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

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**FORM 8-K**

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

Date of report (Date of earliest event reported): **November 9, 2016**

**AXSOME THERAPEUTICS, INC.**

(Exact name of registrant as specified in charter)

**Delaware**  
(State or other jurisdiction of incorporation)

**001-37635**  
(Commission  
File Number)

**45-4241907**  
(IRS Employer  
Identification No.)

**25 Broadway, 9th Floor**  
**New York, New York 10004**  
(Address of principal executive offices)

**(212) 332-3241**  
(Registrant's telephone number, including area code)

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

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

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

On November 9, 2016 (the “Effective Date”), Axsome Therapeutics, Inc., a Delaware corporation (the “Company”) entered into a Loan and Security Agreement (the “Loan Agreement”) with Silicon Valley Bank (“SVB”).

The Loan Agreement established a term loan facility in the aggregate principal amount of up to \$20,000,000 (the “Term Loan”). An initial \$10,000,000 (the “Term A Loan Advance”) will be funded to the Company subsequent to the Effective Date but no later than November 15, 2016. Availability of \$5,000,000 under the second term advance (the “Term B Loan Advance”) is conditioned upon the achievement of both a clinical and financial milestone (the “Milestone Event” and the “Equity Event”, respectively, and together, the “Term B Event”) on or prior to November 9, 2017. The Milestone Event requires the Company’s receipt of positive interim results of the Company’s Phase 3 clinical trial of AXS-02 in complex regional pain syndrome (the “CREATE-1 Study”), while the Equity Event requires that the Company receive unrestricted and unencumbered net cash proceeds of at least \$30,000,000 from the issuance and sale by the Company of its equity securities to investors. Availability of \$5,000,000 under the third term advance (the “Term C Loan Advance” and collectively with the Term A Loan Advance and the Term B Loan Advance, the “Loan Advances”) is tied to achievement of the Term B Event, as well as the Company’s receipt of positive data with respect to the Company’s CREATE-1 Study by December 31, 2017 sufficient to file a new drug application with the U.S. Food and Drug Administration.

The Loan Advances mature on November 1, 2020 and have an interest-only monthly payment period of 12 months after the Effective Date, which may be extended to 18 months upon receipt by the Company of the Term B Loan Advance. Following the interest-only payment period, the Company will begin making monthly payments of principal and interest until the maturity date. Interest will accrue on the unpaid principal balance of the outstanding Loan Advances at a floating per annum rate of 4.50% above the prime rate.

Subject to certain exceptions, the Loan Agreement contains covenants prohibiting the Company from, among other things: (a) conveying, selling, leasing, transferring or otherwise disposing of its properties or assets; (b) liquidating or dissolving; (c) engaging in any business other than the business currently engaged in or reasonably related thereto by it or any of its subsidiaries; (d) engaging in business combinations or acquisitions; (e) incurrence of additional indebtedness; (f) allowing any lien or encumbrance on any of its property; (g) paying any dividends; and (h) making payment on subordinated debt.

The Term Loan is secured by a first priority perfected security interest in substantially all of the assets of Company, excluding the intellectual property of the Company and any interest greater than 65% of the issued and outstanding shares of capital stock owned by the Company of its Australian and UK subsidiaries, whether currently owned or hereafter acquired. Under the Loan Agreement, the Company and its subsidiaries may not grant a security interest in their intellectual property to any party.

In connection with the Loan Agreement, the Company issued to SVB and Life Sciences Loans, LLC (each, a “Holder”) a warrant, dated November 9, 2016 (individually a “Warrant”, and collectively, the “Warrants”) to purchase shares of the Company’s common stock, \$0.0001 par value per share (the “Common Stock”) at a price per share equal to \$7.408333. Each of the Warrants are exercisable for 32,614 shares of Common Stock (the “Initial Shares”) upon the Effective Date of the Loan Agreement. Each of the Warrants further provides that it shall automatically become exercisable for an additional 6,989 shares of Common Stock upon the making of the Term B Loan Advance, and for an additional 6,988 shares of Common Stock upon the making of the Term C Loan Advance. Each Holder may exercise any portion of the Warrant by cash exercise or a cashless exercise as determined on a net issuance basis. The Warrants are exercisable until November 8, 2023 and will be exercised automatically on a net issuance basis if not exercised prior to the expiration date and if the then-current fair market value of one share of Common Stock is greater than the exercise price then in effect.

