to the extent otherwise required pursuant to the terms thereof, may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement. The words "execution," "signed," "signature" and words of like import in any Loan Document shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act. Delivery of an executed counterpart of a signature page of any Loan Document by electronic means including by email delivery of a ".pdf" format data file shall be effective as delivery of an original executed counterpart of such Loan Document.

12.9 Confidentiality. In handling any confidential information, Agent and Lenders agree to exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to its Subsidiaries or Affiliates, or in connection with a Lender's own financing or securitization transactions and, upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization so long as such recipients are bound by confidentiality terms not more permissive than the terms hereof; (b) to prospective transferees or purchasers of any interest in the Loans so long as such prospective transferees or purchasers are bound by confidentiality terms not more permissive than the terms hereof; (c) as required by law, regulation, subpoena, or other order and in connection with reporting obligations applicable to Agent or Lender, including pursuant to the Securities Exchange Act of 1934, as amended; (d) to Agent or Lender's regulators or as otherwise required in connection with any examination or audit; (e) as may be necessary in connection with the exercise of remedies by Agent or Lenders with respect to the Obligations; and (f) to third-party service providers of Agent or Lenders so long as such service providers are bound by confidentiality terms not more permissive than the terms hereof. Confidential information does not include information that is either: (i) in the public domain or in Agent or any Lender's possession when disclosed to Agent or Lender, as applicable, or becomes part of the public domain (other than as a result of its disclosure by Agent or Lender in violation of this Agreement) after disclosure to Agent or Lender, as applicable; or (ii) disclosed to Agent or Lender by a third party, if Agent or Lender, as applicable, does not know that the third party is prohibited from disclosing the information. The provisions of this paragraph shall survive the termination of this Agreement. The agreements provided under this Section 12.10 supersede all prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.10.

12.10 Reserved.

12.11 Tax Treatment.

(a) Each party hereto hereby acknowledges and agrees that the Loans made on the Closing Date are part of an investment unit within the meaning of Section 1273(c)(2) of the Internal Revenue Code of 1986, as amended, which includes the Warrant. Notwithstanding anything to the contrary contained herein, each party hereto hereby further acknowledges and agrees that for United States federal, state and local income tax purposes the amount of the “issue price” of such investment unit allocated to the Loans made on the Closing Date under Section 1273(b) of the Internal Revenue Code, and the aggregate fair market value of the Warrant on the Closing Date, each, shall be determined collectively by the Borrower and the Agent, acting in good faith, after the Closing Date. Each party hereto agrees to use the foregoing issue price for all income financial accounting and regulatory purposes with respect to this transaction and to use the issue price and fair market value, as applicable, as determined in accordance with the foregoing, for all income financial accounting and regulatory purposes with respect to this transaction.

(b) The Loans are deemed to be made with original issue discount for U.S. federal income tax purposes. Requests for information regarding the issue price, amount of original issue discount, issue date and yield to maturity on the Loans shall be directed to the Borrower care of Chief Financial Officer at: 84 October Hill Road, Holliston, MA 01746.

12.12 Captions. The headings used in this Agreement are for convenience only and shall not affect the interpretation of this Agreement.

12.13 Construction of Agreement. The parties mutually acknowledge that they and their attorneys have participated in the preparation and negotiation of this Agreement. In cases of uncertainty this Agreement shall be construed without regard to which of the parties caused the uncertainty to exist.

12.14 Relationship. The relationship of the parties to this Agreement is determined solely by the provisions of this Agreement. The parties do not intend to create any agency, partnership, joint venture, trust, fiduciary or other relationship with duties or incidents different from those of parties to an arm’s-length contract.

12.15 Third Parties. Nothing in this Agreement, whether express or implied, is intended to: (a) confer any benefits, rights or remedies under or by reason of this Agreement on any persons other than the express parties to it and their respective permitted successors and assigns; (b) relieve or discharge the obligation or liability of any person not an express party to this Agreement; or (c) give any person not an express party to this Agreement any right of subrogation or action against any party to this Agreement.

12.16 Appointment of Agent.

(a) Each Lender hereby appoints Agent to act on behalf of Lenders as administrative agent and collateral agent under this Agreement and the other Loan Documents, and to hold and enforce any and all Liens on Collateral granted by any of the Loan Parties to secure any of the Obligations. The provisions of this Section 12.16 are solely for the benefit of Agent and Lenders and no Loan Party nor any other Person shall have any rights as a third party beneficiary of any of the provisions hereof. In performing its functions and duties under this Agreement, Agent does not assume and shall not be deemed to have assumed any obligation toward or relationship of agency or trust with or for any Loan Party or any other Person. Agent shall not have any duties or responsibilities except for those expressly set forth in this Agreement and the other Loan Documents, together with such powers as are reasonably related thereto. The duties of Agent shall be mechanical and administrative in nature and Agent shall not have, or be deemed to have, by reason of this Agreement, any other Loan Document or otherwise a fiduciary relationship in respect of any Lender.

(b) If Agent shall request instructions from Lenders with respect to any act or action (including failure to act) in connection with this Agreement or any other Loan Document, then Agent shall be entitled to refrain from such act or taking such action unless and until it shall have received instructions from Lenders, and Agent shall incur no liability to any Person by reason of so refraining. Agent shall be fully justified in failing or refusing to take any action hereunder or under any other Loan Document for any reason. Without limiting the foregoing, no Lender shall have any right of action whatsoever against Agent as a result of Agent’s acting or refraining from acting hereunder or under any other Loan Document in accordance with the instructions of Lenders.

(c) Agent may perform any and all of its duties and exercise its rights and powers hereunder by or through any one or more sub-agents appointed by Agent. Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective and their respective related parties. The exculpatory provisions of this Section 12 shall apply to any such sub-agent and to the related parties of such Agent and any such sub-agent. No Agent shall be responsible for the negligence or misconduct of any sub-agent except to the extent that a court of competent jurisdiction determines in a final and non-appealable judgment that such Agent acted with gross negligence or willful misconduct in the selection of such sub-agents.

(d) Neither Agent nor any of its Affiliates nor any of their respective directors, officers, agents or employees shall be liable for any action taken or omitted to be taken by it or them under or in connection with this Agreement or the other Loan Documents, except for damages solely caused by its or their own gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limitation of the generality of the foregoing, Agent: (i) may consult with legal counsel, independent chartered accountants and other experts and consultants selected by it and shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants, experts or consultants; (ii) makes no warranty or representation to any Lender and shall not be responsible to any Lender for any statements, warranties or representations made in or in connection with this Agreement or the other Loan Documents; (iii) shall not have any duty to ascertain or to inquire as to the performance or observance of any of the terms, covenants or conditions of this Agreement or the other Loan Documents on the part of any Loan Party or to inspect the Collateral (including the books and records) of any Loan Party; (iv) shall not be responsible to any Lender for the due execution, legality, validity, enforceability, genuineness, sufficiency or value of this Agreement or the other Loan Documents or any other instrument or document furnished pursuant hereto or thereto; and (v) shall incur no liability under or in respect of this Agreement or the other Loan Documents by acting upon any notice, consent, certificate or other instrument or writing (which may be by email, telecopy, telegram, cable or telex) believed by it to be genuine and signed or sent by the proper party or parties.

(e) With respect to its Commitments and Loans hereunder, Agent shall have the same rights and powers under this Agreement and the other Loan Documents as any other Lender and may exercise the same as though it were not Agent; and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated, include Agent in its individual capacity (to the extent it holds any Obligations owing to Lenders or Commitments hereunder). Agent and each of its Affiliates may lend money to, invest in, and generally engage in any kind of business with, any Loan Party, any of their Affiliates and any Person who may do business with or own securities of any Loan Party or any such Affiliate, all as if Agent was not Agent and without any duty to account therefor to Lenders. Agent and its Affiliates may accept fees and other consideration from any Loan Party for services in connection with this Agreement or otherwise without having to account for the same to Lenders.

(f) Each Lender acknowledges that it has, independently and without reliance upon Agent or any other Lender, made its own credit and financial analysis of the Loan Parties and its own decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon Agent or any other Lender and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement. Each Lender acknowledges the potential conflict of interest of each other Lender as a result of Lenders holding disproportionate interests in the Loans, and expressly consents to, and waives any claim based upon, such conflict of interest.

