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

FORM 8-K

**CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Date of report (Date of earliest event reported): August 22, 2016

GALENA BIOPHARMA, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

001-33958
(Commission
File Number)

20-8099512
(I.R.S. Employer
Identification No.)

2000 Crow Canyon Place, Suite 380,
San Ramon, CA 94583

(Address of Principal Executive
Offices) (Zip Code)

Registrant's telephone number, including area code: (855) 855-4253

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

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01 Entry Into A Material Definitive Agreement

On May 10, 2016, Galena Biopharma, Inc. (the “Company”) and JGB (Cayman) Newton Ltd. (the “Purchaser”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) pursuant to which the Company sold and issued to the Purchaser, at a 6.375% original issue discount, a 9% Senior Secured Debenture due November 10, 2018 and having a principal face amount of \$25,300,000 (the “Original Debenture”), and warrants to purchase up to 2,000,000 shares of the Company’s common stock (the “Warrants”). A summary of the terms and conditions of the Purchase Agreement, the Debenture and the Warrants was set forth Under Item 5 of Part II of the Company’s Quarterly Report on Form 10-Q for the period ended March 31, 2016, as filed with the Commission on May 10, 2016, which summary is incorporated by reference herein. On August 22, 2016, the Company, the Purchaser and certain other parties entered into an Amendment Agreement (the “Amendment Agreement”), which provides for the amendment and restatement of the Original Debenture, an amendment to the terms of the Series A Common Stock Purchase Warrant issued by the Company to the Purchaser pursuant to the terms of the Purchase Agreement, and certain other terms and conditions, as summarized below.

Amended & Restated Debenture

The Original Debenture issued to the Purchaser was amended and restated in its entirety on August 22, 2016, pursuant to the Amendment Agreement (the “Amended Debenture”). Among other items, the Amended Debenture contains the following modified and/or additional terms from the Original Debenture:

- With respect to interest accruing on the outstanding principal amount under the Debenture for the period prior to November 10, 2016, the Company is permitted to satisfy such interest payments in kind by adding such amount to the outstanding principal.
 - The Purchaser can from time to time during the term of the Amended Debenture require the Company to prepay in cash all or a portion of the outstanding principal plus accrued and unpaid interest (the “Outstanding Amount”) on written notice to the Company, provided, that such prepayment amount shall not exceed the lesser of \$18,500,000 and the Outstanding Amount. In addition, the Company shall have the right to prepay in cash all (but not less than all) of the Outstanding Amount (1) at any time after November 10, 2017, or (2) upon a “change of control” (as such term is used in the Amended Debenture), in each case with a 10% premium on the Outstanding Amount.
 - The Purchaser shall continue to have the right under the Original Debenture, commencing November 10, 2016, to require the Company to redeem the Outstanding Amount in cash, shares of the Company’s common stock or a combination thereof, except that the maximum monthly amount of such redemptions was increased from \$1,100,000 to \$1,500,000 under the Amended Debenture; provided, that if the trading price of the Company’s common stock is at least \$0.40 per share (as adjusted appropriately for stock splits, combinations or similar events) during such calendar month, then such monthly maximum redemption amount may be increased to \$2,200,000 at the Purchaser’s election and if the Company has already elected to satisfy such redemptions in shares of common stock. In addition, notwithstanding the foregoing limitations on the monthly redemption amount, the Purchaser may elect up to three times in any 12-month period to increase the monthly maximum to \$2,500,000.
 - Among the various conditions that must be satisfied in order for the Company to be able to elect to satisfy the monthly redemption amounts in shares of its common stock, the minimum volume-weighted average price of the common stock was decreased from \$0.75 to \$0.20 per share in the Amended Debenture.
 - The Amended Debenture provides that, following November 10, 2016, the Purchaser may elect to convert any portion of the Outstanding Amount into shares of common stock at a fixed price of \$0.60 per share (as adjusted appropriately for stock splits, combinations or similar events).
 - Under the Original Debenture, the Company was required to maintain a minimum of \$24,000,000 of unencumbered cash in a restricted account as security for its obligations under the Debenture. Under the Amended Debenture, such minimum amount has been reduced to the lesser of \$18,500,000 or the Outstanding Amount.
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Other Terms of Amendment Agreement

Pursuant to the Purchase Agreement, on May 10, 2016, the Company issued to the Purchaser a Series A Common Stock Purchase Warrant (the "Series A Warrant") to purchase 1,000,000 shares of the Company's common stock at a price of \$1.51 per share. In accordance with the terms of the Amendment Agreement, the exercise price of the warrant was reduced to \$0.43 per share (as adjusted appropriately for stock splits, combinations or similar events). In accordance with the listing rules of the NASDAQ Capital Market, the Debenture continues to provide that the maximum number of shares common stock that the Company is permitted to issue pursuant to the Debenture is 36,185,586 shares, which amount represented approximately 19.9% of the Company's outstanding common stock on May 10, 2016. However, the Company has agreed to seek stockholder approval to exceed such limitation in accordance with applicable NASDAQ rules.

The foregoing descriptions of the Amendment Agreement and the Amended Debenture do not purport to be complete and are qualified in their entireties by reference to the full text of the forms of Amendment Agreement and Amended Debenture, which are filed as Exhibit 10.1 and Exhibit 4.1, respectively, to this Current Report on Form 8-K and incorporated herein by reference.

Item 2.03 Creation of a Direction Financial Obligation or an Obligation Under an Off-Balance-Sheet Arrangement of a Registrant

The disclosures set forth above under Item 1.01 are incorporated by reference.

Item 3.03 Material Modification to Rights of Security Holders.

The disclosures set forth above under Item 1.01 are incorporated by reference.

Item 9.01 Material Modification to Rights of Security Holders.

(d) Exhibits

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| 4.1 | Amended and Restated 9% Original Issue Discount Senior Secured Debenture Due November 10, 2018, issued to JGB (Cayman) Newton Ltd. as of August 22, 2016. |
| 10.1 | Amendment Agreement between Galena Biopharma, Inc. and JGB (Cayman) Newton Ltd. dated August 22, 2016. |

SIGNATURES

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

GALENA BIOPHARMA, INC.

Date: August 23, 2016

By: /s/ Mark W. Schwartz
Mark W. Schwartz Ph.D.
President and Chief Executive Officer

NEITHER THIS SECURITY NOR THE SECURITIES ISSUABLE HEREUNDER HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY AND THE SECURITIES ISSUABLE HEREUNDER MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN “ACCREDITED INVESTOR” AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT OR OTHER LOAN SECURED BY SUCH SECURITIES.

Original Issue Date: May 10, 2016

\$25,530,000

**AMENDED AND RESTATED
9% ORIGINAL ISSUE DISCOUNT
SENIOR SECURED DEBENTURE
DUE NOVEMBER 10, 2018**

THIS AMENDED AND RESTATED 9% ORIGINAL ISSUE DISCOUNT SENIOR SECURED DEBENTURE of Galena Biopharma, Inc., a Delaware corporation, (the “Company”), having its principal place of business at 2000 Crow Canyon Place, Suite 380, San Ramon, CA 94583 (this debenture, as amended, restated, supplemented or otherwise modified from time to time, the “Debenture”) is issued pursuant to the Purchase Agreement (as defined below). The date of this amendment and restatement is August 22, 2016.

FOR VALUE RECEIVED, the Company promises to pay in cash to JGB (Cayman) Newton Ltd., a Cayman Islands exempted company, or its registered assigns (the “Holder”), or shall have paid pursuant to the terms hereunder, the principal sum of Twenty Five Million Five Hundred Thirty Thousand Dollars (\$25,530,000) on November 10, 2018 (the “Maturity Date”) or such earlier date as this Debenture is required or permitted to be repaid as provided hereunder, and to pay interest to the Holder on the aggregate then outstanding principal amount of this Debenture in accordance with the provisions hereof. This Debenture is subject to the following additional provisions:

Section 1. Definitions. For the purposes hereof, in addition to the terms defined elsewhere in this Debenture, (a) capitalized terms not otherwise defined herein shall have the meanings set forth in the Purchase Agreement and (b) the following terms shall have the following meanings:

“ Account ” shall have the meaning set forth in Section 6(b).

“ Advance Date ” shall have the meaning set forth in Section 4(a)(i)(B).

“ Agent ” means JGB Collateral LLC, a Delaware limited liability company.

“ Applicable Interest Rate ” means an annual rate equal to nine percent (9%).

“ Bankruptcy Event ” means any of the following events: (a) the Company or any Significant Subsidiary (as such term is defined in Rule 1-02(w) of Regulation S-X) thereof commences a case or other proceeding under any bankruptcy, reorganization, arrangement, adjustment of debt, relief of debtors, dissolution, insolvency or liquidation or similar law of any jurisdiction relating to the Company or any Significant Subsidiary thereof, (b) there is commenced against the Company or any Significant Subsidiary thereof any such case or proceeding that is not dismissed within sixty (60) days after commencement, (c) the Company or any Significant Subsidiary thereof is adjudicated insolvent or bankrupt or any order of relief or other order approving any such case or proceeding is entered, (d) the Company or any Significant Subsidiary thereof suffers any appointment of any custodian or the like for it or any substantial part of its property that is not discharged or stayed within sixty (60) calendar days after such appointment, (e) the Company or any Significant Subsidiary thereof makes a general assignment for the benefit of creditors, (f) the Company or any Significant Subsidiary thereof calls a meeting of its creditors with a view to arranging a composition, adjustment or restructuring of its debts, (g) the Company or any Significant Subsidiary thereof, by any act or failure to act, expressly indicates its consent to, approval of or acquiescence in any of the foregoing or takes any corporate or other action for the purpose of effecting any of the foregoing, or (h) the Company or any Significant Subsidiary admits in writing its inability, or is otherwise unable, to pay its debts generally as they become due.

“ Beneficial Ownership Limitation ” shall have the meaning set forth in Section 4(h).

“ Bloomberg ” means Bloomberg, L.P.

“ Board of Directors ” means the board of directors of the Company.

“ Business Day ” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“ Buy-In ” shall have the meaning set forth in Section 4(e).

“ Cash Equivalents ” means the Investments described in clause (a) of the definition of “Permitted Investments.”

“ Cash On Hand ” means, with respect to the Company, at any time, the sum of (a) all cash and Cash Equivalents held in the Account plus (b) all other cash and Cash Equivalents

held by the Company and its Subsidiaries on a consolidated basis, provided that such cash and Cash Equivalents are not subject to any encumbrance or restriction of any kind.

“ Change of Control Transaction ” means the occurrence after the date hereof of any of (a) an acquisition after the date hereof by an individual or legal entity or “group” (as described in Rule 13d-5(b)(1) promulgated under the Exchange Act) of effective control (whether through legal or beneficial ownership of capital stock of the Company, by contract or otherwise) of in excess of fifty percent (50%) of the voting securities of the Company, (b) the Company merges into or consolidates with any other Person, or any Person merges into or consolidates with the Company and, after giving effect to such transaction, the stockholders of the Company immediately prior to such transaction own less than fifty percent (50%) of the aggregate voting power of the Company or the successor entity of such transaction, (c) the Company sells or transfers all or substantially all of its assets to another Person and the stockholders of the Company immediately prior to such transaction own less than fifty percent (50%) of the aggregate voting power of the acquiring entity immediately after the transaction, (d) a replacement at one time or within a three (3) year period of more than one-half of the members of the Board of Directors which is not approved by a majority of those individuals who are members of the Board of Directors on the Original Issue Date (or by those individuals who are serving as members of the Board of Directors on any date whose nomination to the Board of Directors was approved by a majority of the members of the Board of Directors who are members on the date hereof), or (e) the execution by the Company of an agreement to which the Company is a party or by which it is bound, providing for any of the events set forth in clauses (a) through (d) above.