The foregoing descriptions of the Warrants and the Loan Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of the Warrants and the Loan Agreement, copies of which are filed as Exhibits 4.1 and 4.2, and 10.1, respectively, to this Form 8-K and are incorporated herein by reference.

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

The information set forth in Item 1.01 of this Current Report on Form 8-K is incorporated by reference into this Item 2.03.

**Item 3.02. Unregistered Sales of Equity Securities.**

To the extent required by Item 3.02 of Form 8-K, the information regarding the Warrants set forth under Item 1.01 of this Form 8-K are incorporated by reference in this Item 3.02. The Company issued to each Holder a Warrant in reliance on the exemption from registration provided for under Section 4(a) (2) of the Securities Act of 1933, as amended (the "Securities Act"). The Company relied on this exemption from registration based in part on the representations made by each Holder, including the representations with respect to each Holder's status as an accredited investor, as such term is defined in Rule 501(a) of the Securities Act, and each Holder's investment intent.

**Item 8.01. Other Events.**

On November 10, 2016, the Company issued a press release announcing the signing of the Loan Agreement. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
4.1	Warrant Agreement between Axsome Therapeutics, Inc. and Silicon Valley Bank, dated November 9, 2016.
4.2	Warrant Agreement between Axsome Therapeutics, Inc. and Life Sciences Loans, LLC, dated November 9, 2016.
10.1	Loan and Security Agreement, dated as of November 9, 2016, by and between Axsome Therapeutics, Inc., and Silicon Valley Bank.
99.1	Axsome Therapeutics, Inc. Press Release dated November 10, 2016.

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.

AXSOME THERAPEUTICS, INC.

Date: November 10, 2016

By: /s/ Herriot Tabuteau, M.D.  
Name: Herriot Tabuteau, M.D.  
Title: Chief Executive Officer

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

#### WARRANT TO PURCHASE STOCK

**Company:** Axsome Therapeutics, Inc., a Delaware corporation

**Number of Shares:** As set forth in Paragraph A below

**Type/Series of Stock:** Common Stock, \$0.0001 par value per share

**Warrant Price:** \$7.408333 per Share, subject to adjustment

**Issue Date:** November 9, 2016

**Expiration Date:** November 8, 2023      **See also Section 5.1(b).**

**Credit Facility:** This Warrant to Purchase Stock (“**Warrant**”) is issued in connection with that certain Loan and Security Agreement of even date herewith between Silicon Valley Bank and the Company (as amended and/or modified and in effect from time to time, the “**Loan Agreement**”).

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, SILICON VALLEY BANK (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, “**Holder**”) is entitled to purchase up to such number of fully paid and non-assessable shares of the above-stated Type/Series of Stock (the “**Class**”) of the above-named company (the “**Company**”) as determined pursuant to Paragraph A below, at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant. Reference is made to Section 5.4 of this Warrant whereby Silicon Valley Bank shall transfer this Warrant to its parent company, SVB Financial Group.

A. **Number of Shares.** This Warrant shall be exercisable for the Initial Shares, plus the Additional Shares, if any (collectively, and as may be adjusted from time to time in accordance with the provisions of this Warrant, the “**Shares**”).

(1) **Initial Shares.** As used herein, “**Initial Shares**” means 32,614 shares of the Class, subject to adjustment from time to time in accordance with the provisions of this Warrant.