(g) Each Lender agrees to indemnify Agent (to the extent not reimbursed by Loan Parties and without limiting the obligations of Loan Parties hereunder), ratably according to its respective Pro Rata Share, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever which may be imposed on, incurred by, or asserted against Agent in any way relating to or arising out of this Agreement or any other Loan Document or any action taken or omitted by Agent in connection therewith; provided, however, that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting solely from Agent's gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limiting the foregoing, each Lender agrees to reimburse Agent promptly upon demand for its ratable share of any out-of-pocket expenses (including reasonable and documented counsel fees) incurred by Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement and each other Loan Document, to the extent that Agent is not reimbursed for such expenses by the Loan Parties.

(h) Agent may resign at any time by giving not less than thirty (30) days' prior written notice thereof to Lenders and Borrower. Upon any such resignation, Required Lenders shall have the right to appoint a successor Agent. If no successor Agent shall have been so appointed by Required Lenders and shall have accepted such appointment within thirty (30) days after Agent's giving notice of resignation, then Agent may, on behalf of Lenders, appoint a successor Agent, which shall be a Lender, if a Lender is willing to accept such appointment, or otherwise shall be a commercial bank or financial institution or a subsidiary of a commercial bank or financial institution if such commercial bank or financial institution has combined capital of at least \$300,000,000. If no successor Agent has been appointed pursuant to the foregoing, by the 30th day after the date such notice of resignation was given by the resigning Agent, such resignation shall become effective and Lenders shall thereafter perform all the duties of Agent hereunder until such time, if any, as Required Lenders appoint a successor Agent as provided above. Upon the acceptance of any appointment as Agent hereunder by a successor Agent, such successor Agent shall succeed to and become vested with all the rights, powers, privileges and duties of the resigning Agent. Upon the earlier of the acceptance of any appointment as Agent hereunder by a successor Agent or the effective date of the resigning Agent's resignation, the resigning Agent shall be discharged from its duties and obligations under this Agreement and the other Loan Documents, except that any indemnity, expense reimbursement or other rights in favor of such resigning Agent shall continue. After any resigning Agent's resignation hereunder, the provisions of this Section 12.16 shall inure to its benefit as to any actions taken or omitted to be taken by it while it was Agent under this Agreement and the other Loan Documents.

(i) In addition to any rights now or hereafter granted under applicable law and not by way of limitation of any such rights, upon the occurrence and during the continuance of any Event of Default, with the prior written consent of Agent, each Lender and each holder of any Obligation is hereby authorized at any time or from time to time, without notice to any Loan Party or to any other Person, any such notice being hereby expressly waived, to set off and to appropriate and to apply any and all balances held by it at any of its offices for the account of any Loan Party or any Subsidiary of a Loan Party (regardless of whether such balances are then due to such Loan Party or such Subsidiary) and any other properties or assets any time held or owing by that Lender or that holder to or for the credit or for the account of any Loan Party or any Subsidiary of a Loan Party against and on account of any of the Obligations which are not paid when due. Any Lender or holder of any Obligation exercising a right to set off or otherwise receiving any payment on account of the Obligations in excess of its Pro Rata Share thereof in accordance with the terms of this Agreement relating to the priority of the repayment of the Obligations shall purchase for cash (and the other Lenders or holders shall sell) such participations in each such other Lender's or holder's Pro Rata Share of the Obligations as would be necessary to cause such Lender to share the amount so set off or otherwise received with each other Lender or holder in accordance with their respective Pro Rata Shares and in accordance with the terms of this Agreement relating to the priority of the repayment of the Obligations. Each Loan Party agrees, to the fullest extent permitted by law, that (i) any Lender or holder may exercise its right to set off with respect to amounts in excess of its Pro Rata Share of the Obligations and may sell participations in such amount so set off to other Lenders and holders and (ii) any Lender or holders so purchasing a participation in the Loans made or other Obligations held by other Lenders or holders may exercise all rights of set off, bankers' Lien, counterclaim or similar rights with respect to such participation as fully as if such Lender or holder were a direct holder of the Loans and the other Obligations in the amount of such participation. Notwithstanding the foregoing, if all or any portion of the set-off amount or payment otherwise received is thereafter recovered from Lender that has exercised the right of set-off, the purchase of participations by that Lender shall be rescinded and the purchase price restored without interest.

(j) Nothing in this Agreement or the other Loan Documents shall be deemed to require Agent to advance funds on behalf of any Lender or to relieve any Lender from its obligation to fulfill its Commitments hereunder or to prejudice any rights that the Borrower may have against any Lender as a result of any default by such Lender hereunder. To the extent that Agent advances funds to the Borrower on behalf of any Lender and is not reimbursed therefor on the same Business Day as such advance is made, Agent shall be entitled to retain for its account all interest accrued on such advance until reimbursed by the applicable Lender.

(k) If Agent pays an amount to a Lender under this Agreement in the belief or expectation that a related payment has been or will be received by Agent from Borrower and such related payment is not received thereby, then Agent will be entitled to recover such amount from such Lender on demand without set off, counterclaim or deduction of any kind.

(l) If Agent determines at any time that any amount received thereby under this Agreement shall be returned to Borrower or paid to any other Person pursuant to any insolvency law or otherwise, then, notwithstanding any other term or condition of this Agreement or any other Loan Document, Agent will not be required to distribute any portion thereof to any Lender. In addition, each Lender will repay to Agent on demand any portion of such amount that Agent has distributed to such Lender, together with interest at such rate, if any, as Agent is required to pay to Borrower or such other Person, without set off, counterclaim or deduction of any kind.

(m) Agent shall be deemed to have no knowledge of any Event of Default unless such Agent shall have received written notice thereof from a Lender or a Loan Party stating that it is a “notice of Default” and an Event of Default has occurred. Agent will use reasonable efforts to provide Lenders with any written notice of Event of Default received by Agent from, or delivered by Agent to, any Loan Party; provided, however, that Agent shall not be liable to any Lender for any failure to do so, except to the extent that such failure is attributable solely to Agent’s gross negligence or willful misconduct as finally determined by a court of competent jurisdiction.

(n) Anything in this Agreement or any other Loan Document to the contrary notwithstanding, each Lender hereby agrees with each other Lender and with Agent that no Lender shall take any action to protect or enforce its rights arising out of this Agreement or any other Loan Document (including exercising any rights of set-off) without first obtaining the prior written consent of Agent, it being the intent of Lenders that any such action to protect or enforce rights under this Agreement and the other Loan Documents shall be taken in concert and at the direction or with the consent of Agent or Required Lenders.

12.17 Publicity. Notwithstanding anything else herein to the contrary, Loan Parties hereby agrees that the Agent and Lenders may, at Agent’s or such Lender’s sole expense, make a public announcement of the transactions contemplated by this Agreement, and may publicize or use (a) the other party’s name (including a brief description of the relationship among the parties hereto), logo or hyperlink to such other parties’ web site, separately or together, in written and oral presentations, advertising, promotional and marketing materials, client lists, public relations materials or on its web site (together, the “**Publicity Materials**”); (b) the names of officers of such other parties in the Publicity Materials; and (c) such other parties’ name, trademarks, servicemarks in any news or press release concerning such party, in each case to the extent such information is not deemed confidential in accordance with Section 12.9; provided that Agent and Lenders shall afford the Loan Parties a reasonable opportunity to review and approve any Publicity Materials (such approval not to be unreasonably withheld, conditioned or delayed).

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Closing Date.

BORROWER:

HARVARD BIOSCIENCE, INC., a Delaware corporation

By _____

Name: _____

Title: _____

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

AGENT:

BROADOAK INCOME FUND, L.P.

By _____

Name: _____

Title: _____

LENDER:

BROADOAK INCOME FUND, L.P.

By _____

Name: _____

Title: _____



EXHIBIT A

DEFINITIONS

As used in this Agreement, the following capitalized terms have the following meanings:

“**Account**” means any “account” as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to a Loan Party.

“**Account Control Agreement**” means with respect to Collateral Accounts maintained in the United States, any state thereof or the District of Columbia, any control agreement entered into among the depository institution at which a Loan Party maintains a Deposit Account or the securities intermediary or commodity intermediary at which a Loan Party maintains a Securities Account or a Commodity Account, one or more Loan Parties, and Agent pursuant to which Agent, for the benefit of Lenders, obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

“**Account Debtor**” means any “account debtor” as defined in the Code with such additions to such term as may hereafter be made.