“ Common Stock Equivalents ” means any securities of the Company or its Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“ Company Force Amount ” shall have the meaning set forth in Section 4(a)(i)(B).

“ Company Force Right ” shall have the meaning set forth in Section 4(a)(i)(B).

“ Company Force Notice ” shall have the meaning set forth in Section 4(a)(i)(B).

“ Conversion Date ” shall have the meaning set forth in Section 4(b)(i).

“ Conversion Price ” shall have the meaning set forth in Section 4(b)(ii).

“ Conversion Share Delivery Date ” shall have the meaning set forth in Section 4(b)(iii).

“ Conversion Shares ” means, collectively, the shares of Common Stock issuable upon conversion of this Debenture pursuant to Section 4(b).

“Debenture Register” shall have the meaning set forth in Section 2(c).

“Default Rate” means the Applicable Interest Rate plus three and one-half (3.5) percentage points.

“Dispose” and “Disposition” means the sale, transfer, license, lease or other disposition (including any sale and leaseback transaction or by way of a merger) of any assets or property by any Person, including, without limitation, any sale, assignment, transfer or other disposal, with or without recourse, of any notes or accounts receivable or any rights and claims associated therewith, in each case, whether or not the consideration therefor consists of cash, securities or other assets owned by the acquiring Person, excluding any sales of inventory in the ordinary course of business on ordinary business terms. For the avoidance of doubt, in no event shall the issuance and/or sale of Equity Interests of the Company be considered a Disposition hereunder.

“Distribution” has the meaning set forth in Section 5(c).

“Dollar Volume Limitation” means fifteen percent (15%) of the aggregate dollar trading volume of the Common Stock on the Principal Market (or other applicable Trading Market) over the twenty (20) consecutive Trading Day period ending on the Trading Day immediately preceding the date of any Holder Redemption Notice or the commencement of any Interest Notice Period, as applicable. For the purposes of this definition the term “dollar trading volume” for any Trading Day shall be determined by multiplying the VWAP by the volume as reported on Bloomberg for such Trading Day.

“DTC” means the Depository Trust Company.

“Equity Conditions” means, during the period in question, (a) the Company shall have duly honored all conversions and redemptions scheduled to occur or occurring by virtue of one or more Conversion Notices or Holder Redemption Notices, as applicable (b) the Company shall have paid all liquidated damages and other amounts owing to the Holder in respect of this Debenture, (c) all of the Stock Payment Shares issued, issuable or required to be issued pursuant to the Transaction Documents may be resold pursuant to Rule 144 without volume or manner-of-sale restrictions as determined by the counsel to the Company as set forth in a written opinion letter to such effect, addressed and acceptable to the Transfer Agent and the Holder, provided, however, this condition shall not be deemed satisfied during (1) any period that the Company is not in compliance with the current public information requirements under Rule 144 or any information requirements of paragraph (i) of Rule 144 or (2) any Rule 12b-25 extension period with respect to any quarterly or annual report of the Company that is not filed by the prescribed due date for such quarterly or annual report (without giving effect to any extension period), (d) the Common Stock is trading on a Trading Market and all of the Stock Payment Shares issuable pursuant to the Transaction Documents are listed or quoted for trading on such Trading Market (and the Company believes, in good faith, that trading of the Common Stock on a Trading Market will continue uninterrupted for the foreseeable future) and the issuance of such Stock Payment Shares would not violate the rules and regulations of any such Trading Market, (e) there is a sufficient number of

authorized but unissued and otherwise unreserved shares of Common Stock for the issuance of all of the Stock Payment Shares then issuable pursuant to the Transaction Documents, (f) there is no existing Event of Default and no existing event which, with the expiration of cure period or the giving of notice, would constitute an Event of Default, (g) the issuance of the Stock Payment Shares in question to the Holder would not violate the limitations set forth in Section 4(h) or Section 4(i), (h) the applicable Holder is not in possession of any information provided by or on behalf of the Company that constitutes, or may constitute, material non-public information, (i) the VWAP of the Common Stock is at least \$0.20 per share (appropriately adjusted for any stock split, stock dividend, stock combination, stock buy-back or other similar transaction), and (j) the Common Stock is DTC eligible (and not subject to “chill”) and the Company’s transfer agent is participating in DTC’s Fast Automated Securities Transfer Program.

“Equity Conditions Failure” shall have the meaning set forth in Section 4(a)(iii).

“Equity Interests” means, with respect to any Person, all of the shares of capital stock of (or other ownership or profit interests in) such Person, all of the warrants, options or other rights for the purchase or acquisition from such Person of shares of capital stock of (or other ownership or profit interests in) such Person, all of the securities convertible into or exchangeable for shares of capital stock of (or other ownership 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 all of the other ownership 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.

“Event of Default” shall have the meaning set forth in Section 7(a).

“Excess Shares” shall have the meaning set forth in Section 4(a)(v)(B).

“Exchange Cap” shall have the meaning set forth in Section 4(i).

“Fundamental Transaction” means (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, exclusive license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any direct or indirect purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of fifty percent (50%) or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock (but, for the avoidance of doubt, excluding any transaction, event or occurrence covered by Section 5(a)) or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related

transactions consummates a stock or share 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 fifty percent (50%) of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination).

“ Holder Redemption Amount ” shall have the meaning set forth in Section 4(a)(i)(A).

“ Holder Redemption Notice ” shall have the meaning set forth in Section 4(a)(i)(A).

“ Holder Redemption Payment Date ” shall have the meaning set forth in Section 4(a)(i)(C).

“ Holder Redemption Right ” shall have the meaning set forth in Section 4(a)(i).

“ Indebtedness ” shall include (a) all obligations for borrowed money, (b) all obligations evidenced by bonds, debentures, notes, or other similar instruments and all reimbursement or other obligations in respect of letters of credit, bankers acceptances, current swap agreements, interest rate hedging agreements, interest rate swaps or other financial products, (c) all capital or equipment lease obligations, (d) all obligations or liabilities secured by a Lien (except for Liens described in clauses (a) and (b) of the definition of Permitted Liens) on any asset of the Company or any Subsidiary, irrespective of whether such obligation or liability is assumed by the Company or such Subsidiary, and (e) any obligation guaranteeing or intended to guarantee (whether directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse) any of the foregoing obligations of any other person or entity.

“ Interest Advance Shares ” shall have the meaning set forth in Section 2(a).

“ Interest Notice Period ” shall have the meaning set forth in Section 2(a).

“ Interest Payment Date ” shall have the meaning set forth in Section 2(a).

“ Interest Share Amount ” shall have the meaning set forth in Section 2(a).

“ Investments ” means, as to any Person, any direct or indirect acquisition or investment by such Person, whether by means of (a) the purchase or other acquisition (including by merger) of Equity Interests of another Person, (b) a loan, advance or capital contribution to, guarantee or assumption of debt of, or purchase or other acquisition of any other debt or interest in, another Person, or (c) the purchase or other acquisition (in one transaction or a series of transactions) of assets of another Person that constitute a business unit or all or a substantial part of the business of, such Person.

“ Late Fees ” shall have the meaning set forth in Section 2(d).

“ Mandatory Default Amount ” means one hundred three and one-half percent (103.5%) of the sum of (a) the outstanding principal amount of this Debenture and all accrued and unpaid interest thereon and (b) all other amounts, costs, expenses and liquidated damages due in respect of this Debenture.

“ Monthly Allowance ” means, with respect to each calendar month, a principal amount of this Debenture equal to one million five hundred thousand dollars (\$1,500,000) plus accrued and unpaid interest thereon; provided, however, if the sale price (including, for the avoidance of doubt, any intra-Trading Day sale price) of the Common Stock on the Principal Market on any Trading Day during such calendar month exceeds \$0.40 per share (appropriately adjusted for any stock split, stock dividend, stock combination, stock buy-back or other similar transaction) and this Debenture is Stock On, then the “ Monthly Allowance ” for such calendar month shall automatically be increased, without any further action of the parties, to a principal amount of this Debenture equal to two million two hundred thousand dollars (\$2,200,000) plus accrued and unpaid interest thereon. For the avoidance of doubt, neither the Holder nor the Company shall be required to give any written notice to the other for the increase in the Monthly Allowance required by the proviso to the immediately preceding sentence to take effect. For the further avoidance of doubt, (a) no reduction in the outstanding principal amount of this Debenture (as a result of conversion, redemption or otherwise) shall reduce or otherwise have any effect on the amount of the Monthly Allowance, which shall remain unchanged regardless of any such reduction in the outstanding principal amount of this Debenture, and (b) the Monthly Allowance shall never be greater than the outstanding principal balance of this Debenture.

“ Monthly Redemption Advance Shares ” shall have the meaning set forth in Section 4(a)(i)(B).

“ Monthly Redemption Commencement Date ” shall have the meaning set forth in Section 4(a)(i).

“ New York Courts ” shall have the meaning set forth in Section 8(d).

“ Notice of Conversion ” shall have the meaning set forth in Section 4(b)(i).

“ Original Issue Date ” means May 10, 2016, regardless of any transfers of the Debenture or amendments to the Debenture and regardless of the number of instruments which may be issued to evidence the Debenture.

“ Permitted Disposition ” means (a) any Disposition of assets to a third party that is not an Affiliate of the Company in an arm’s length transaction or (b) Dispositions in connection with Strategic Transaction, subject to Section 6(e).

“ Permitted Indebtedness ” means (a) the indebtedness evidenced by this Debenture, (b) lease obligations and purchase money indebtedness of up to \$250,000, in the aggregate, incurred in connection with the acquisition of capital assets and lease obligations with respect to newly acquired or leased assets, and (c) Subordinated Indebtedness.

“ Permitted Investment ” means: (a) (i) U.S. Treasury bills, notes, and bonds maturing within one (1) year from the date of acquisition thereof, (ii) U.S. agency and government-sponsored entity debt obligations maturing within one (1) year from the date of acquisition thereof, and (iii) Commission-registered money market funds that have a minimum of one billion dollars (\$1,000,000,000) in assets, (b) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions and advances, to customers, suppliers, contract manufacturers, and/or licensors who are not Affiliates, in the ordinary course of business, provided that this subparagraph (b) shall not apply to Investments of the Company in any Subsidiary; (c) Investments consisting of travel advances in the ordinary course of business; (d) Investments in newly-formed Subsidiaries, provided that each such Subsidiary promptly executes a joinder to the Subsidiary Guaranty and Security Agreement; (e) Investments in connection with Strategic Transactions, subject to Section 6(e); (f) any Investment in a Person that is primarily engaged in a Similar Business if as a result of such Investment (i) such Person becomes a Subsidiary of the Company and promptly executes a joinder to the Subsidiary Guaranty and Security Agreement, or (ii) such Person, in one transaction or a series of related transactions, is merged, consolidated or amalgamated with or into, or transfers or conveys all or a portion of its assets to, or is liquidated into, the Company or a Guarantor, and (g) additional Investments that do not exceed Two Hundred Fifty Thousand Dollars (\$250,000) in the aggregate.