(2) **Additional Shares.** All shares, if any, for which this Warrant shall become exercisable pursuant to this Paragraph A(2) and as may be adjusted from time to time in accordance with the provisions of this Warrant, are referred to herein collectively as the “**Additional Shares.**”

(a) Upon the making (if any) of the Term B Loan Advance (as defined in the Loan Agreement) to the Company, this Warrant automatically shall become exercisable for 6,989 additional shares of the Class, as such number may be adjusted from time to time in accordance with the provisions of this Warrant (including, without limitation, adjustments in respect of events occurring prior to the date, if any, on which this Warrant becomes exercisable for such additional shares as if they were “Shares” hereunder at all times from and after the Issue Date).

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(b) Upon the making (if any) of the Term C Loan Advance (as defined in the Loan Agreement) to the Company, this Warrant automatically shall become exercisable for 6,988 additional shares of the Class, as such number may be adjusted from time to time in accordance with the provisions of this Warrant (including, without limitation, adjustments in respect of events occurring prior to the date, if any, on which this Warrant becomes exercisable for such additional shares as if they were “Shares” hereunder at all times from and after the Issue Date).

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

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

where:

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

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

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If shares of the Class are then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a “Trading Market”), the fair market value of a Share shall be the closing price or last sale price of a share of the Class reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If shares of the Class are not then traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver, or

cause to be delivered, to Holder a certificate, or evidence of a book-entry interest, representing the Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, “**Acquisition**” means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license (other than a license permitted under Section 7.1 of the Loan Agreement), or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company’s domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company’s (or the surviving or successor entity’s) outstanding voting power immediately after such merger, consolidation or reorganization (or, if such Company stockholders beneficially own a majority of the outstanding voting power of the surviving or successor entity as of immediately after such merger, consolidation or reorganization, such surviving or successor entity is not the Company); or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company’s then-total outstanding combined voting power.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company’s stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a “**Cash/Public Acquisition**”), and the fair market value of one Share as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date immediately prior to such Cash/Public Acquisition, and Holder has not exercised this Warrant pursuant to Section 1.1 or Section 1.2 above as to all Shares, then this Warrant shall automatically be deemed to be Cashless Exercised pursuant to Section 1.2 above as to all Shares not previously exercised effective immediately prior to and contingent upon the consummation of a Cash/Public Acquisition. In connection with such Cashless Exercise, Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as of the date thereof and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon exercise. In the event of a Cash/Public Acquisition where the fair market value of one Share as determined in accordance with Section 1.3 above would be less than the Warrant Price in effect immediately prior to such Cash/Public Acquisition, then this Warrant will expire immediately prior to the consummation of such Cash/Public Acquisition.

(c) Upon the closing of any Acquisition other than a Cash/Public Acquisition, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(d) As used in this Warrant, “**Marketable Securities**” means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in a Trading Market, and (iii) following the closing of such Acquisition, Holder would not be restricted from publicly re-selling all of the issuer’s shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise this Warrant in full on or prior to the closing of such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

## SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

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

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company’s expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from



Holder, furnish Holder with a certificate of its Chief Financial Officer or other Company officer having similar duties, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

### SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) The initial Warrant Price first set forth above is not greater than the average closing price of a share of the Class on the principal Trading Market in which shares of the Class are traded as of the Issue Date hereof for the thirty (30) consecutive trading days ending on the trading day immediately prior to the Issue Date hereof.

(b) All Shares which may be issued upon the exercise of this Warrant shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class and other securities as will be sufficient to permit the exercise in full of this Warrant.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up;

then, in connection with each such event, the Company shall give Holder notice thereof at the same time and in the same manner as Holder notifies the holders of the outstanding shares of the Class of such event.

### SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the Shares to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Stockholder Rights. Without limiting any provision of this Warrant, Holder agrees that as a Holder of this Warrant it will not have any rights (including, but not limited to, voting rights) as a stockholder of the Company with respect to the Shares issuable hereunder unless and until the exercise of this Warrant and then only with respect to the Shares issued on such exercise.