“**Adjusted EBITDA**” means, with respect to any Person for any period, the Consolidated Net Income of such Person and its Subsidiaries for such period:

(a) increased (without duplication) by the following, in each case, to the extent deducted (and not added back) in determining Consolidated Net Income for such Person for such period:

(i) federal, state, local and foreign income or franchise taxes of such Person and its Subsidiaries paid or payable in cash during such period; plus

(ii) Consolidated Interest Expense of such Person and its Subsidiaries; plus

(iii) Consolidated Depreciation and Amortization Expense of such Person and its Subsidiaries; plus

(iv) (x) non-cash losses and non-cash charges (excluding any non-cash charges that constitute an accrual of or a reserve for future cash charges or are reasonably likely to result in a cash outlay in a future period), and (y) non-cash expenses resulting from the grant of stock options, or other stock based compensation to any director, officer or employee of Borrower or its Subsidiaries; plus

(v) in the case of the Borrower, reasonable and customary one-time, non-recurring fees, expenses and costs relating to the entry into the Loan Documents and any strategic transaction pursued in parallel and the consummation of the transactions contemplated thereby incurred within six months of the Closing Date; plus

(vi) losses, charges and expenses attributed to asset Transfers ([**]) or the sale or other Transfer of any Equity Interests of any Person other than in the Ordinary Course of Business or the Transfer of any securities or the extinguishment of any Indebtedness; plus

(vii) any net realized or unrealized loss during such period resulting from currency transaction or translation losses, including those related to currency remeasurements of indebtedness (including any losses resulting from intercompany indebtedness); plus

(viii) other extraordinary, unusual or non-recurring charges, expenses and losses for such period; and

(b) decreased (without duplication) by the following, in each case, to the extent included in determining Consolidated Operating Income for such Person for such period:

(i) interest income to the extent received in cash or otherwise during such period; plus

(ii) any gain realized in connection with the sale or Transfer of assets ([**]) other than in Ordinary Course of Business or the Transfer of any securities or the extinguishment of any Indebtedness; plus

(iii) other extraordinary, unusual or non-recurring gains for such period (including any tax refunds), plus

(iv) any other non-cash income for such period.

“**Affiliate**” means (a) any Person that directly or indirectly controls, is controlled by, or is under common control with the Person in question, (b) any Person directly or indirectly owning, controlling or holding with power to vote ten percent (10%) or more of the outstanding voting securities of another Person, or (c) any Person ten percent (10%) or more of whose outstanding voting securities are directly or indirectly owned, controlled or held by another Person with power to vote such securities. As used in the definition of “Affiliate,” the term “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through ownership of voting securities, by contract or otherwise. For purposes of this Agreement, none of Agent or any Lender shall be deemed an Affiliate of any Loan Party.

“**Agent**” has the meaning set forth in the preamble of this Agreement.

“**Agreement**” has the meaning set forth in the preamble of this Agreement.

“**Amortization Date**” means December 31, 2027; provided that if the Extension Milestone is satisfied then the Amortization Date shall be extended to December 31, 2028.

“**Anti-Terrorism Law**” means any law relating to terrorism or money-laundering, including Executive Order No. 13224 and the USA Patriot Act.

“**Anti-Terrorism Order**” means Executive Order No. 13,224 as of September 24, 2001, Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit or Support Terrorism, 66 U.S. Fed. Reg. 49,079 (2001), as amended.

“**Applicable Rate**” means an annual rate equal to the greater of (i) (x) for the period from the Closing Date through and including the second anniversary of the Closing Date, 12.80% or (y) after the second anniversary of the Closing Date, 12.50%, and (ii) the Prime Rate plus 5.25%.

“**Approved Fund**” means any fund that is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) an entity or an Affiliate of an entity that administers or manages a Lender.

“**Assignment Agreement**” means an Assignment Agreement substantially in the form of Exhibit E, with such amendments or modifications as may be approved by Agent.

“**Board**” means, with respect to any Person, the board of directors, board of managers, managers or other similar bodies or authorities performing similar governing functions for such Person. Unless the context otherwise requires, each reference to a Board herein shall be a reference to the Board of Borrower.

“**Borrower**” has the meaning set forth in the preamble hereof.

“**Business Day**” means any day that is not a Saturday, Sunday or a day on which commercial banks in the State of New York are required or permitted to be closed.

“**Cash Equivalents**” means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc.; (c) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein; (d) repurchase agreements with a term of not more than 30 days for securities described in clause (a) of this definition and entered into with a financial institution satisfying the criteria described in clause (c) of this definition, and (e) money market funds at least ninety-five percent (95%) of the assets of which constitute Cash Equivalents of the kinds described in clauses (a) through (c) of this definition.

“**Change in Control**” means an event or series of events by which (a) any Person or group (within the meaning of Rule 13d-5 of the Securities Exchange Act of 1934 as in effect on the Closing Date) shall own directly or indirectly, beneficially or of record, shares representing more than 40% of the aggregate ordinary voting power or economic interests represented by the issued and outstanding Equity Interests of the Borrower on a fully diluted basis, (b) a majority of the seats (other than vacant seats) on the board of directors (or equivalent governing body) of the Borrower shall at any time be occupied by Persons who were neither (i) nominated, approved or appointed by the board of directors (or equivalent governing body) of the Borrower nor (ii) nominated, approved or appointed by individuals so nominated, approved, or appointed, (c) the Borrower shall fail to own, directly or indirectly, free and clear of all Liens or other encumbrances (other than Liens created pursuant to any Loan Document or Liens otherwise permitted pursuant to any Loan Document), 100% of the aggregate ordinary voting power and economic interests represented by the issued and outstanding Equity Interests of each of its Subsidiaries (or such lesser percentage as may be owned, directly or indirectly, as of the Closing Date or the later acquisition thereof) except where such failure is as a result of a transaction permitted by the Loan Documents or (d) any change in control (or similar event, however denominated) with respect to any Loan Party or any of its Subsidiaries shall occur under and as defined in any indenture or agreement in respect of Indebtedness in an outstanding principal amount in excess of \$250,000 to which any Loan Party or any of its Subsidiaries is a party.

“**Claims**” has the meaning set forth in Section 12.3.

“**Closing Date**” has the meaning set forth in the preamble hereof.

“**Code**” means the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of New York; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Agent’s Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of New York, the term “**Code**” shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

“**Collateral**” means any and all properties, rights and assets of each Loan Party described on Exhibit B, and any collateral securing the Obligations pursuant to any guaranty or pursuant to any other Loan Document.

“**Collateral Access Agreement**” means an agreement with respect to a Loan Party’s leased location or bailee location, in each case in form and substance reasonably satisfactory to Agent.

“**Collateral Account**” means any Deposit Account, Securities Account, or Commodity Account of a Loan Party, except for Excluded Accounts.

“**Commitment**” means, as to any Lender, the aggregate principal amount of Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

“**Commodity Account**” means any “commodity account” as defined in the Code with such additions to such term as may hereafter be made.

“**Compliance Certificate**” means that certain certificate in the form attached hereto as Exhibit D.

“**Consolidated Depreciation and Amortization Expense**” means, with respect to any Person for any period, the total amount of depreciation and amortization expense, including the amortization of deferred financing fees or costs, amortization of acquired assets, capitalized expenditures, customer acquisition costs and incentive payments, conversion costs and contract acquisition costs, the amortization of original issue discount and amortization of favorable or unfavorable lease assets or liabilities, of such Person and its Subsidiaries for such period on a consolidated basis and otherwise determined in accordance with GAAP.

“**Consolidated Interest Expense**” means, with respect to any Person and its Subsidiaries for any period, the sum of (a) consolidated total interest expense of such Person and its Subsidiaries for such period, whether paid or accrued and whether or not capitalized (including (without duplication), amortization of debt issuance costs and original issue discount, premiums paid to obtain payment, financial assurance or similar bonds, interest capitalized during construction, non-cash interest payments, the interest component of any deferred payment obligations, the interest component of all payments under capital leases and the implied interest component of synthetic lease obligations (regardless of whether accounted for as interest expense under GAAP), all commissions, discounts and other fees and charges owed with respect to letters of credit and bankers’ acceptances and net costs in respect of any obligations under any swap agreements constituting interest rate swaps, collars, caps or other arrangements requiring payments contingent upon interest rates of such Person and its Subsidiaries), plus (b) all mandatory cash dividends paid or payable on preferred stock during such period other than to such Person or a Loan Party, plus or minus, as applicable, to the extent they would otherwise be included in interest expense under GAAP, unrealized gains and losses arising from derivative financial instruments issued by such Person for the benefit of such Person or its Subsidiaries, in each case determined on a consolidated basis for such period.