“ Permitted Lien ” means the individual and collective reference to the following: (a) Liens for taxes, assessments and other governmental charges or levies not yet due or Liens for taxes, assessments and other governmental charges or levies being contested in good faith and by appropriate proceedings for which adequate reserves (in the good faith judgment of the management of the Company) have been established in accordance with GAAP, (b) Liens imposed by law which were incurred in the ordinary course of the Company’s business, such as carriers’, warehousemen’s and mechanics’ Liens, statutory landlords’ Liens, and other similar Liens arising in the ordinary course of the Company’s business, and which (x) do not individually or in the aggregate materially detract from the value of the property or assets subject to such Lien or materially impair the use thereof in the operation of the business of the Company and its consolidated Subsidiaries or (y) are being contested in good faith by appropriate proceedings, which proceedings have the effect of preventing for the foreseeable future the forfeiture or sale of the property or asset subject to such Lien, (c) Liens in favor of the Agent, (d) Liens in respect of Subordinated Indebtedness, provided that such Liens are expressly subordinated to the security interest of the Holder pursuant to a written subordination and inter-creditor agreement satisfactory to the Holder, and (e) Liens for reasonable and customary banking fees granted to banks or other financial institutions in the ordinary course of business in connection with, and which solely encumber, deposit, disbursement or concentration accounts (other than in connection with borrowed money) maintained with such banks or financial institutions that do not exceed fifty thousand dollars (\$50,000) in the aggregate; provided that there shall be no Liens (including any Permitted Lien) on the Account other than the Liens of the Agent.

“ PIK ” shall have the meaning set forth in Section 2(a) .

“ PIK Amount ” shall have the meaning set forth in Section 2(a) .

“ Prepayment Amount ” shall have the meaning set forth in Section 2(e) .

“ Prepayment Date ” shall have the meaning set forth in Section 2(e) .

“ Prepayment Notice ” shall have the meaning set forth in Section 2(e) .

“ Principal Market ” means the Nasdaq Capital Market or such other Trading Market where the Common Stock is then listed or quoted.

“ Purchase Agreement ” means the Securities Purchase Agreement, dated as of May 10, 2016, among the Company and the original Holder, as amended, modified or supplemented from time to time in accordance with its terms.

“ Purchase Rights ” has the meaning set forth in Section 5(b) .

“ Securities Account Control Agreement ” means the securities account control agreement, dated May 10, 2016, by and among the Holder, the Company, U.S. Bank, N.A., and SVB Asset Management.

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

“ Similar Business ” means any business engaged in by the Company or any of its Subsidiaries on the Original Issue Date and any business or other activities that are reasonably similar, ancillary, complementary or related to, or a reasonable extension, development or expansion of, the businesses in which the Company and its Subsidiaries are engaged on the Original Issue Date.

“ Special Interest Payment ” shall have the meaning set forth in Section 2(a) .

“ Stock Off ” shall have the meaning set forth in Section 4(a)(ii) .

“ Stock Off Notice ” shall have the meaning set forth in Section 4(a)(iv) .

“ Stock On ” shall have the meaning set forth in Section 4(a)(ii) .

“ Stock On Effective Date ” shall have the meaning set forth in Section 4(a)(ii) .

“ Stock On Notice ” shall have the meaning set forth in Section 4(a)(ii) .

“ Stock Payment Price ” means the lower of (a) ninety two and one-half percent (92.5%) of the VWAP for the Trading Day immediately prior to, as the case may be, the applicable Interest Payment Date, the applicable Advance Date or, with respect to any redemption pursuant to Section 6(a) , the date of the applicable Holder Redemption Notice and (b) ninety two and one-half percent (92.5%) of the average of the three (3) lowest VWAPs

during the twenty (20) consecutive Trading Day period immediately preceding, as the case may be, the applicable Interest Payment Date, the applicable Advance Date or, with respect to any redemption pursuant to Section 6(a), the date of the applicable Holder Redemption Notice.

“Stock Payment Shares” means any shares of Common Stock (other than Conversion Shares) issued to the Holder in satisfaction of any principal or interest due and payable to the Holder under this Debenture, including, pursuant to Section 2 and/or Section 4 hereof.

“Strategic Transaction” shall mean a bona fide joint venture, partnering agreement, collaboration or strategic alliance or relationship involving the licensing of the Company’s technology or products for the purpose of the further development, commercialization or distribution of such technology or any Company product, in each case entered into on an arm’s length basis with any Person not an Affiliate of the Company. For the avoidance of doubt, a Strategic Transaction shall not include any transaction the terms of which provide for a sale or assignment (other than by license) of any Intellectual Property Rights relating to any Company technology or products.

“Subordinated Indebtedness” means Indebtedness that is expressly subordinated to the Indebtedness to the Holder pursuant to a written subordination and inter-creditor agreement satisfactory to the Holder in its sole discretion.

“Successor Entity” shall have the meaning set forth in Section 5.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the OTC Bulletin Board, the OTCQX operated by the OTC Markets Group, Inc. or the Principal Market (or any successors to any of the foregoing).

“Voluntary Stock Off Effective Date” shall have the meaning set forth in Section 4(a)(iv).

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (local time in New York City, New York) to 4:00 p.m. (local time in New York City, New York)), (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser

selected in good faith by the and reasonably acceptable to the Company, the reasonable fees and reasonable out-of-pocket expenses of which shall be paid by the Company.

Section 2.

Interest.

a)

Payment of Interest in Cash or Shares or PIK. The Company shall pay interest to the Holder on the aggregate then outstanding principal amount of this Debenture at the Applicable Interest Rate (provided, however, that following the occurrence and during the continuance an Event of Default the Company shall, at the election of the Holder, pay interest at the Default Rate), payable monthly in arrears as of the last Trading Day of each calendar month and on the Maturity Date (each such date, an “Interest Payment Date”) (if any Interest Payment Date is not a Business Day, then the applicable payment shall be due on the next succeeding Business Day), at the Company’s option, (1) in cash, (2) in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock at the Stock Payment Price for the applicable Interest Payment Date (the dollar amount to be paid in shares, the “Interest Share Amount”), (3) solely with respect to any Interest Payment Date occurring prior to November 10, 2016, by adding the amount of such interest payment to outstanding principal amount of this Debenture (“PIK” and the dollar amount to be made in PIK, the “PIK Amount”) or (4) a combination thereof (such amount to be paid in cash, such amount to be paid in shares of Common Stock and such amount to be paid in PIK to be specifically enumerated as provided herein). In addition, on the Maturity Date (or such earlier date that the principal amount of this Debenture is paid in full by acceleration or otherwise) a fixed amount, which shall be deemed additional interest hereunder, equal to \$765,900 shall be due and payable to the Holder on such date in, at the option of the Company, cash, shares of Common Stock or a combination thereof (but, for the avoidance of doubt, not in PIK) as provided in this Section 2 with respect to regular interest payments (the “Special Interest Payment”). Notwithstanding anything contained herein to the contrary, any payment of interest in shares of Common Stock may only occur if (i) all of the Equity Conditions have been met (unless waived by the Holder in writing) during the five (5) Trading Days immediately prior to the applicable Interest Payment Date (the “Interest Notice Period”) and through and including the date such shares of Common Stock are actually issued to the Holder, (ii) the Company shall have given the Holder notice in accordance with the notice requirements set forth below, and (iii) as to such Interest Payment Date, prior to such Interest Notice Period (but not more than two (2) Trading Days prior to the commencement of such Interest Notice Period), the Company shall have delivered to the Holder’s account with DTC a number of shares of Common Stock to be applied against such Interest Share Amount equal to the quotient of (x) the applicable Interest Share Amount divided by (y) the Stock Payment Price assuming for such purposes that the Interest Payment Date is the Trading Day immediately prior to the commencement of the Interest Notice Period (the “Interest Advance Shares”). In the event that the Interest Advance Shares in respect of any Interest Share Amount would exceed the Dollar Volume Limitation, then the Company shall pay the portion of the Interest Advance Shares that would be in excess of the Dollar Volume Limitation in cash.

b)

Company's Election to Pay Interest in Cash or Shares or PIK. Subject to the terms and conditions herein, the decision whether to pay interest hereunder in cash, shares of Common Stock, PIK or a combination thereof shall be at the sole discretion of the Company. At least two (2) Trading Days prior to the commencement of any Interest Notice Period, the Company shall deliver to the Holder a written notice of its election to pay interest hereunder on the applicable Interest Payment Date either in cash, shares of Common Stock, PIK or a combination thereof and the Interest Share Amount or PIK Amount, as applicable, as to the applicable Interest Payment Date, provided that the Company may indicate in such notice that the election contained in such notice shall apply to future Interest Payment Dates until revised by a subsequent notice. During any Interest Notice Period, the Company's election (whether specific to an Interest Payment Date or continuous) shall be irrevocable as to such Interest Payment Date. Subject to the aforementioned conditions, failure to timely deliver such written notice to the Holder shall be deemed an election by the Company to pay the interest on such Interest Payment Date in cash. The aggregate number of shares of Common Stock otherwise issuable to the Holder on an Interest Payment Date shall be reduced by the number of Interest Advance Shares previously issued to the Holder in connection with such Interest Payment Date. In addition, if the number of Interest Advance Shares exceeds the aggregate number of shares of Common Stock otherwise issuable to the Holder on the Interest Payment Date, then the Holder shall promptly return such excess number of shares to the Company. For the avoidance of doubt, any PIK Amount when so added to the outstanding principal of this Debenture shall, for all purposes of this Debenture, be deemed to be part of the principal indebtedness evidenced by this Debenture including, without limitation, for purposes of determining interest payable hereunder after the applicable Interest Payment Date for which such PIK Amount is paid and amounts convertible into Common Stock hereunder after the applicable Interest Payment Date for which such PIK Amount is paid.

c)

Interest Calculations. Interest shall be calculated on the basis of a 360-day year and the actual number of days elapsed, and shall accrue daily commencing on the Original Issue Date until payment in full of the outstanding principal, together with all accrued and unpaid interest, liquidated damages and other amounts which may become due hereunder, has been made. Payment of interest in shares of Common Stock (other than the Interest Advance Shares issued prior to an Interest Notice Period) shall otherwise occur pursuant to Sections 4(b) – (g) herein and, solely for purposes of the payment of interest in shares, the Interest Payment Date shall be deemed the Holder Redemption Payment Date. Interest hereunder will be paid to the Person in whose name this Debenture is registered on the records of the Company regarding registration and transfers of this Debenture (the “Debenture Register”) or such Person's designee identified to the Company in writing.

d)

Late Fee. All overdue accrued and unpaid interest to be paid hereunder shall entail a late fee at an interest rate equal to the lesser of fifteen percent (15%) per annum or the maximum rate permitted by applicable law (the “Late Fees”) which shall accrue daily

from the date such interest is due hereunder through and including the date of actual payment of such overdue amount in full. Notwithstanding anything to the contrary contained herein, if, on any Interest Payment Date the Company has elected to pay accrued interest in the form of Common Stock but the Company is not permitted to pay accrued interest in Common Stock because it fails to satisfy the conditions for payment in Common Stock set forth in Section 2(a) herein, then, at the option of the Holder, the Company, in lieu of delivering either shares of Common Stock pursuant to this Section 2 or paying the regularly scheduled interest payment in cash, shall deliver, within three (3) Trading Days of each applicable Interest Payment Date, an amount in cash equal to the product of (x) the number of shares of Common Stock otherwise deliverable to the Holder in connection with the payment of interest due on such Interest Payment Date multiplied by (y) the highest VWAP during the period commencing on the Interest Payment Date and ending on the Trading Day prior to the date such payment is actually made.

e)