“**Consolidated Net Income**” means, for any Person (the “first Person”) for any period, the sum of net income (or loss) for such period of such first Person and its subsidiaries determined on a consolidated basis in accordance with GAAP, excluding, without duplication, to the extent included in determining such net income (or loss) for such period: (a) any income (or loss) of any other Person (the “second Person”) if such second Person is not a subsidiary of such first Person, except that such first Person’s equity in the net income of any second Person for such period shall be included in the determination of Consolidated Net Income up to the aggregate amount of cash actually distributed by such second Person during such period to such first Person or any of its subsidiaries as a dividend or other distribution, (b) the income (or loss) of any second Person accrued prior to the date it became a subsidiary of such first Person or is merged into or consolidated with such first person or any of its subsidiaries or such second Person’s assets are acquired by such first person or any of its subsidiaries, (c) non-recurring gains (or losses), (d) the income of any subsidiary of such first Person to the extent that the declaration or payment of dividends or similar distributions by such subsidiary of that income is prohibited by operation of the terms of its charter or any agreement, instrument, judgment, decree, statute, rule or governmental regulation applicable to such subsidiary, and (e) all non-cash adjustments made to translate foreign assets and liabilities for changes in foreign exchange rates made in accordance with ASC 830.

“**Contested in Good Faith**” means, with respect to any matter, that such matter is being contested in good faith by appropriate proceedings diligently conducted and for which adequate reserves have been provided in accordance with GAAP.

“**Contingent Obligation**” means, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation, in each case, directly or indirectly guaranteed, endorsed, co made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

“**Copyrights**” means any and all copyright rights, copyright applications, copyright registrations and like protections of a Person in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

“**Default**” means any circumstance, event or condition that, with the giving of any notice, the passage of time, or both, would be an Event of Default.

“**Default Rate**” has the meaning set forth in Section 2.3(b).

“**Deposit Account**” means any “deposit account” as defined in the Code with such additions to such term as may hereafter be made, and includes any checking account, savings account or certificate of deposit.

“**Disbursement Letter**” means a disbursement letter substantially in the form of Exhibit F.

“**Disqualified Stock**” means any Equity Interest that, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable), or upon the happening of any event, (a) matures (excluding any maturity as the result of an optional redemption by the issuer thereof) or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or is redeemable or subject to repurchase at the option of the holder thereof, in whole or in part, or requires the payment of any cash dividend or any other scheduled payment, in each case constituting a return of capital, in each case at any time on or prior to the date that is 180 days after the Term Loan Maturity Date or (b) is convertible into or exchangeable (unless at the sole option of the issuer thereof) for (i) Indebtedness or other debt securities or (ii) any Equity Interest referred to in clause (a) above, in each case at any time prior to the date that is 180 days after the Term Loan Maturity Date. Notwithstanding the preceding sentence, any Equity Interest that would constitute Disqualified Stock solely because the holders thereof have the right to require the issuer to repurchase such Equity Interest upon the occurrence of a Change in Control will not constitute Disqualified Stock if the terms of such Equity Interest provide that such repurchase or redemption cannot be consummated until the Obligations have been paid in full, in cash (subject to the contingent obligations which are not then due and payable and which survive the termination of this Agreement and as to which no claim has been asserted or is known to exist).

“**Division**” means, in reference to any Person which is an entity, the division of such Person into two (2) or more separate Persons, with the dividing Person either continuing or terminating its existence as part of such division, including, without limitation, as contemplated under Section 18-217 of the Delaware Limited Liability Company Act for limited liability companies formed under Delaware law, Section 17-220 of the Delaware Revised Uniform Limited Partnership Act for limited partnerships formed under Delaware law, or any analogous action taken pursuant to any other applicable law with respect to any corporation, limited liability company, partnership or other entity.

“**Dollars**,” “**dollars**” or use of the sign “**\$**” means only lawful money of the United States and not any other currency, regardless of whether that currency uses the “**\$**” sign to denote its currency or may be readily converted into lawful money of the United States.

“**Domestic Subsidiary**” means a Subsidiary organized under the laws of the United States or any state or territory thereof or the District of Columbia.

“**Equipment**” means all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“**Equity Interests**” means, with respect to any Person, any of the shares of capital stock of (or other ownership, membership or profit interests in) such Person, any of the warrants, options or other rights for the purchase or acquisition from such Person of shares of capital stock of (or other ownership, membership or profit interests in) such Person, any of the securities convertible into or exchangeable for shares of capital stock of (or other ownership, membership or profit interests in) such Person or warrants, rights or options for the purchase or acquisition from such Person of such shares (or such other interests), and any of the other ownership, membership or profit interests in such Person (including partnership, member or trust interests therein), whether voting or nonvoting, and whether or not such shares, warrants, options, rights or other interests are outstanding on any date of determination.

“**ERISA**” means the Employee Retirement Income Security Act of 1974, and its regulations.

“**Event of Default**” has the meaning set forth in Section 8.

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

“**Excluded Accounts**” means any Deposit Account, Securities Account or Commodity Account (i) used exclusively for payroll, payroll taxes and other employee wage and benefit programs to or for the benefit of the Loan Parties’ employees which, in the aggregate, do not hold more than one payroll cycle’s worth of cash at any time, (ii) zero balance accounts so long as the balance in such accounts is transferred to a Collateral Account and is zero at the end of each Business Day and (iii) accounts in which there is not maintained at any point in time funds on deposit greater than \$10,000 in the aggregate for all such accounts.

“**Excluded Locations**” means the following locations where Collateral may be located from time to time: (a) locations where mobile office equipment (e.g. laptops, mobile phones and the like) may be located with employees in the Ordinary Course of Business, and (b) other locations where, in the aggregate for all such locations, less than Fifty Thousand Dollars (\$50,000) of Collateral is located.

“**Excluded Taxes**” means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan or Commitment pursuant to a law in effect on the date on which (i) such Lender acquires such interest in the Loan or Commitment or (ii) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2.5, amounts with respect to such Taxes were payable either to such Lender’s assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (c) Taxes attributable to such Recipient’s failure to comply with Section 2.5(c)(iii) and (d) any U.S. federal withholding Taxes imposed under FATCA.

“**Existing Indebtedness**” is the indebtedness of Borrower pursuant to that certain Credit Agreement, dated as of December 22, 2020, entered into by and between Citizens Bank, N.A., as administrative agent, the lenders party thereto and Borrower, as amended, restated, supplemented or otherwise modified from time to time.

“**Exit Fee**” means a payment (in addition to and not a substitution for the regular quarterly payments of principal following the Amortization Date or regular monthly payments of accrued interest) due on the earliest to occur of (a) the Term Loan Maturity Date, (b) the acceleration of any Term Loan, or (c) the repayment or prepayment of a Term Loan pursuant to Section 2.2(b), (c) or (d), in each case equal to the principal amount of such Term Loan being prepaid or repaid multiplied by the applicable Exit Fee Percentage. For the avoidance of doubt, no Exit Fee is payable on the portion of the Term C Loan that converts in accordance with Section 2.2(f).

“**Exit Fee Percentage**” means 10.00%; provided that with respect to the principal amount of the Term A Loans and the Term B Loans that are outstanding as of the fifteen month anniversary of the Closing Date, the Exit Fee Percentage shall be reduced by 1.00% for every \$2,000,000 of the principal amount of Term A Loans that had been repaid or prepaid prior to the fifteen month anniversary of the Closing Date. For the avoidance of doubt, the Exit Fee Percentage until the fifteen month anniversary of the Closing Date is 10.00%.

“**Extension Milestone**” means Agent and Lenders have received evidence reasonably satisfactory to Agent and Lenders that (i) Borrower, on a consolidated basis, has achieved Adjusted EBITDA, measured on a trailing twelve months basis ending on the last day of two consecutive fiscal quarters ending on or before December 31, 2027, of at least \$14,000,000 and (ii) no Event of Default has occurred and is continuing.

“**FATCA**” means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreement entered into pursuant to Section 1471(b)(1) of the Internal Revenue Code.

“**Federal Reserve Board**” means the Board of Governors of the Federal Reserve System, or any successor thereto.

“**Foreign Lender**” means a Lender not organized under the laws of the United States or any state or territory thereof or the District of Columbia.

“**Foreign Subsidiary**” means any Subsidiary that is not a Domestic Subsidiary.

“**Funding Date**” means any date on which a Loan is made to or for the account of Borrower which shall be a Business Day.

“**GAAP**” means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination; provided, however, that if there occurs after the Closing Date any change in GAAP that affects in any respect the calculation of any covenant or threshold in this Agreement, Agent and Borrower shall negotiate in good faith amendments to the provisions of this Agreement that relate to the calculation of such covenant or threshold with the intent of having the respective positions of Lender and Borrower after such change in GAAP conform as nearly as possible to their respective positions as of the Closing Date, and, until any such amendments have been agreed upon, such covenants and thresholds shall be calculated as if no such change in GAAP has occurred.