Prepayment at the Option of the Holder. The Holder shall have the right, at any time and from time to time, to require the Company to prepay in cash all, or any portion, of the outstanding principal amount of this Debenture plus all accrued and unpaid interest thereon by delivering a written notice (a “Prepayment Notice”) to the Company specifying the principal amount and accrued interest thereon to be prepaid (the “Prepayment Amount”); provided, that the Prepayment Amount shall not exceed the lesser of (1) eighteen million five hundred thousand dollars (\$18,500,000) and (2) the outstanding principal amount of this Debenture plus all accrued and unpaid interest thereon. Any prepayment of this Debenture pursuant to the preceding sentence shall be due and payable in cash on the first (1st) Trading Day after the Company’s receipt of such Prepayment Notice (the “Prepayment Date”).

f)

Prepayment at the Option of the Company. Notwithstanding anything contained herein to the contrary, except as expressly set forth in Section 2(e), prior to the date that is eighteen (18) months following the Original Issue Date, the Company may not prepay all or any portion of this Debenture without the prior written consent of the Holder. Notwithstanding the foregoing, the Company may prepay all, but not less than all, of this Debenture in cash by paying to the Holder an amount in cash equal to one hundred ten percent (110%) of the entire outstanding principal balance plus all accrued and unpaid interest thereon at any time (i) following such 18-month period, or (ii) upon consummation of a Change of Control, in each case, upon ten (10) Trading Days’ prior written notice to the Holder. Such prepayment shall be made by the Company by wire transfer of immediately available funds to the Holder, in the case of clause (i), immediately upon the expiration of such ten (10) Trading Day notice period or, in the case of clause (ii), upon (but not earlier than) the consummation of the Change of Control. For the avoidance of doubt, the Holder shall be entitled to convert all or any portion of this Debenture pursuant to Section 4(b) until the Company makes such prepayment in immediately available funds in accordance with the preceding sentence.

Section 3.

Registration of Transfers and Exchanges.

a)

Different Denominations. This Debenture is exchangeable for an equal aggregate principal amount of Debentures of different authorized denominations, as requested by the Holder surrendering the same. No service charge will be payable for such registration of transfer or exchange.

b)

Investment Representations. This Debenture has been issued subject to certain investment representations of the original Holder set forth in the Purchase Agreement and may be transferred or exchanged only in compliance with the Purchase Agreement and applicable federal and state securities laws and regulations.

c)

Reliance on Debenture Register. Prior to due presentment for transfer to the Company of this Debenture, the Company and any agent of the Company may treat the Person in whose name this Debenture is duly registered on the Debenture Register as the owner hereof for the purpose of receiving payment as herein provided and for all other purposes, whether or not this Debenture is overdue, and neither the Company nor any such agent shall be affected by notice to the contrary.

Section 4.

Redemption; Voluntary Conversion at the Option of the Holder; Delivery of Stock Payment Shares and Conversion Shares.

a)

Monthly Redemption.

i.

Commencing on November 10, 2016 (the “Monthly Redemption Commencement Date”) the Holder shall have the right, at its option (except as expressly provided in Section 4(a)(i)(B)), to require the Company to redeem up to the Monthly Allowance per calendar month (the “Holder Redemption Right”). The Company may, at its option, increase, and only increase, the dollar amount of the Monthly Allowance in effect for any calendar month by delivering a written notice to the Holder at any time during such calendar month prior to 7:00 a.m. (local time in New York City, New York) on the third (3rd) to last Trading Day of such calendar month; such notice may also indicate that the increase contained in such notice shall apply to future calendar months until revised by a subsequent notice. In addition, the Holder shall have the right, at its option, to increase the dollar amount of the Monthly Allowance to an amount equal to two million five hundred thousand dollars (\$2,500,000) for any calendar month by delivering a written notice to the Holder at any time during such calendar month; provided, that the Holder may not exercise this right with respect to more than three (3) calendar months in any twelve (12) month period. The Exercise

of the Holder Redemption Right shall be exercised in accordance with the following procedures:

(A)

The Holder may exercise its Holder Redemption Right for a calendar month, at any time and from time to time, during such calendar month, by sending one (1) or more, but not more than six (6), written notices, the form of which is attached hereto as Annex A (each a “Holder Redemption Notice”), to the Company by not later than 11:59:59 P.M. (local time in New York City, New York) on the last Trading Day of such calendar month, which Holder Redemption Notices shall specify the principal amount to be redeemed and the amount of accrued and unpaid interest thereon (together, the “Holder Redemption Amount”).

(B)

At any time after the Monthly Redemption Commencement Date that this Debenture is Stock On, the Company may require the Holder to exercise its Holder Redemption Right for an amount up to the lesser of (i) two million two hundred thousand dollars (\$2,200,000) principal amount of this Debenture (but not less than the Monthly Allowance) or (ii) the remaining outstanding principal amount of this Debenture, in each case, during any calendar month other than November, 2016 (the “Company Force Right”) by delivering a written notice to the Holder three (3) Trading Days prior to the first (1st) Trading Day of such calendar month (the “Company Force Notice”), which Company Force Notice shall indicate the principal amount for which the Holder is required to exercise its Holder Redemption Right (the “Company Force Amount”) and certify that this Debenture is Stock On on the date of the Company Force Notice, that all of the Equity Conditions are satisfied and that the Company reasonably believes, in good faith, that the Equity Conditions will continue to be satisfied for at least such calendar month. For the avoidance of doubt and notwithstanding anything contained herein to the contrary, in no event shall the Company Force Amount exceed the Dollar Volume Limitation. During any calendar month for which the Company has exercised the Company Force Right, the Holder shall deliver at least one (1) but not more than six (6) Holder Redemption Notices to the Company from time to time during such calendar month for an aggregate Holder Redemption Amount equal to the Company Force Amount (and, for the avoidance of doubt, if the Company Force Amount is less than the Monthly Allowance, nothing herein shall be deemed to prevent the Holder from submitting additional Holder Redemption Notices for Holder Redemption Amounts in excess of the Company Force Amount up to the Monthly Allowance). Notwithstanding the foregoing, if an Equity Conditions Failure occurs during such calendar month, the Holder shall have no further obligation (but shall, for the avoidance of doubt, retain the option to do so) to submit Holder Redemption Notices during such calendar month.

unless such Equity Conditions Failure is waived in writing by the Holder; provided, however, following the date of any such Equity Conditions Failure (to the extent not waived by the Holder) the Holder may not submit Holder Redemption Notices for such calendar month in excess of the Monthly Allowance (for the avoidance of doubt, the Company shall be required to honor all Holder Redemption Notices delivered prior to the date of the Equity Conditions Failure in accordance with Section 4(a)(v)). On the Trading Day prior to the first (1st) Trading Day of any calendar month for which the Company has exercised the Company Force Right (the “Advance Date”), the Company shall deliver to the Holder’s or its designee’s balance account with DTC a number of shares of Common Stock (free of any restrictive legends or other trading restrictions) equal to the quotient of (x) the Company Force Amount and (y) the Stock Payment Price for the Advance Date (the “Monthly Redemption Advance Shares”).

(C)

The Company shall promptly, but in any event no more than three (3) Trading Days after the date that the Holder delivers a Holder Redemption Notice to the Company (the “Holder Redemption Payment Date”), pay the applicable Holder Redemption Amount (1) in cash, to the extent that this Debenture is Stock Off (as defined below) on the date that the Holder delivers the Holder Redemption Notice to the Company, equal to the Holder Redemption Amount by wire transfer of immediately available funds or (2) in shares of Common Stock, to the extent that this Debenture is Stock On (as defined below) on the date that the Company delivers the Holder Redemption Notice, in accordance with this Section 4.

(D)

For the avoidance of doubt, payment of the Holder Redemption Amount in cash or Common Stock shall be determined according to the status of the Debenture as Stock On or Stock Off on the date that the Holder delivers the Holder Redemption Notice to the Company and not the Holder Redemption Payment Date. For the further avoidance of doubt, the Holder and the Company agree that the Holder may deliver up to three (3) Holder Redemption Notices during a calendar month; provided, that during any calendar month for which the Company has exercised the Company Force Right, the Holder may deliver up to six (6) Holder Redemption Notices to the Company during such calendar month, provided, further, and for the avoidance of doubt, that the sum of the Holder Redemption Amounts set forth in all of the Holder Redemption Notices delivered during such calendar month does not exceed the Monthly Allowance or, if applicable, the Company Force Amount.

(E)

Each of the Holder and the Company acknowledge the Company’s

obligation under Section 4.8(a) of the Purchase Agreement to not provide any material non-public information to the Holder, and the Holder agrees that the Company shall have no liability to the Holder for failing to disclose any material non-public information in connection with the issuance of any Stock Payment Shares to Holder in accordance with the terms of this Debenture.

ii.

At any time, and from time to time, subject to the provisions of this Section 4(a), the Company may, at its option, deliver a written notice to the Holder that it will pay any Holder Redemption Amounts under Section 4(a)(i) in shares of Common Stock (a “Stock On Notice”) and any such notice shall become effective on the fifth (5th) Trading Day after the Holder’s receipt thereof (the “Stock On Effective Date”). Such Stock On Notice shall certify that the Equity Conditions are satisfied on the date thereof, and each of the twenty (20) consecutive Trading Days immediately preceding the date of such Stock On Notice, and at any time that this Debenture is Stock On, the Company shall, upon the Holder’s request, certify in writing to the Holder that the Equity Conditions are satisfied and that the Company reasonably believes, in good faith, that the Equity Conditions will continue to be satisfied for the foreseeable future. From the time that a Stock On Notice takes effect until such time that such Stock On Notice is withdrawn pursuant to Section 4(a)(iv) or deemed withdrawn pursuant to Section 4(a)(iii), this Debenture shall be deemed to be “Stock On.” At any time that this Debenture is not Stock On, then this Debenture shall be deemed to be “Stock Off.” For the avoidance of doubt, the Holder may deliver a Holder Redemption Notice during the period after receipt of the Stock On Notice but prior to the Stock On Effective Date; the Debenture shall be Stock Off during such period and, accordingly, the applicable Holder Redemption Amount would be payable in cash. Notwithstanding anything contained herein to the contrary, and subject to the satisfaction of all of the requirements set forth in this Section 4(a) for the delivery of a Stock On Notice (including, without limitation, the satisfaction of the Equity Conditions), the Company shall, to the extent that this Debenture is not already Stock On, be required to deliver a Stock On Notice to the Holder at any time that the Company’s Cash on Hand does not exceed the outstanding principal amount of this Debenture by more than ten million dollars (\$10,000,000) (for the avoidance of doubt, any Stock On Notice required to be delivered pursuant to this sentence shall not disclose the Company’s Cash on Hand or otherwise contain any material, non-public information).

iii.

The Company may not deliver a Stock On Notice unless the Equity Conditions are satisfied on the date thereof and on each of the twenty (20) consecutive Trading Days immediately preceding such date. If the Equity Conditions cease, for any reason, to be satisfied while this Debenture is Stock On, then the applicable Stock On Notice shall, unless such Equity Conditions Failure is waived by the Holder in writing, automatically without any further action of the Company or the Holder, immediately be deemed to be withdrawn and this Debenture shall immediately be deemed to be Stock Off (an “Equity”).

Conditions Failure”). The Company shall immediately notify the Holder of any Equity Conditions Failure.

iv.