“**General Intangibles**” means all “general intangibles” as defined in the Code in effect on the Closing Date with such additions to such term as may hereafter be made, and includes without limitation, all Intellectual Property, claims, income and other tax refunds, security and other deposits, payment intangibles, contract rights, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

“**Governmental Approval**” means any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

“**Governmental Authority**” means any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

“**Guarantor**” means any Person providing a Guaranty with respect to the Obligations or providing collateral, security or other credit support for all or any portion of the Obligations.

“**Guaranty**” means any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

“**Immaterial Foreign Subsidiary**” means each of Harvard Apparatus, SARL, Ealing Scientific Ltd, Data Sciences GmbH, Data Sciences EURL, Data Sciences UK (MN) Limited, BioDrop Ltd, Walden Precision Apparatus Limited, Scie-Plas Ltd and Asys Hitech GmbH.

“**Immaterial US Subsidiary**” means each of HBIO Sub Inc., Warner Instruments LLC, FKA UBI, Inc., FKA GSI US, Inc., Cartesian Technologies, Inc., Genomic Solutions Canada Inc., KD Scientific, Inc., Coulbourn Instruments LLC, HEKA Instruments Incorporated, Triangle Biosystems, Inc., HBIO Distribution Oldco, Inc. and any other Domestic Subsidiary which complies with the limitations set forth in Section 7.13 as of any date of determination.

“**Indebtedness**” means (a) indebtedness for borrowed money or the deferred price of property or services, (b) any reimbursement and other obligations for surety bonds and letters of credit, (c) obligations evidenced by notes, bonds, debentures or similar instruments, (d) capital lease obligations, (e) Contingent Obligations and (f) Disqualified Stock.

“**Indemnified Person**” has the meaning set forth in Section 12.3.

“**Indemnified Taxes**” means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document and (b) to the extent not otherwise described in (a), Other Taxes.

“**Insolvency Proceeding**” means any proceeding by or against any Person under the United States Bankruptcy Code or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

“**Intellectual Property**” means, with respect to any Loan Party (or, as applicable, any of its Subsidiaries), all of such Loan Party’s or Subsidiary’s right, title, and interest in and to the following:

- (a) its Copyrights, Trademarks and Patents;
- (b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;
- (c) any and all source code;
- (d) any and all design rights which may be available to such Person;
- (e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and
- (f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

“**Internal Revenue Code**” means the Internal Revenue Code of 1986, as amended from time to time.

“**Inventory**” means all “inventory” as defined in the Code in effect on the Closing Date with such additions to such term as may hereafter be made.

“**Investment**” means any beneficial ownership interest in any Person (including stock, partnership interest or other securities or Equity Interests), and any loan, advance or capital contribution to any Person, or the acquisition of all or substantially all of the assets or properties of another Person.

“**IP Security Agreement**” means that certain intellectual property security agreement entered into by each Loan Party which is the owner of Intellectual Property registered with the United States Patent and Trademark Office or United States Copyright Office and Agent as of the Closing Date or from time thereafter, as amended, restated, supplemented or otherwise modified, from time to time.

“**IRS**” means the United States Internal Revenue Service.

“**Key Person**” means the Chief Executive Officer, President and Chief Financial Officer of Borrower.

“**Lender**” has the meaning set forth in the preamble hereof.

“**Lender Expenses**” means all reasonable and documented out-of-pocket audit fees and expenses, costs, and expenses (including reasonable attorneys’ fees and expenses) of Agent and the Lenders for preparing, amending, negotiating, and administering the Loan Documents or otherwise incurred with respect to a Loan Party and all costs and expenses (including reasonable attorneys’ fees and expenses) of Agent and the Lenders in connection with defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings).

“**Lien**” means a claim, mortgage, deed of trust, levy, charge, pledge, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

“**Liquidity**” means, as of any date of determination, (i) the aggregate amount of Borrower’s unrestricted and unencumbered cash and Cash Equivalents, plus (ii) the amount Borrower is able to draw under the Revolving Facility as of such date when taking into account the draw conditions under the Revolving Facility.

“**Loan Documents**” means, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Warrants, the Pledge Agreement, the IP Security Agreement, any Guaranty, any Subordination Agreement, any Account Control Agreements, any Collateral Access Agreements, any note, or notes, and any other present or future agreement by a Loan Party with or for the benefit of Agent or any Lender in connection with this Agreement, all as amended, modified, supplemented, extended or restated from time to time.

“**Loan Parties’ Books**” means all of each Loan Party’s books and records including ledgers, federal and state tax returns, records regarding such Loan Party’s assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

“**Loan Party**” or “**Loan Parties**” means, Borrower and any Guarantor from time to time party hereto.

“**Loan Request**” means a written request for a Loan pursuant to this Agreement in substantially the form attached hereto as Exhibit C.

“**Loans**” means, collectively, the Term Loans and any other loan from time to time made under this Agreement, and “**Loan**” means any of the foregoing.

“**Margin Stock**” has the meaning set forth in Section 5.11(b).

“**Material Adverse Effect**” means (a) a material impairment in the perfection or priority of Agent’s Lien in the Collateral or in the value of the Collateral; or (b) a material adverse effect upon: (i) the business, operations, properties, assets or condition (financial or otherwise) of the Loan Parties as a whole; (ii) the prospect of repayment of any part of the Obligations; or (iii) the ability of Agent to enforce any of its rights or remedies with respect to any Obligations.

“**Material Agreement**” is any license, agreement or other contractual arrangement the loss of which could reasonably be expected to result in a Material Adverse Effect.

“**Maximum Rate**” has the meaning set forth in Section 2.3(d) hereof.

“**Obligations**” means all of Borrower’s and each other Loan Party’s obligations to pay the Loans when due, including principal interest, fees, Lender Expenses, Term Loan Closing Fee, the Prepayment Fee, the Exit Fee and any other amounts due to be paid by Borrower or Loan Party, and Borrower’s and Loan Party’s obligation to perform its duties under the Loan Documents (other than the Warrant), and any other debts, liabilities and other amounts Borrower or Loan Party owes to Agent or any Lender at any time, whether under the Loan Documents or otherwise (but excluding obligations arising under the Warrant), including, without limitation, interest accruing after Insolvency Proceedings begin (whether or not allowed), and any debts, liabilities, or obligations of Borrower or Loan Party assigned to Agent or any Lender.

“**OFAC**” has the meaning set forth in Section 5.11(c).

“**OFAC Lists**” are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to the Anti-Terrorism Order and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

“**Operating Documents**” means, for any Person, such Person’s formation documents, as certified by the Secretary of State (or equivalent agency) of such Person’s jurisdiction of formation, organization or incorporation on a date that is no earlier than thirty (30) days prior to the Closing Date and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement or operating agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments, restatements and modifications thereto.

“**Ordinary Course of Business**” means, in respect of any transaction involving any Person, the ordinary course of such Person’s business as conducted by any such Person in accordance with (a) the usual and customary customs and practices in the kind of business in which such Person is engaged, and (b) the past practice and operations of such Person, and in each case, undertaken by such Person in good faith and not for purposes of evading any covenant or restriction in any Loan Document.

“**Other Connection Taxes**” means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document).

“**Other Taxes**” means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

“**Patents**” means all patents, patent applications and like protections of a Person including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same and all rights therein provided by international treaties or conventions.

“**Payment Date**” means the last calendar day of each month.

“**Perfection Certificate**” has the meaning set forth in [Section 5.1](#).