The Company may voluntarily withdraw a Stock On Notice by delivering a written notice (a “Stock Off Notice”) to the Holder and such Stock On Notice shall be deemed withdrawn and this Debenture shall be Stock Off five (5) Trading Days after receipt thereof by the Holder (the “Voluntary Stock Off Effective Date”); provided, however, the Company may not, unless the Holder otherwise consents in writing, deliver a Stock Off Notice during any calendar month for which the Company has exercised the Company Force Right if the related Voluntary Stock Off Effective Date would occur during such calendar month or if the Company would be required to deliver a Stock On Notice pursuant to the last sentence of Section 4(a)(ii). For the avoidance of doubt, the Holder may deliver a Holder Redemption Notice during the period after receipt of the Stock Off Notice but prior to the Voluntary Stock Off Effective Date; the Debenture shall be Stock On during such period and, accordingly, the applicable Holder Redemption Amount would be payable in shares of Common Stock on the applicable Holder Redemption Payment Date as provided herein.

v.

With respect to each Holder Redemption Notice delivered to the Company pursuant to Section 4(a)(i) at a time when this Debenture was Stock On, subject to the provisions of this Section 4(a)(v), the Company shall, in payment of the Holder Redemption Amount deliver to the Holder, or its designee, a number of Stock Payment Shares equal to the quotient of (x) the applicable Holder Redemption Amount and (y) the Stock Payment Price by not later than the applicable Holder Redemption Payment Date. With respect to any Holder Redemption Notice delivered to the Company during a calendar month for which the Company has exercised the Company Force Right and for which calendar month the Holder has actually received the applicable Monthly Redemption Advance Shares, the number of Stock Payment Shares deliverable pursuant to the immediately preceding sentence shall be reduced by the excess (if any) of the Monthly Redemption Advance Shares over the aggregate number of Stock Payment Shares that would be deliverable pursuant to the immediately preceding sentence for all other Holder Redemption Notices delivered during such calendar month (“Available Advance Shares”). The Holder’s calculation of the Available Advance Shares set forth on the Holder Redemption Notice shall be binding on the Company absent manifest error. Notwithstanding the foregoing or any other provision herein to the contrary:

(A)

in the event any Equity Conditions Failure occurs after the delivery of the applicable Holder Redemption Notice at a time when this Debenture is Stock On but prior to the applicable Holder Redemption Payment Date, at the option of the Holder, (1) the Company shall pay to the Holder an amount in cash equal to the Holder Redemption Amount, and (2) the Holder shall, if applicable, return a number of Monthly Redemption Advance Shares to the Company equal to the applicable number of Stock Payment Shares;

(B)

in the event that the aggregate number of Stock Payment Shares to be delivered to the Holder pursuant to this Section 4(a)(v) in respect of any individual Holder Redemption Notice would cause such Holder to exceed the Beneficial Ownership Limitation or the Exchange Cap, then, (I) the Holder shall provide written notice to the Company that such delivery of all or a portion of such Stock Payment Shares would cause the Holder to exceed the Beneficial Ownership Limitation or the Exchange Cap, and (II) in addition to delivery of the number of Stock Payment Shares that would not cause such Holder to exceed the Beneficial Ownership Limitation or Exchange Cap, as applicable, the Company shall pay to the Holder, in lieu of such number of Stock Payment Shares that would cause the Holder to exceed the Beneficial Ownership Limitation or Exchange Cap, as applicable (such excess number of shares, the “Excess Shares”), on the applicable Holder Redemption Payment Date, an amount in cash equal to the portion of the Holder Redemption Amount that would otherwise be payable in respect of the Excess Shares;

(C)

in the event that the Holder Redemption Amount in respect of any Holder Redemption Notice, when aggregated with the Holder Redemption Amounts in respect of each other Holder Redemption Notice delivered to the Company during the same calendar month, would exceed the Dollar Volume Limitation, then the Company shall pay the portion of the Holder Redemption Amount that would be in excess of the Dollar Volume Limitation in cash; and/or

(D)

with respect to any calendar month for which the Company has exercised the Company Force Right and for which calendar month the Holder has actually received Monthly Redemption Advance Shares, if there are any Available Advance Shares remaining after all Holder Redemption Notices for such calendar month have been satisfied in full, the Holder shall promptly return such remaining Available Advance Shares to the Company.

b)

Voluntary Conversion at the option of the Holder.

1. Voluntary Conversion. Commencing on the Monthly Redemption Commencement Date, and thereafter from time to time until this Debenture is no longer outstanding, this Debenture shall be convertible, in whole or in part, into shares of Common Stock at the option of the Holder, subject to the conversion limitations set forth in Section 4(h) and Section 4(i). The Holder shall effect conversions by delivering to the Company a Notice of Conversion, the form of which is attached hereto as Annex B (each, a “Notice of Conversion”), specifying therein the principal amount of this Debenture to be converted and the date on which such conversion shall be effected (such date, the “Conversion Date”). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion is deemed delivered hereunder. No ink-original

Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. To effect conversions hereunder, the Holder shall not be required to physically surrender this Debenture to the Company unless the entire principal amount of this Debenture, plus all accrued and unpaid interest thereon, has been so converted. Conversions hereunder shall have the effect of lowering the outstanding principal amount of this Debenture in an amount equal to the applicable conversion. The Holder and the Company shall maintain records showing the principal amount(s) converted and the date of such conversion(s). In the event of any dispute or discrepancy, the records of the Holder shall be controlling and determinative in the absence of manifest error. **The Holder, and any assignee by acceptance of this Debenture, acknowledge and agree that, by reason of the provisions of this paragraph, following conversion of a portion of this Debenture, the unpaid and unconverted principal amount of this Debenture may be less than the amount stated on the face hereof.**

2. Conversion Price. The conversion price in effect on any Conversion Date shall be equal to \$0.60, subject to adjustment herein (the “Conversion Price”).

3. Conversion Shares Issuable Upon Conversion of Principal Amount; Delivery Date. The number of Conversion Shares issuable upon a conversion hereunder shall be determined by the quotient obtained by dividing (x) the outstanding principal amount of this Debenture to be converted plus accrued and unpaid interest thereon by (y) the Conversion Price. The Company shall deliver all Conversion Shares to the Holder within two (2) Trading Days after the date of the applicable Notice of Conversion (the “Conversion Share Delivery Date”).

c)

Delivery of Certificate for Stock Payment Shares and Conversion Shares. The Company shall deliver any certificate or certificates evidencing Stock Payment Shares or Conversion Shares, as applicable required to be issued by the Company pursuant to Section 4(a)(v) or Section 4(b), as applicable, electronically through DTC without restrictive legends or trading restrictions of any kind not later than the applicable Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable; provided, that prior to the twelve (12) month anniversary of the Original Issue Date, in order for such certificate or certificates to be issued without restrictive legends, (i) the Company shall be in compliance with the current public information requirements of Rule 144 and (ii) the Holder shall have delivered to the Company a broker representation letter that the shares of Common Stock represented by such certificate or certificates have been sold pursuant to Rule 144. The Company shall, at its own expense, cause Company Counsel to issue any legal opinions required to issue such Interest Advance Shares, Monthly Redemption Advance Shares, Stock Payment Shares and/or Conversion Shares without any restrictive legends as provided herein, such legal opinion to be in a form acceptable to the Holder. Company Counsel’s form of Rule 144 legal opinion is attached hereto in substantially the form of Annex C. If such certificate or certificates are not delivered to or as directed by the applicable Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable, the Holder shall, in addition to, and

not in limitation of, its other rights and remedies under this Debenture and the other Transaction Documents, be entitled to elect by written notice to the Company at any time on or before its receipt of such certificate or certificates, to rescind the applicable Holder Redemption Notice or Notice of Conversion, as applicable.

d)

Obligation Absolute; Partial Liquidated Damages. The Company's obligations to issue and deliver Stock Payment Shares and Conversion Shares in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Stock Payment Shares or Conversion Shares; provided, however, that such delivery shall not operate as a waiver by the Company of any such action the Company may have against the Holder. The Company may not refuse to issue any Stock Payment Shares or Conversion Shares required to be issued hereunder based on any claim that the Holder or anyone associated or affiliated with the Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, shall have been sought and obtained, and the Company posts a surety bond for the benefit of the Holder in the amount of one hundred and fifty percent (150%) of the outstanding principal amount of this Debenture, which is subject to the injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to the Holder to the extent it obtains judgment. In the absence of such injunction, the Company shall issue Stock Payment Shares and Conversion Shares required to be issued hereunder in accordance with the terms hereof. If the Company fails for any reason to deliver to the Holder such certificate or certificates representing Stock Payment Shares or Conversion Shares required to be issued pursuant to Section 4(a)(v) or Section 4(b), as applicable, by the second Trading Day following the applicable Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable, the Company shall pay to the Holder, in cash, as partial liquidated damages and not as a penalty, for each one thousand dollars (\$1,000) of principal amount being redeemed or converted, as applicable, \$5 per Trading Day for each Trading Day after the second Trading Day following such Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable, until such certificates are delivered or Holder rescinds such redemption or conversion, as applicable; provided, however, if the Company has failed to deliver a certificate or certificates representing Stock Payment Shares or Conversion Shares required to be issued pursuant to Section 4(a)(v) or Section 4(b), as applicable, by the Holder Redemption Payment Date or Conversion Date, as applicable, more than twice in any twelve (12) month period, then such partial liquidated damages shall begin to accrue on the Holder Redemption Payment Date and/or Conversion Share Delivery Date, as applicable. Nothing herein shall limit a Holder's right to pursue actual damages or declare an Event of Default pursuant to Section 8 hereof for the Company's failure to deliver Stock Payment Shares or

Conversion Shares within the period specified in this Debenture and the Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief. The exercise of any such rights shall not prohibit the Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

e)

Compensation for Buy-In on Failure to Timely Deliver Certificates. In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder such certificate or certificates representing Stock Payment Shares or Conversion Shares required to be issued pursuant to Section 4(a)(v) or Section 4(b), as applicable by the applicable Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable, and if after such Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable, the Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Stock Payment Shares or Conversion Shares, as applicable, which the Holder was entitled to receive pursuant to Section 4(a)(v) or Section 4(b), as applicable, relating to such Holder Redemption Payment Date or Conversion Share Delivery Date, as applicable (a "Buy-In"), then the Company shall (A) pay in cash to the Holder (in addition to any other remedies available to or elected by the Holder) the amount, if any, by which (x) the Holder's total purchase price (including any brokerage commissions) for the Common Stock so purchased exceeds (y) the product of (1) the aggregate number of Stock Payment Shares or Conversion Shares, as applicable, that the Holder was entitled to receive from the Holder Redemption Notice or Notice of Conversion, as applicable, at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of the Holder, rescind the Holder Redemption Notice or Notice of Conversion, as applicable, at issue or deliver to the Holder the number of Stock Payment Shares or Conversion Shares, as applicable, that would have been issued if the Company had timely complied with its delivery requirements under this Section 4. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to a Holder Redemption Notice with respect to which the actual sale price of the Stock Payment Shares (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing Stock Payment Shares or Conversion Shares as required pursuant to the terms hereof.

f)

Fractional Shares. No fractional shares or scrip representing fractional shares shall

be issued under this Debenture. As to any fraction of a share which the Holder would otherwise be entitled, the Company shall round up to the next whole share.

g)

Transfer Taxes and Expenses. The issuance of certificates for Stock Payment Shares and Conversion Shares shall be made without charge to the Holder hereof for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates. The Company shall pay all Transfer Agent fees required for processing of any Holder Redemption Notice and all fees to DTC (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Stock Payment Shares and Conversion Shares.

h)