“**Permitted Encumbrances**” means:

(a) Liens imposed by law for taxes, assessments or other governmental charges that are not yet due or are being Contested in Good Faith, provided that enforcement of such Liens is stayed pending such contest;

(b) landlords’, vendors’, carriers’, warehousemen’s, mechanics’, materialmen’s, repairmen’s and other like Liens imposed by law, arising in the ordinary course of business and securing obligations that are not overdue by more than 30 days or are being Contested in Good Faith, provided that enforcement of such Liens is stayed pending such contest;

(c) pledges and deposits made in the ordinary course of business in compliance with workers’ compensation, unemployment insurance and other social security laws or regulations;

(d) deposits to secure the performance of bids, trade contracts (other than contracts for the payment of money), leases (other than capital lease obligations), statutory obligations, surety and appeal bonds, performance bonds and other obligations of a like nature, in each case incurred in the ordinary course of business;

(e) judgment liens in respect of judgments that do not constitute an Event of Default;

(f) easements, zoning restrictions, rights of way and similar encumbrances on real property imposed by law or arising in the ordinary course of business that do not secure any monetary obligation and do not materially detract from the value of the affected property or interfere with the ordinary conduct of business of the Loan Parties and their respective Subsidiaries;

(g) any interest or title of a licensor, sublicensor, lessor or sublessor with respect to any assets under any license or lease agreement entered into in the ordinary course of business, provided that the same do not in any material respect interfere with the business of the Loan Parties or their Subsidiaries or materially detract from the value of the relevant assets of the Loan Parties or its Subsidiaries;

(h) licenses, sublicenses, leases or subleases with respect to any assets granted to third Persons in the ordinary course of business, provided that the same do not in any material respect interfere with the business of the Loan Parties or their Subsidiaries or materially detract from the value of the relevant assets of the Loan Parties or their Subsidiaries;

(i) customary rights of set off, bankers' liens, refunds or charge backs, under deposit agreements, the Uniform Commercial Code or common law, of banks or other financial institutions where any Loan Party or any of such Loan Party's Subsidiaries maintains deposits (other than deposits intended as cash collateral) in the ordinary course of business;

(j) Liens on Margin Stock to the extent that a prohibition on such Liens would violate Regulation U;

(k) Liens on amounts deposited as "security deposits" (or their equivalent) in the ordinary course of business in connection with actions or transactions not prohibited by this Agreement;

(l) Liens in favor of customs and revenue authorities arising in the ordinary course of business as a matter of law to secure payment of customs duties in connection with the importation of goods;

(m) Liens resulting from the filing of precautionary UCC-1 financing statements (or equivalent) with respect to operating leases;

(n) Liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into by any Loan Party or any of its Subsidiaries in the ordinary course of business;

(o) Liens incurred in the ordinary course of business imposed by law in connection with the purchase or shipping of goods or assets (or the related assets and proceeds thereof), which Liens are in favor of the seller or shipper of such goods or assets and only attach to such goods or assets; provided that the term "Permitted Encumbrance" shall not include any Lien securing Indebtedness.

"Permitted Indebtedness" means:

(a) each Loan Party's Indebtedness under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Closing Date and shown on the Perfection Certificate; provided that (i) to the extent the amount of such type of Indebtedness is limited pursuant to a clause of this defined term, amounts existing on the Closing Date or any permitted refinancing thereof shall count towards such limit, (ii) to the extent such Indebtedness is required to be repaid on the Closing Date, in accordance with a payoff letter delivered as a condition to closing, such Indebtedness shall not constitute Permitted Indebtedness after such repayment, and (iii) to the extent any such Indebtedness is required to be made subject to the terms of a Subordination Agreement as of the Closing Date or thereafter, pursuant to the terms of this Agreement, such Indebtedness shall be permitted only to the extent the applicable Subordination Agreement is in effect;

(c) Indebtedness under the Revolving Facility in an aggregate outstanding amount not to exceed \$10,000,000 at any time; provided that the proceeds of the Revolving Facility may only be used to repay the Term A Loans and/or the Term B Loans;

(d) to the extent constituting Indebtedness, Permitted Investments under clause (d) thereof;

(e) unsecured Indebtedness to trade creditors incurred in the Ordinary Course of Business;

(f) Indebtedness incurred as a result of endorsing negotiable instruments received in the Ordinary Course of Business;

(g) unsecured guarantees arising as a result of customary indemnification obligations to purchasers that are not Affiliates of a Loan Party in connection with any Permitted Transfers;

(h) Indebtedness incurred in the ordinary course of business under (A) appeal bonds or similar instruments, (B) surety bonds, payment bonds, performance bonds, bid bonds, completion guarantees and similar obligations, workers' compensation claims, health, disability or other employee benefits, and bankers acceptances issued for the account of any Loan Party or its Subsidiaries and unsecured guarantees thereof and (C) company credit cards and other treasury management services in an aggregate amount not to exceed \$250,000 outstanding at any time;

(i) Indebtedness incurred to finance the acquisition, construction or improvement of any fixed or capital assets, including capital lease obligations and any Indebtedness assumed in connection with the acquisition of such assets or secured by a Lien on any such assets prior to the acquisition thereof; provided that (x) any such Indebtedness is incurred prior to or within 90 days after such acquisition or the completion of such construction or improvement and (y) the aggregate outstanding principal amount of Indebtedness permitted by this clause (i) shall not, without duplication, exceed \$500,000 at any time; and

(j) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness described in clauses (b) through (i) above; provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or any of its Subsidiaries, as the case may be;

(k) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds in the ordinary course of business, so long as such Indebtedness is extinguished within three (3) Business Days of the earlier of its incurrence and Borrower becoming aware thereof; and

(l) additional unsecured Indebtedness in an aggregate principal amount not to exceed \$250,000 at any one time outstanding.

“Permitted Investments” means:

(a) Investments (including, without limitation, Subsidiaries) existing on the Closing Date and shown on the Perfection Certificate;

(b) (i) Investments consisting of cash and Cash Equivalents, and (ii) any Investments permitted by Borrower's investment policy, as amended from time to time; provided that such investment policy (and any such amendment thereto) has been approved in writing by Agent;

(c) Investments consisting of repurchases of Borrower's Equity Interests from former employees, officers and directors of Borrower to the extent permitted under Section 7.7;

(d) Investments (i) among Loan Parties, (ii) in a Loan Party; provided that any Indebtedness of Loan Party owing to a Subsidiary that is not a Loan Party shall be subordinated to the Obligations on terms reasonably satisfactory to Agent, (iii) by a Loan Party in a Subsidiary which is not a Loan Party; provided that the aggregate amount of such Investments shall not exceed Six Hundred Thousand Dollars (\$600,000) in the aggregate over the term of the Agreement and (iv) by a Subsidiary that is not a Loan Party in any other Subsidiary that is not a Loan Party;

(e) payroll, commission, travel and other similar cash advances made to directors (or comparable Persons), officers or employees in the ordinary course of business;

(f) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the Ordinary Course of Business;

(g) Investments consisting of Deposit Accounts maintained in compliance with Section 6.6;

(h) Investments consisting of accounts receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the Ordinary Course of Business; provided that this clause (h) shall not apply to Investments of a Loan Party in any Subsidiary; and

(i) to the extent constituting Investments, amounts deposited as “security deposits” (or their equivalent) in the ordinary course of business in connection with actions or transactions not prohibited by this Agreement;

(j) as long as no Default shall have occurred and be continuing or would immediately result therefrom, other Investments by the Borrower and its Subsidiaries in an aggregate amount not to exceed \$250,000 at any time outstanding; and

(k) to the extent constituting Investments, Transfers pursuant to clause (i) of the definition of Permitted Transfers.

“**Permitted Liens**” means:

(a) Liens arising under this Agreement and the other Loan Documents;

(b) Liens existing on the Closing Date and shown on the Perfection Certificate; provided that (i) to the extent the amount of Indebtedness secured by such Lien is limited pursuant to a clause of this defined term, amounts existing on the Closing Date or any permitted refinancing thereof shall count towards such limit, (ii) to the extent the Indebtedness secured by such a Lien is required to be repaid on the Closing Date, in accordance with a payoff letter delivered as a condition to closing, such Lien shall not constitute Permitted Lien after the repayment of the associated Indebtedness, and (iii) to the extent any such Lien is required to be made subject to the terms of a Subordination Agreement as of the Closing Date or thereafter, pursuant to the terms of this Agreement, such Lien shall be permitted only to the extent the applicable Subordination Agreement is in effect;

(c) Liens in favor of other financial institutions arising in connection with a Deposit Account or Securities Account of a Loan Party or Subsidiary thereof held at such institutions; provided that Agent has a perfected security interest in such Deposit Account, or the securities maintained therein and Agent has received an Account Control Agreement with respect thereto to the extent required pursuant to Section 6.6 of this Agreement;

(d) Liens securing the Revolving Facility;

(e) any Lien on fixed or capital assets acquired, constructed or improved by the Borrower or any Subsidiary; provided that (i) such Lien secures Indebtedness permitted by clause (i) of the definition of “Permitted Indebtedness”, (ii) such Lien and the Indebtedness secured thereby are incurred prior to or within 90 days after such acquisition or the completion of such construction or improvement, (iii) the Indebtedness secured thereby does not exceed the cost of acquiring, constructing or improving such fixed or capital assets and (iv) such Lien shall not apply to any other property or assets of the Borrower or any Subsidiary;

(f) Liens on cash deposits intended as cash collateral securing Indebtedness permitted pursuant to clause (h)(C) of the definition of Permitted Indebtedness not to exceed \$100,000 in the aggregate; and

(g) Permitted Encumbrances.