Beneficial Ownership Limitation. Notwithstanding anything to the contrary set forth in this Debenture, at no time may the Company issue to the Holder shares of Common Stock (whether as Stock Payment Shares, Interest Advance Shares, Monthly Redemption Advance Shares, Conversion Shares or otherwise) to the extent that after giving effect to such issuance, the Holder (together with the Holder's Affiliates, and any Persons acting as a group together with the Holder or any of the Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of this Section 4(h), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 4(h) applies, the determination of whether shares of Common Stock may be issued pursuant to this Debenture (in relation to other securities owned by the Holder together with any Affiliates) shall be in the sole discretion of the Holder, and the submission of a Holder Redemption Notice (at a time when this Debenture is Stock On) or Notice of Conversion shall be deemed to be the Holder's determination of whether shares of Common Stock may be issued pursuant to this Debenture (in relation to other securities owned by the Holder together with any Affiliates) subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, the Holder will be deemed to represent to the Company each time it delivers a Holder Redemption Notice (at a time that this Debenture is Stock On) or Notice of Conversion that such Holder Redemption Notice has not violated the restrictions set forth in this paragraph and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 4(h), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Company, or (iii) a more recent written notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within two (2) Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to

the conversion or exercise of securities of the Company by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The “ Beneficial Ownership Limitation ” shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the applicable issuance of shares of Common Stock pursuant to this Debenture held by the Holder. The Holder, upon not less than sixty one (61) days’ prior notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 4(h), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the applicable issuance of shares of Common Stock pursuant to this Debenture held by the Holder and the Beneficial Ownership Limitation provisions of this Section 4(h) shall continue to apply. Any such increase or decrease will not be effective until the sixty first (61st) day after such notice is delivered to the Company. The Beneficial Ownership Limitation provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 4(h) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Debenture.

i)

Principal Market Regulation. The Company shall not issue any shares of Common Stock pursuant to the terms of this Debenture if the issuance of such shares of Common Stock would exceed the aggregate number of shares of Common Stock which the Company may issue pursuant to the terms of this Debenture without breaching the Company’s obligations under the rules or regulations of the Principal Market (the number of shares which may be issued without violating such rules and regulations, the “ Exchange Cap ”), except that such limitation shall not apply in the event that the Company (A) obtains the approval of its stockholders as required by the applicable rules of the Principal Market for issuances of shares of Common Stock in excess of such amount or (B) obtains a written opinion from outside counsel to the Company that such approval is not required, which opinion shall be reasonably satisfactory to the Holder. The Exchange Cap as of the Original Issue Date is 36,185,586 shares of Common Stock (appropriately adjusted for any stock split, stock dividend, stock combination, stock buy-back or other similar transaction).

Section 5.

Certain Adjustments.

(a)

Stock Dividends and Stock Splits. If the Company, at any time while this Debenture is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon conversion of, or payment of interest on, this Debenture), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii)

combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Company, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Company) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b)

Fundamental Transaction. If, at any time while this Debenture is outstanding, the Company effects a Fundamental Transaction, then, upon any subsequent conversion of this Debenture, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 4(h) or Section 4(i) on the conversion of this Debenture), the number of shares of capital stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Debenture is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 4(h) or Section 4(i) on the conversion of this Debenture). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one (1) share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Debenture following such Fundamental Transaction. For the avoidance of doubt, nothing contained in this Section 5(b) shall be deemed implied consent to any Fundamental Transaction otherwise prohibited by this Debenture or otherwise limit the Holder’s rights under Section 6(a)(vi).

(c)

Calculations. All calculations under this Section 5 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 5, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Company) issued and outstanding.

(d)

Notice to the Holder.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 5, the Company shall promptly deliver to the Holder a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Conversion by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any Fundamental Transaction, Change of Control, consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be filed at each office or agency maintained for the purpose of conversion of this Debenture, and shall cause to be delivered to the Holder at its last address as it shall appear upon the Debenture Register, at least twenty (20) calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to convert this Debenture during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 6.
Covenants.

a)

As long as any portion of this Debenture remains outstanding, and unless the Holder shall have otherwise given prior written consent, the Company shall not, and shall not permit any of the Subsidiaries to, directly or indirectly:

i.

other than Permitted Indebtedness, enter into, create, incur, assume, guarantee or suffer to exist any Indebtedness of any kind, including, but not limited to, a guarantee, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom;

ii.

other than Permitted Liens, enter into, create, incur, assume or suffer to exist any Liens of any kind, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom;

iii.

make or hold any Investments, including, without limitation, making or holding any Investment in a Subsidiary that is not a Guarantor, other than Permitted Investments;

iv.

other than Permitted Dispositions, Dispose of any its assets, including, without limitation, any Disposition to a Subsidiary that is not a Guarantor, unless such Subsidiary immediately executes a joinder to the Subsidiary Guaranty and Security Agreement;

v.

amend its charter documents, including, without limitation, its certificate of incorporation and bylaws, in any manner that materially and adversely affects any rights of the Holder under the Transaction Documents;

vi.

merge, dissolve, liquidate, consolidate with or into another Person, or Dispose of (whether in one transaction or in a series of transactions) all or substantially all of its assets (whether now owned or hereafter acquired) to or in favor of any Person or otherwise suffer or permit a Change of Control Transaction or Fundamental Transaction; provided, however, that the Company may, without the Holder's consent, cause any Subsidiary to be merged with and into the Company or another Subsidiary, provided such surviving Subsidiary, if not already a party to the Subsidiary Guaranty and Security Agreement, promptly executes a joinder thereto;

vii.

repay, repurchase or offer to repay, repurchase or otherwise acquire more than a de minimis number of shares of its Equity Securities;

viii.

repay, repurchase or offer to repay, repurchase or otherwise acquire any Indebtedness other than (i) this Debenture and (ii) regularly scheduled principal and interest payments under the terms of any Permitted Indebtedness, provided that any such payments of Permitted Indebtedness that is Subordinated Indebtedness shall not be permitted if, at such time, or after giving effect to such payment, any Event of Default exists or would occur as a result thereof;

ix.

pay dividends or distributions on any of its Equity Securities, except that any Subsidiary may, directly or indirectly, pay any dividend or distribution to the Company;

x.

create any new Subsidiary unless such Subsidiary is promptly added as a Guarantor and promptly executes a joinder to the Subsidiary Guaranty and Security Agreement;

xi.

enter into any transaction with any Affiliate of the Company which would be required to be disclosed in any public filing with the Commission, unless such transaction is made on an arm's-length basis and expressly approved by a majority of the disinterested directors of the Company (even if less than a quorum otherwise required for board approval); or

xii.

enter into any agreement with respect to any of the foregoing.

b)

Minimum Cash Covenant. The Company shall, at all times while this Debenture remains outstanding, maintain on deposit in an account of the Company at U.S Bank, N.A. (or any successor account reasonably acceptable to the Holder) (the "Account") an amount of unencumbered cash and/or Cash Equivalents equal to the lesser of (i) eighteen million five hundred thousand dollars (\$18,500,000) and (ii) the outstanding principal amount of this Debenture (including, for the avoidance of doubt, any PIK Amount). The Account shall at all times be subject to the Securities Account Control Agreement. In no event shall the Account be subject to any Liens other than the Liens of the Agent.

c)

Sale of Assets. If the Company or any Subsidiary Disposes of any assets or other property, other than the sale of inventory in the ordinary course of business consistent with past practices, then the Company shall, at the Holder's election by delivering written notice

to the Company, use the proceeds from such Disposition to prepay the outstanding principal amount of this Debenture in an amount equal to fifty (50%) of such proceeds, but not exceeding the total amounts then owing under this Debenture. The provisions of this clause shall not be deemed to be implied consent to any Disposition or other transaction (including, without limitation, a Fundamental Transaction or Change of Control) otherwise prohibited by the terms and conditions of this Debenture.

d)

Equity Issuances. Nothing herein shall prohibit the Company from issuing any Equity Interests in any transaction the primary purpose of which is to provide financing to the Company and does not otherwise constitute a Change of Control Transaction.

e)

Strategic Transaction. The Company or any Subsidiary may engage in any Strategic Transaction permitted by this Debenture provided that any such Strategic Transaction, individually or together with other Strategic Transactions entered into by the Company or any Subsidiary, does not have a material adverse effect on the Holder's or the Agent's security interest in the Collateral (as defined in the Security Agreement) or the Company's ability to perform its obligations under this Debenture, including, without limitation, the repayment of the principal amount hereof when and as due hereunder.

Section 7.

Events of Default.

a)

“Event of Default” means, wherever used herein, any of the following events (whatever the reason for such event and whether such event shall be voluntary or involuntary or effected by operation of law or pursuant to any judgment, decree or order of any court, or any order, rule or regulation of any administrative or governmental body):

i.

any default in the payment of the principal amount of any Debenture, whether on a Prepayment Date, Holder Redemption Payment Date or the Maturity Date or by acceleration or otherwise;

ii.

any default in the payment of interest, liquidated damages and/or other amounts owing to a Holder on any Debenture, as and when the same shall become due and payable, in each case, whether on a Holder Redemption Payment Date, Interest Payment Date or the Maturity Date or by acceleration or otherwise, in each case which such default continues for five (5) Trading Days;

iii.

the Company shall fail to observe or perform any other covenant or agreement contained in this Debenture (other than a breach by the Company of its obligations to deliver shares of Common Stock to the Holder pursuant to the terms of this Debenture

which breach is addressed in clause (ix) below) which failure is not cured, if possible to cure, within the earlier to occur of (A) five (5) Trading Days after notice of such failure sent by the Holder to the Company and (B) ten (10) Trading Days after the Company has become aware or should have become aware of such failure; provided, that any failure to observe or perform any provision of Section 6 shall be an immediate Event of Default without any grace period;

iv.

a default or event of default (subject to any grace or cure period provided in the applicable agreement, document or instrument) or any material breach shall occur under any of the Transaction Documents, which failure is not cured, if possible to cure, within twenty (20) days following notice of failure sent by the Holder to the Company;

v.

any representation or warranty made in this Debenture, any other Transaction Documents, any written statement pursuant hereto or thereto or any other report, financial statement or certificate made or delivered to the Holder or any other Holder shall be untrue or incorrect in any material respect as of the date when made or deemed made;

vi.

the Company or any Significant Subsidiary (as such term is defined in Rule 1-02(w) of Regulation S-X) shall be subject to a Bankruptcy Event;

vii.

the Company or any Subsidiary shall default on any of its obligations under any mortgage, credit agreement or other facility, indenture agreement, factoring agreement or other instrument under which there may be issued, or by which there may be secured or evidenced, any Indebtedness for borrowed money or money due under any long term leasing or factoring arrangement that (a) involves an obligation greater than \$2,000,000, whether such Indebtedness now exists or shall hereafter be created, and (b) results in such Indebtedness becoming or being declared due and payable prior to the date on which it would otherwise become due and payable;

viii.