“**Permitted Locations**” means, collectively, the following locations where Collateral may be located from time to time: (a) locations identified in the Perfection Certificate, (b) locations with respect to which Borrower have complied with the requirements of Section 6.12, and (c) the Excluded Locations.

“**Permitted Restricted Payments**” means:

(a) any Subsidiary of the Borrower may declare and pay dividends or other distributions with respect to its Equity Interests to the Borrower or any Subsidiary;

(b) cashless repurchases of common stock of the Borrower deemed to occur upon exercise of stock options or warrants if such common stock represents a portion of the exercise price of such options or warrants; and

(c) cash payments in lieu of the issuance of fractional shares in connection with conversion of any convertible securities.

“**Permitted Transfers**” means

- (a) sales of Inventory by a Loan Party or any of its Subsidiaries in the Ordinary Course of Business;
- (b) dispositions of worn-out, obsolete or surplus Equipment in the Ordinary Course of Business that is, in the reasonable judgment of such Loan Party or Subsidiary, no longer economically practicable to maintain or useful;
- (c) Transfers consisting of the granting of Permitted Liens and the making of Permitted Investments;
- (d) the use or transfer of money or Cash Equivalents in the Ordinary Course of Business for the payment of ordinary course business expenses in a manner that is not prohibited by the Loan Documents;
- (e) (i) the abandonment, cancellation or lapse of issued patents, registered trademarks and other registered intellectual property of a Loan Party or Subsidiary thereof to the extent, in such Loan Party's reasonable business judgment, not economically desirable in the conduct of such Loan Party's business or so long as such lapse is not materially adverse to the interests of the Lenders and (ii) the expiration of patents in accordance with their statutory terms;
- (f) the licensing and sublicensing on a non-exclusive basis of patents, trademarks, copyrights and other intellectual property rights in the ordinary course of business and the leasing and subleasing of any other property;
- (g) any trade in of equipment in exchange of other equipment of substantially similar value in the ordinary course of business;
- (h) other dispositions (other than of (i) Equity Interests of any Subsidiary or (ii) material Intellectual Property) for at least fair market value so long as (i) no Default then exists or would immediately result therefrom, (ii) at least 75% of the consideration for such disposition consists of cash or Cash Equivalents and is paid at the time of the closing of the sale, and (iii) the aggregate amount of the cash and non-cash proceeds received from all assets sold pursuant to this clause (h) shall not exceed \$250,000 in the aggregate during the term of this Agreement (for this purpose using the fair market value of property other than cash and Cash Equivalents); and
- (i) [***].

“**Person**” means any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

“**Pledge Agreement**” means that certain Pledge Agreement, dated as of the Closing Date, by and among the Loan Parties and the Agent, as amended, restated, supplemented or otherwise modified from time to time.

“**Prepayment Fee**” means, with respect to any prepayment of the Loans prior to the Term Loan Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to the Lenders in amount equal to:

- (a) for a prepayment made on or after the Closing Date through and including the first anniversary of the Closing Date, 3.00% of the principal amount of such Loan prepaid;
- (b) for a prepayment made after the first anniversary of the Closing Date, through and including the second anniversary of the Closing Date, 2.00% of the principal amount of the Loans prepaid;
- (c) for a prepayment made after the second anniversary of the Closing Date, through and including the third anniversary of the Closing Date, 1.00% of the principal amount of the Loans prepaid; and
- (d) for a prepayment made after the third anniversary of the Closing Date, including any repayment on the Term Loan Maturity Date, 0.00% of the principal amount of the Loans prepaid.

“**Prime Rate**” means, for any day of determination, the per annum interest rate published in the money rates section of the Wall Street Journal (or any successor publication thereto) as the US “prime rate” as adjusted and in effect from time to time.

“**Pro Rata Share**” means, with respect to any Lender and as of any date of determination, the percentage obtained by dividing (i) the aggregate Commitments of such Lender by (ii) the aggregate Commitments of all Lenders; provided that, to the extent any Commitment has expired or been terminated, with respect to such Commitment, the applicable outstanding balance of the Loans made pursuant to such Commitment held by such Lender and all Lenders, respectively, shall be used in lieu of the amount of such Commitment; provided, further, that with respect to all matters relating to a particular Loan, the Commitment or outstanding balance of the applicable Loan, shall be used in lieu of the aggregate Commitment or outstanding balance of all Loans in the foregoing calculation. “Ratable” and related terms shall mean, determined by reference to such Lender’s Pro Rata Share.

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“**Recipient**” means (a) Agent, or (b) any Lender.

“**Register**” has the meaning set forth in Section 12.2(i).

“**Registered Organization**” means any “registered organization” as defined in the Code with such additions to such term as may hereafter be made.

“**Required Lenders**” means (i) for so long as all of the Persons that are Lenders on the Closing Date (each an “**Original Lender**”) have not assigned or transferred any of their interests in their Term Loans, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loans, Lenders holding at least fifty percent (50%) of the aggregate outstanding principal balance of the Term Loans and, in respect of this clause (ii), (A) each Original Lender that has not assigned or transferred any portion of its Term Loans, and (B) each assignee or transferee of an Original Lender’s interest in the Term Loans, but only to the extent that such assignee or transferee is an Affiliate or Approved Fund of such Original Lender.

“**Requirement of Law**” means as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

“**Responsible Officer**” means with respect to any Person, any of the Chief Executive Officer, President or Chief Financial Officer of such Person. Unless the context otherwise requires, each reference to a Responsible Officer herein shall be a reference to a Responsible Officer of Borrower.

“**Restricted License**” means any material in-bound license or other similar material agreement (other than ordinary course customer contracts, off the shelf software licenses, licenses that are commercially available to the public, and open source licenses) to which a Loan Party or Subsidiary is a party (a) that prohibits or otherwise restricts such Loan Party or Subsidiary from granting a security interest in its interest in such license or agreement or in any other property, or (b) for which a default under, or termination of which, could reasonably be expected to interfere with Agent’s right to sell any Collateral.

“**Revolving Facility**” means a revolving credit facility entered into after the Closing Date which is on terms and conditions acceptable to the Agent in its sole discretion and which may be secured by a first priority claim on collateral consisting of accounts receivable and inventory, subject to an intercreditor agreement satisfactory to the Agent in its sole discretion.

“**Securities Account**” means any “**securities account**” as defined in the Code with such additions to such term as may hereafter be made.

“**Security Instrument**” means any security agreement, assignment, pledge agreement, financing or other similar statement or notice, continuation statement, other agreement or instrument, or any amendment or supplement to any thereof, creating, governing or providing for, evidencing or perfecting any security interest or Lien.

“**Shares**” means all of the issued and outstanding Equity Interests owned or held of record by a Loan Party or other Loan Party.

“**Subordinated Debt**” means Indebtedness incurred by a Loan Party that is subordinated in writing to all of the Obligations, pursuant to a Subordination Agreement.

“**Subordination Agreement**” means any subordination agreement in form and substance satisfactory to Agent in its sole discretion entered into from time to time with respect to Subordinated Debt.

“**Subsidiary**” means, with respect to any Person, any corporation, partnership, limited liability company or joint venture in which (i) any general partnership interest or (ii) more than fifty percent (50%) of the stock, limited liability company interest, joint venture interest or other Equity Interest which by the terms thereof has the ordinary voting power to elect the Board of that Person, at the time as of which any determination is being made, is owned or controlled by such Person, directly or indirectly. Unless the context otherwise requires, each reference to a Subsidiary herein shall be a reference to a Subsidiary of Borrower.

“**Taxes**” means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

“**Term A Loan**” is defined in Section 2.2(a)(i) hereof.

“**Term A Loan Commitment**” means as to any Lender, the aggregate principal amount of Term A Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

“**Term B Loan**” is defined in Section 2.2(a)(ii) hereof.

“**Term B Loan Commitment**” means as to any Lender, the aggregate principal amount of Term B Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

“**Term C Loan**” is defined in Section 2.2(a)(iii) hereof.

“**Term C Loan Commitment**” means as to any Lender, the aggregate principal amount of Term C Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

“**Term Loan**” is defined in Section 2.2(a)(iii) hereof.

“**Term Loan Commitment**” means as to any Lender, the aggregate principal amount of Term Loans committed to be made by such Lender, as set forth on Schedule 1 hereto. “**Term Loan Commitments**” means the aggregate amount of such commitments of all Lenders.

“**Term Loan Maturity Date**” means December 31, 2029; provided that if the Extension Milestone is satisfied then the Term Loan Maturity Date shall be extended to December 31, 2030.

“**Trademarks**” means any trademark and servicemark rights of a Person, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business connected with and symbolized by such trademarks.