(a) the Common Stock shall not be eligible for listing or quotation for trading on a Trading Market and shall not be eligible to resume listing or quotation for trading thereon within five (5) Trading Days, (b) the shares of Common Stock are suspended from trading or otherwise not listed or quoted for trading on a Trading Market for five (5) Trading Days (which need not be consecutive) during any twelve (12) month period, or (c) the shares of Common Stock are suspended from trading or otherwise not listed or quoted for trading on a Trading Market for three (3) consecutive Trading Days; provided, however, that for purposes of this subparagraph (viii), any day on which there is a general suspension of trading on a Trading Market shall be disregarded;

ix.

the Company shall fail for any reason to deliver certificates

representing (A) Stock Payment Shares to a Holder, (1) with respect to any Holder Redemption Notice, prior to the second Trading Day after the Holder Redemption Payment Date or, (2) with respect to any payment of interest, on the applicable Interest Payment Date or (B) Conversion Shares prior to the second Trading Day after the date of the applicable Notice of Conversion;

x.

the Company or any Subsidiary Guarantor shall breach any agreement delivered to the initial Holder pursuant to Section 2.2 of the Purchase Agreement;

xi.

the electronic transfer by the Company of shares of Common Stock through DTC or another established clearing corporation is no longer available or is subject to a “chill” that lasts for more than three (3) Trading Days;

xii.

a judgment not covered by insurance, which, with other outstanding judgments undischarged against the Company, exceeds in the aggregate \$2,000,000 or a judgment that is more than \$2,000,000 in excess of applicable insurance coverage, is rendered against the Company and, within sixty (60) days after entry thereof, such judgment is not discharged or satisfied or execution thereof stayed pending appeal, or within sixty (60) days after the expiration of any such stay, such judgment is not discharged or satisfied;

xiii.

(A) U.S. Bank, N.A. or SVB Asset Management fails to comply with its obligations under the Securities Account Control Agreement, (B) without limiting clause (A), U.S. Bank, N.A. or SVB Asset Management notifies the Agent of its intention to not comply with the terms of the Securities Account Control Agreement and the Company fails to enter into a new securities account control agreement or deposit account control agreement with respect to the amounts held in the Account in a form reasonably acceptable to the Holder within five (5) days after receipt of such notice, or (C) the Company fails to comply, notifies the Agent of its intention to not comply, with its obligations under the Securities Account Control Agreement;

xiv.

(A) the Company or U.S. Bank, N.A. closes the Account, or (B) without limiting clause (A), the Company or U.S. Bank, N.A. notifies the Agent of its intention to close, the Account, and, solely in the case of clause (B), the Company fails to enter into a new securities account control agreement or deposit account control agreement with respect to the amounts held in the Account in a form reasonably acceptable to the Holder within five (5) days after receipt of such notice;

xv.

(A) U.S. Bank, N.A. or SVB Asset Management terminates the Securities Account Control Agreement, or (B) without limiting clause (A), U.S. Bank, N.A. or SVB Asset Management notifies the Agent and/or the Company of its intention to

terminate, the Securities Account Control Agreement, and, solely in the case of clause (B), the Company fails to enter into a new securities account control agreement or deposit account control agreement with respect to the amounts held in the Account in a form reasonably acceptable to the Holder within five (5) days after receipt of such notice;

xvi.

The Company or any Subsidiary shall be indicted, convicted or have a judgment entered against it (including in a settled action) for any intentional or willful violation of federal or state laws applicable to the business of the Company and its Subsidiaries, in each case (other than in the case of an indictment), that results in a non-appealable or un-stayed monetary fine or damages of twelve million dollars (\$12,000,000) or more; or

xvii.

if any provision of the Security Agreement shall at any time for any reason be declared to be null and void, or the validity or enforceability thereof shall be contested by any Debtor (as defined in the Security Agreement), or a proceeding shall be commenced by any Debtor, or by any governmental authority having jurisdiction over any Debtor, seeking to establish the invalidity or unenforceability thereof, or any Debtor shall deny that any Debtor has any liability or obligation purported to be created under the Security Agreement.

b)

Remedies Upon Event of Default. If any Event of Default occurs, the outstanding principal amount of this Debenture, plus accrued but unpaid interest, liquidated damages and other amounts owing in respect thereof through the date of acceleration, shall become, at the Holder's election, immediately due and payable in cash at the Mandatory Default Amount; provided, that such acceleration shall be automatic, without any notice or other action of the Holder required, in respect of an Event of Default occurring pursuant to clause (vi) of Section 7(a). For the avoidance of doubt, in no event shall the Mandatory Default Amount be payable in shares of Common Stock. Upon the payment in full of the Mandatory Default Amount in cash, the Holder shall promptly surrender this Debenture to or as directed by the Company. In connection with such acceleration described herein, the Holder need not provide, and the Company hereby waives, any presentment, demand, protest or other notice of any kind, and the Holder may immediately and without expiration of any grace period enforce any and all of its rights and remedies hereunder and all other remedies available to it under applicable law. Such acceleration may be rescinded and annulled by Holder at any time prior to payment hereunder and the Holder shall have all rights as a holder of the Debenture until such time, if any, as the Holder receives full payment pursuant to this Section 7(b). No such rescission or annulment shall affect any subsequent Event of Default or impair any right consequent thereon.

Section 8.

Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holder hereunder, including, without limitation, any Holder Redemption Notice, shall be in writing and delivered personally, by facsimile, by email attachment, or

sent by a nationally recognized overnight courier service, addressed to the Company, at the address set forth above, or such other facsimile number, email address, or address as the Company may specify for such purposes by notice to the Holder delivered in accordance with this Section 8(a). Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile, by email attachment, or sent by a nationally recognized overnight courier service addressed to the Holder at the facsimile number or email address or address of the Holder appearing on the books of the Company, or if no such facsimile number or email attachment or address appears on the books of the Company, at the principal place of business of such Holder, as set forth in the Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment to the email address set forth on the signature pages attached hereto prior to 5:30 p.m. (local time in New York City, New York) (or such later time expressly specified elsewhere in this Debenture) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment to the email address set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (local time in New York City, New York) (or such later time expressly specified elsewhere in this Debenture) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Absolute Obligation. Except as expressly provided herein, no provision of this Debenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of, liquidated damages and accrued interest, as applicable, on this Debenture at the time, place, and rate, and in the coin or currency, herein prescribed. This Debenture is a direct debt obligation of the Company.

c) Lost or Mutilated Debenture. If this Debenture shall be mutilated, lost, stolen or destroyed, the Company shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated Debenture, or in lieu of or in substitution for a lost, stolen or destroyed Debenture, a new Debenture for the principal amount of this Debenture so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such Debenture, and of the ownership hereof, reasonably satisfactory to the Company.

d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Debenture shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in the state and federal courts sitting in the City of New York, Borough of Manhattan (the “New

York Courts”). Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such New York Courts, or such New York Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Debenture and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Debenture or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Debenture, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys’ fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

e) Amendments; Waivers. No provision herein may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Holder or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Debenture shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

f) Severability. If any provision of this Debenture is invalid, illegal or unenforceable, the balance of this Debenture shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law. The Company covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law or other law which would prohibit or forgive the Company from paying all or any portion of the principal of or interest on this Debenture as contemplated herein, wherever enacted, now or at any time hereafter in force, or which may affect the covenants or the performance of this Debenture, and the Company (to the extent it may lawfully do so) hereby expressly waives all benefits or advantage of any such law, and covenants that it will not, by resort to any such law, hinder,

delay or impede the execution of any power herein granted to the Holder, but will suffer and permit the execution of every such as though no such law has been enacted.

g) Remedies, Characterizations, Other Obligations, Breaches and Injunctive Relief. The remedies provided in this Debenture shall be cumulative and in addition to all other remedies available under this Debenture and any of the other Transaction Documents at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Holder's right to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Debenture. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, conversion and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the Holder shall be entitled, in addition to all other available remedies, to an injunction restraining any such breach or any such threatened breach, without the necessity of showing economic loss and without any bond or other security being required. The Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Debenture.

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

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

j) Secured Obligation. The obligations of the Company under this Debenture are secured by the Collateral (as defined in the Security Agreement) pledged by the Company pursuant to the Security Agreement, dated as of the date hereof, between the Grantors (as defined therein) and the Agent. For the avoidance of doubt, and notwithstanding anything contained herein to the contrary, subject to Permitted Liens, the Holder shall have the first lien over all Collateral, which will rank higher than any other creditor of the Company or its Subsidiaries, to the extent permitted by law.

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties below have caused this Debenture to be duly executed by a duly authorized officer as of the date first above indicated.

GALENA BIOPHARMA, INC.

By: /s/ Mark W. Schwartz

Name: Mark W. Schwartz

Title: President & CEO

Facsimile No. for delivery of Notices: _____

E-mail Address for delivery of Notices: _____

JGB (CAYMAN) NEWTON LTD.

By: /s/ Brett Cohen

Name: Brett Cohen

Title: President

Facsimile No. for delivery of Notices: (212) 253-4093

E-mail Address(es) for delivery of Notices:

sehrenberg@jgbcap.com, bcohen@jgbcap.com,

dshmookler@jgbcap.com, jwhite@jgbcap.com

ANNEX A

HOLDER REDEMPTION NOTICE

The undersigned hereby exercises its right to require the Company to redeem the 9% Original Issue Discount Senior Secured Debenture due November __, 2018 (the “Debenture”) of Galena Biopharma, Inc., a Delaware corporation (the “Company”), in accordance with Section 4 of the Debenture.

The undersigned agrees to comply with the prospectus delivery requirements under the applicable securities laws in connection with any transfer of the aforesaid shares of Common Stock.

Holder Redemption Right calculations:

Company Force Amount, if applicable:

Principal Amount of Debenture to be Redeemed:

Accrued and unpaid interest thereon:

Stock Payment Price, if applicable:

Available Advance Shares, if applicable:

Stock Payment Shares, if applicable:

Excess Shares, if applicable:

Dollar Volume Limitation:

If applicable, cash due in respect of Excess Shares or pursuant to Sections 4(a)(v)(B) or (C):

Signature:

Name:

Wire Instructions:

Or, if applicable

Address for Delivery of Common Stock Certificates:

Or

DWAC Instructions:

Broker No: _____

Account No: ____

ANNEX B

NOTICE OF CONVERSION

The undersigned hereby elects to convert principal under the THIS AMENDED AND RESTATED 9% ORIGINAL ISSUE DISCOUNT SENIOR SECURED DEBENTURE of Galena Biopharma, Inc., a Delaware corporation (the “ Company ”), into shares of common stock (the “ Common Stock ”), of the Company according to the conditions hereof, as of the date written below.

By the delivery of this Notice of Conversion the undersigned represents and warrants to the Company that its ownership of the Common Stock does not exceed the amounts specified under Section [] of this Debenture, as determined in accordance with Section 13(d) of the Exchange Act.

Conversion calculations:

Date to Effect Conversion:

Principal Amount of Debenture to be Converted:

Accrued and unpaid interest thereon:

Number of shares of Common Stock to be issued:

Signature:

Name:

Address for Delivery of Common Stock Certificates:

Or

DWAC Instructions:

Broker No: _____

Account No: _____

AMENDMENT AGREEMENT

This Amendment Agreement (“**Agreement**”), dated as of August 22, 2016, is made by and between JGB (Cayman) Newton Ltd. (the “**Holder**”), Galena Biopharma, Inc., a Delaware corporation (the “**Company**”), JGB Collateral LLC, a Delaware limited liability company (the “**Agent**”), as agent for the Holder, and each entity executing this Agreement as a Guarantor.

WHEREAS, the Holder and the Company entered into a Securities Purchase Agreement dated as of May 10, 2016 (as the same may be amended, amended and restated, supplemented or otherwise modified from time to time in accordance with its provisions, the “**Purchase Agreement**”), whereby the Company issued to the Holder, and the Holder acquired from the Company, a 9% Original Issue Discount Senior Secured Debenture due November 10, 2018, in the original principal amount of \$25,530,000 (as the same may be amended, amended and restated, supplemented or otherwise modified from time to time in accordance with its provisions, the “**Original Debenture**”);

WHEREAS, the parties desire that the Original Debenture be amended and restated in substantially the form attached hereto as Exhibit A (the “**A&R Debenture**”); and

NOW, THEREFORE, in consideration of the premises set forth above and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Definitions. Capitalized terms used and not defined in this Agreement shall have the respective meanings given them in the A&R Debenture or the Purchase Agreement, as applicable.