“**Transfer**” means defined in Section 7.1.

“**U.S. Tax Compliance Certificate**” has the meaning specified in Section 2.5(c)(iii)(y)(B)(3).

“**Warrants**” means, collectively, each Warrant to Purchase Common Stock dated as of the Closing Date executed by Borrower in favor of Lender and each participant in the Loans as of the Closing Date, as amended, modified, supplemented, extended or restated from time to time.

EXHIBIT B

COLLATERAL DESCRIPTION

The Collateral consists of all of each Loan Party's right, title and interest in and to the following personal property wherever located, whether now owned or existing or hereafter acquired, created or arising:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (including all Intellectual Property), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and all such Loan Party's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds (both cash and non-cash) and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral shall exclude all of the following (the "**Excluded Assets**"):

- (a) Margin Stock, including any Margin Stock held through a Securities Account;
 - (b) solely to the extent that a pledge hereunder could reasonably be expected to result in a material adverse tax consequence to the holder of any applicable Equity Interests, Equity Interests in any Foreign Subsidiary in excess of 65% of the voting Equity Interests therein;
 - (c) motor vehicles and other assets subject to certificates of title or ownership to the extent a security interest therein cannot be perfected by a filing of a financing statement;
 - (d) any United States intent-to-use trademark application prior to the filing of a "Statement of Use" or "Amendment to Allege Use" with respect thereto;
 - (e) any contract, instrument, document, lease, license or other agreement to which a Grantor or any of its property is subject with any Person if, to the extent and for so long as the grant of a lien thereon constitutes a breach of or a default under, or creates a right of termination in favor of any party (other than such Grantor) to, such contract, instrument, document, lease, license or other agreement (but only to the extent any such prohibition on the granting of liens is not rendered ineffective by, or is otherwise unenforceable under, the Uniform Commercial Code or applicable law); and
 - (f) any assets as to which the Administrative Agent shall have notified the Loan Parties in writing that the Administrative Agent determined in its reasonable discretion that the costs, burden, difficulty or consequence (including, without limitation, a material and adverse effect on the ability of the Borrower and its Subsidiaries to conduct their operations and business in the ordinary course) of obtaining a security interest in the same are excessive in relation to the benefit to the Agent and Lenders of the security intended to be afforded thereby.
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Harvard Bioscience Announces the Successful Completion of Debt Refinancing with Comprehensive Growth Financing Package

- *Completes Repayment of Existing Credit Agreement, Extends Debt Maturity, and Enhances Financial Flexibility*
- *BroadOak Partner Bill Snider to Join Board of Directors and Company to Form Advisory Board on Growth and Operating Opportunities*

HOLLISTON, Mass., December 17, 2025 (GLOBE NEWSWIRE) – Harvard Bioscience, Inc. (Nasdaq: HBIO) (the “Company” or “Harvard Bioscience”), today announced it entered into an agreement with BroadOak Capital Partners (collectively, “BroadOak”), a life-sciences-focused investment and advisory firm, to provide a \$40 million credit facility comprised of three term loans, all of which will be funded on December 17, 2025. The proceeds of the facility will be used to retire the Company’s existing debt obligations and associated fees, and strengthen its balance sheet and capital structure.

Comprehensive Growth Financing Package

Term Loan A and Term Loan B are senior secured term loans providing aggregate gross proceeds of \$32.5 million. Term Loan C is a \$7.5 million senior secured term loan convertible into shares of the Company’s common stock at \$1.00 per share at BroadOak’s option or automatically upon the satisfaction of certain conditions while the loans remain outstanding. All three loans mature on December 17, 2029 (the “Maturity Date”). Commencing December 31, 2027 (the “Amortization Date”), the Company is required to make quarterly principal amortization payments on the Term A Loan and Term B Loan. The Amortization Date and Maturity Date may be extended by one year if the Company achieves a certain adjusted EBITDA milestone. In connection with the transaction, BroadOak received warrants to purchase an aggregate of 2 million shares of the Company’s common stock at a price per share of \$0.50 and the right to nominate one member to the Company’s board of directors while the loans remain outstanding.

“This financing package meets our objectives and is an important milestone for Harvard Bioscience that provides us with the stability and flexibility we need moving forward,” said John Duke, CEO of Harvard Bioscience. “We appreciate the confidence and partnership of BroadOak and thank them for their support throughout this process. By successfully refinancing our near-term debt obligations and enhancing our liquidity profile we are positioned well to execute our strategic priorities and drive long-term value.”

Board of Directors Update and Advisory Board

Pursuant to BroadOak's director nomination right, effective December 17, 2025, Bill Snider, Partner at BroadOak, joined the Company's board of directors as a member of Class III of the board and as a member of the compensation committee. Mr. Snider leads BroadOak's growth capital investing activities and has more than 30 years of institutional investment experience as well as extensive expertise in life science tools. Prior to BroadOak, he was a general partner and co-founder of Emerging Technology Partners, LLC ("ETP"), a life science focused venture capital firm. Prior to ETP, he was a vice president and portfolio manager at T. Rowe Price. Mr. Snider has been a director of many life sciences research tools companies and is actively involved in the investment community.

The Company will also establish a Product, Operations, and Scientific Advisory Board that will consist of the Chief Executive Officer, two individuals appointed by the Company's board of directors and two individuals appointed by BroadOak, to advise on commercial and application opportunities, product line planning and life cycle management, manufacturing, supply chain and procurement, and opportunities to enhance commercial performance.

"I have known Harvard Bioscience for many years and believe that with this financing and the recent organizational improvements, it is stronger than ever," said Bill Snider, Partner at BroadOak. "In addition, the Company's preclinical and translational research platforms are well positioned regarding the new approach methodologies roadmaps being implemented by FDA and other regulators. I am excited to be joining the board and look forward to partnering with and supporting the team as they establish a leadership position in these emerging initiatives."

"We heartily welcome Bill Snider to Harvard Bioscience's board of directors," said Katherine Eade, Lead Independent Director. "Bill's invaluable experience and expertise and his confidence in the Company strengthen us and our resolve to drive significant value creation for Harvard Bioscience's shareholders."

Guggenheim Securities served as lead financial advisor to Harvard Bioscience in connection with the transaction. Covington & Burling LLP acted as legal advisor to Harvard Bioscience, and Cooley LLP acted as legal advisor to BroadOak.

The Company has also filed a Current Report on Form 8-K with the U.S. Securities and Exchange Commission containing additional details regarding the final terms of the transaction.

About Harvard Bioscience

Harvard Bioscience, Inc. is a leading developer, manufacturer and seller of technologies, products and services that enable fundamental advances in life science applications, including research, drug and therapy discovery, bio-production and preclinical testing for pharmaceutical and therapy development. Our customers range from renowned academic institutions and government laboratories to the world's leading pharmaceutical, biotechnology and contract research organizations. With operations in the United States, Europe, and China, we sell through a combination of direct and distribution channels to customers around the world.

For more information, please visit our website at www.harvardbioscience.com.

About BroadOak Capital Partners

BroadOak Capital Partners is a life-sciences-focused boutique financial institution providing direct investment and investment banking services to companies in research tools and consumables, diagnostics, and biopharma services. BroadOak has completed over 75 investments and has advised on more than 50 M&A transactions. In October 2025, the firm added over \$200 million of permanent capital to further supplement its investment platform.

Forward-Looking Statements

This document contains forward-looking statements within the meaning of the federal securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as “may,” “will,” “expect,” “plan,” “anticipate,” “estimate,” “intend,” “believe” and similar expressions or statements that do not relate to historical matters. Forward-looking statements include, but are not limited to, statements concerning the sustainability of the Company’s capital structure, its lower near-term refinancing risk and path toward long-term deleveraging, expected future financial and operational performance, the strength of the Company’s market position, business model and anticipated macroeconomic conditions, and matters relating to our ability to continue as a going concern, fund our operations, or comply with the terms of our credit agreement. Forward-looking statements do not guarantee future performance and involve known and unknown uncertainties, risks, assumptions, and contingencies, many of which are outside the Company’s control. Risks and other factors that could cause the Company’s actual results to differ materially from those described in its forward-looking statements include those described in the “Risk Factors” section of the Company’s most recently filed Annual Report on Form 10-K and the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2025 as filed with the Securities and Exchange Commission (“SEC”), as well as in the Company’s other filings with the SEC. Forward-looking statements are based on the Company’s expectations and assumptions as of the date of this document. Except as required by law, the Company assumes no obligation to update forward-looking statements to reflect any change in expectations, even as new information becomes available.

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