2.

Amendment and Restatement; Reconfirmation of Security Interest and Subsidiary Guaranty.

(a)

Effective on the date hereof, the Original Debenture shall be amended and restated in its entirety in substantially the form of the A&R Debenture.

(b)

Nothing herein or the A&R Debenture shall impair or limit the continuation of the liens and security interests granted to the Holder and/or the Agent under the Security

Agreement or the other Security Documents, which liens are continued in full force and effect pursuant to and as provided therein. The Company and each Guarantor agrees that any reference to the Original Debenture in any Security Document means the Original Debenture as amended and restated pursuant to this Agreement. The Company and each Guarantor acknowledges the continuing existence and priority of all liens and security interests granted, conveyed, and assigned pursuant to the Security Documents in accordance with the terms thereof, and agrees to perform such acts and duly authorize, execute, acknowledge, deliver, file, and record such additional documents and certificates as the Holder requests in order to perfect, preserve, and protect such liens and security interests.

(c)

Each Guarantor acknowledges the amendment and restatement of the Original Debenture pursuant to this Agreement and ratifies, and confirms that, the Subsidiary Guaranty executed by such Guarantor is not released, diminished, impaired, reduced, or otherwise adversely affected by such amendment and restatement and continues to guarantee and assure the full payment and performance of all present and future obligations under the A&R Debentures and the other Transaction Documents.

3.

Amendments to Registration Rights Agreement. Effective on the date hereof, Section 1 of the Registration Rights Agreement is hereby amended and restated by replacing the definition of “Filing Date” with the following:

“Filing Date” means, with respect to the initial Registration Statement required hereunder, September 2, 2016, and, with respect to any additional Registration Statement which may be required pursuant to Section 3(c), as soon as reasonably practicable after the Company is permitted by SEC Guidance to file such additional Registration Statement related to the Registrable Securities.

4.

Amendments to the Series A Warrants.

(a)

Section 2(b) of the Series A Common Stock Purchase Warrant is hereby amended and restated as follows:

b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be \$0.43, subject to adjustment hereunder (the “Exercise Price”).

(b) Section 3(f) of the Series A Common Stock Purchase Warrant is hereby amended and restated as follows:

f) Prepayments. If, at any time while this Warrant is outstanding, the Holder requires the Company to prepay all or a portion of the outstanding principal amount of the Debenture plus accrued and unpaid interest thereon pursuant to Section 2(e) of the Debenture, then the aggregate number of Warrant Shares issuable upon exercise of the unexercised portion of this Warrant prior to such prepayment shall be reduced by multiplying such number by a fraction, the numerator of which is the principal and accrued interest prepaid in accordance with Section 2(e) of the Debenture, and the denominator of which is the total amount of principal funded in cash by the Holder plus accrued interest thereon. Any adjustment made pursuant to this Section 3(f) shall become effective immediately after the Prepayment Date. For the avoidance of doubt, nothing contained in this Section 3(f) shall require the Holder to return any Warrant Shares received by the Holder upon any exercise of this Warrant prior to the applicable prepayment.

(c) Section 3(f) of the Series B Common Stock Purchase Warrant is hereby amended and restated as follows:

f) Prepayments. If, at any time while this Warrant is outstanding, the Holder requires the Company to prepay all or a portion of the outstanding principal amount of the Debenture plus accrued and unpaid interest thereon pursuant to Section 2(e) of the Debenture, then the aggregate number of Warrant Shares issuable upon exercise of the unexercised portion of this Warrant prior to such prepayment shall be reduced by multiplying such number by a fraction, the numerator of which is the principal and accrued interest prepaid in accordance with Section 2(e) of the Debenture, and the denominator of which is the total amount of principal funded in cash by the Holder

plus accrued interest thereon. Any adjustment made pursuant to this Section 3(f) shall become effective immediately after the Prepayment Date. For the avoidance of doubt, nothing contained in this Section 3(f) shall require the Holder to return any Warrant Shares received by the Holder upon any exercise of this Warrant prior to the applicable prepayment.

5.

No Modifications. Except as expressly set forth in this Agreement, nothing contained in this Agreement shall be deemed or construed to amend, supplement or modify any Transaction Document or otherwise affect the rights and obligations of any party thereto, all of which remain in full force and effect.

6.

Representations and Warranties. The Company and each Guarantor represents and warrants, severally and jointly, to the Holder that:

(a)

Authorization; Enforcement. The Company and each Guarantor has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder. The execution and delivery of this Agreement by the Company and each Guarantor and the consummation by each of them of the transactions contemplated hereby have been duly authorized by all necessary action on the part of the Company and each such Guarantor and no further action is required by the Company or any Guarantor in connection herewith. The execution and delivery of the A&R Debenture by the Company and the consummation by it of the transactions contemplated thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company in connection therewith. This Agreement has been (or upon delivery will have been) duly executed by the Company and each Guarantor and, when delivered in accordance with the terms hereof, will constitute the valid and binding obligation of the Company and each Guarantor enforceable against them in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law (clauses (i) – (iii) collectively, the “**Enforceability Limitations**”).

The A&R Debenture has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms thereof, will constitute the valid and binding obligation of the Company enforceable against it in accordance with its terms subject to the Enforceability Limitations.

(b)

No Conflicts. The execution, delivery and performance by the Company and each Guarantor of this Agreement and the execution, delivery and performance by the Company of the A&R Debenture, and the consummation by each of them of the transactions contemplated hereby and thereby do not and will not: (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, securities purchase agreement, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or Governmental Authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected.

(c)

Absence of Defaults. No Event of Default under the Original Debenture or the A&R Debenture has occurred or is continuing. The Company and each Guarantor has complied in all material respects with its respective obligations under the Transaction Documents.

(d)

Solvency. Based on the consolidated financial condition of the Company and its Subsidiaries taken as a whole, after giving effect to the transactions contemplated by this Agreement: (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital

requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the date of this Agreement.

(e)

SEC Reports; Financial Statements. Since May 10, 2016, the Company has timely filed all reports, schedules, forms, statements and other documents required to be filed by it with the Commission pursuant to the reporting requirements of the Exchange Act (all of the foregoing including filings incorporated by reference therein being referred to herein as the “ **SEC Documents** ”). At the times of their respective filings, the SEC Documents complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the Commission promulgated thereunder. The SEC Documents did not, and do not, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. As of their respective dates, the financial statements of the Company included in the SEC Documents complied as to form in all material respects with Regulation S-X and all other published rules and regulations of the Commission. Such financial statements have been prepared in accordance with generally accepted accounting principles (“ **GAAP** ”) applied on a consistent basis during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto or (ii) in the case of unaudited interim statements, to the extent they may not include footnotes or may be condensed or summary statements), and fairly present in all material respects the financial position of the Company and its consolidated subsidiaries as of the dates thereof and the results of operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments). The Company does not currently have any reason to believe that it will not timely file its Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2016.

(f)

Rule 144 Holding Period. Pursuant to Rule 144 promulgated under the Securities Act, the holding period of the A&R Debenture, and any Stock Payment Shares or Conversion Shares issued thereunder, began on May 10, 2016. The Company agrees not to take a position contrary to this paragraph.

(g)

Absence of Material Adverse Effect. Since June 30, 2016, there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect.

7.

Stockholder Approval. The Company shall provide each stockholder entitled to vote at a special meeting of stockholders of the Company (the “**Stockholder Meeting**”), which shall be promptly called and held not later than one hundred eighty (180) days from the date of this Agreement (the “**Stockholder Meeting Deadline**”), a proxy statement, substantially in a form which shall have been previously reviewed by the Holder’s counsel, at the expense of the Company, soliciting each such stockholder’s affirmative vote at the Stockholder Meeting for approval of resolutions (“**Stockholder Resolutions**”) providing for the Company’s issuance of Conversion Shares and Stock Payment Shares as described in the A&R Debenture in accordance with applicable law and the rules and regulations of the Principal Market (as defined in the A&R Debenture) and without any limitation on the number of Conversion Shares or Stock Payment Shares that may be issued thereunder (such affirmative approval being referred to herein as the “**Stockholder Approval**”), and the Company shall use its reasonable best efforts to solicit its stockholders’ approval of such resolutions and to cause the Board of Directors of the Company to recommend to the stockholders that they approve such resolutions. The Company shall be obligated to seek to obtain the Stockholder Approval by the Stockholder Meeting Deadline. If, despite the Company’s reasonable best efforts the Stockholder Approval is not obtained on or prior to the Stockholder Meeting Deadline, the Company shall cause an additional Stockholder Meeting to be held once in each subsequent six-month period thereafter while the Debenture is outstanding until such Stockholder Approval is obtained; provided, however, that the Company shall have no obligation to seek Stockholder Approval more than three (3) times.

8.

Transaction Documents. The parties hereto agree that this Agreement and the A&R Debenture is a Transaction Document. In addition, all references in the Transaction

Documents to the Original Debenture shall be deemed to mean the Original Debenture as amended and restated pursuant to this Agreement.

9.

Successors and Assigns; Survival. This Agreement shall inure to the benefit of and be binding upon each of the parties hereto, and each of their respective successors and assigns. The representations and warranties of the Company and the Guarantors shall survive the consummation of the transactions contemplated by this Agreement.

10.

Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York. The parties agree that the state and federal courts located in New York County, New York shall have exclusive jurisdiction over any action, proceeding or dispute arising out of this Agreement and the parties submit to the personal jurisdiction of such courts.

11.

Counterparts. This Agreement may be executed in any number of counterparts, all of which shall constitute one and the same agreement, and any party hereto may execute this Agreement by signing and delivering one or more counterparts. Delivery of an executed counterpart of this Agreement electronically or by facsimile shall be effective as delivery of an original executed counterpart of this Agreement.

12.

Disclosure. The Company will disclose the material terms of this Agreement and the transactions contemplated hereby by not later than 9:30 a.m. (New York City time) on the Trading Day immediately following the date hereof by means of a Current Report on Form 8-K filed with the Commission. Such Current Report on Form 8-K shall include as exhibits this Agreement and the A&R Debenture. The Company and Holder shall consult with each other in preparing any such Current Report. From and after the filing of the Current Report on Form 8-K with the Commission, the Company acknowledges and agrees that the Holder shall not be in possession of any material, nonpublic information received from the Company, any of its Subsidiaries or any of their respective officers, directors, employees or agents.

13.

Expense Reimbursement. The Company shall on the date hereof deliver to the Holder

by wire transfer of immediately available funds an amount equal to \$20,000 as reimbursement for the fees of Holder's outside legal counsel.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

Galena Biopharma, Inc., as Company

By /s/ Mark W. Schwartz

Name: Mark W. Schwartz

Title: President & CEO

Aphera, Inc., as Guarantor

By /s/ Mark W. Schwartz
Name: Mark W. Schwartz
Title: President

Mills Pharamceuticals, LLC., as Guarantor

By /s/ Mark W. Schwartz
Name: Mark W. Schwartz
Title: President & CEO

JGB (Cayman) Newton Ltd., as Holder

By /s/ Brett Cohen
Name: Brett Cohen
Title: President

JGB Collateral LLC, as Agent

By /s/ Brett Cohen
Name: Brett Cohen
Title: President

EXHIBIT A

[filed separately]