#### SECTION 5. MISCELLANEOUS.

5.1 Term; Automatic Cashless Exercise Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Pacific time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares issued upon such exercise to Holder.

5.2 Legends. Each certificate evidencing Shares shall be imprinted with a legend in substantially the following form:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO SILICON VALLEY BANK DATED NOVEMBER 9, 2016, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issued upon exercise of this Warrant may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to SVB Financial Group (Silicon Valley Bank’s parent company) or any other affiliate of Holder, provided that any such transferee is an “accredited investor” as defined in Regulation D promulgated under the Act.

5.4 Transfer Procedure. After receipt by Silicon Valley Bank of the executed Warrant, Silicon Valley Bank will transfer all of this Warrant to its parent company, SVB Financial Group. By its acceptance of this Warrant, SVB Financial Group hereby makes to the Company each of the representations and warranties set forth in Section 4 hereof and agrees to be bound by all of the terms and conditions of this Warrant as if the original Holder hereof. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, SVB Financial Group and any subsequent Holder may transfer all or part of this Warrant or the Shares issued upon exercise of this Warrant to any transferee, provided, however, in connection with any such transfer, SVB Financial Group or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee other than SVB Financial Group shall agree in writing with the Company to be bound by all of the terms and conditions of this Warrant.

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3<sup>rd</sup>) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

SVB Financial Group  
Attn: Treasury Department  
3003 Tasman Drive, HC 215  
Santa Clara, CA 95054  
Telephone: (408) 654-7400  
Facsimile: (408) 988-8317  
Email address: derivatives@svb.com

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

Axsome Therapeutics, Inc.  
Attn: Chief Executive Officer  
25 Broadway, 9<sup>th</sup> Floor  
New York, NY 10004  
Telephone: (212) 332-3241  
Facsimile: (212) 320-0245  
Email: htabuteau@axsome.com

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

DLA Piper LLP (US)  
Attn: Jeff Baglio, Esq.  
4365 Executive Drive Suite 1100  
San Diego, California 92121-2133  
Facsimile: (858) 638 5058  
Email: jeff.baglio@dlapiper.com

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

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

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

5.11 Business Days. “**Business Day**” is any day that is not a Saturday, Sunday or a day on which Silicon Valley Bank is closed.

[Remainder of page left blank intentionally]  
[Signature page follows]

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

“COMPANY”

AXSOME THERAPEUTICS, INC.

By: /s/ Herriot Tabuteau, M.D.

Name: Herriot Tabuteau, M.D.  
(Print)

Title: Chief Executive Officer

“HOLDER”

SILICON VALLEY BANK

By: /s/ Ryan Roller

Name: Ryan Roller  
(Print)

Title: Vice President

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right to purchase \_\_\_\_\_ shares of the Common/Series \_\_\_\_\_ Preferred [circle one] Stock of (the "**Company**") in accordance with the attached Warrant To Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

- check in the amount of \$ \_\_\_\_\_ payable to order of the Company enclosed herewith
- Wire transfer of immediately available funds to the Company's account
- Cashless Exercise pursuant to Section 1.2 of the Warrant
- Other [Describe]

2. Please issue a certificate or certificates representing the Shares in the name specified below:

\_\_\_\_\_  
Holder's Name

\_\_\_\_\_

\_\_\_\_\_

(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in Section 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

\_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

(Date): \_\_\_\_\_

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THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

#### WARRANT TO PURCHASE STOCK

**Company:** Axsome Therapeutics, Inc., a Delaware corporation

**Number of Shares:** As set forth in Paragraph A below

**Type/Series of Stock:** Common Stock, \$0.0001 par value per share

**Warrant Price:** \$7.408333 per Share, subject to adjustment

**Issue Date:** November 9, 2016

**Expiration Date:** November 8, 2023      **See also Section 5.1(b).**

**Credit Facility:** This Warrant to Purchase Stock (“**Warrant**”) is issued in connection with that certain Loan and Security Agreement of even date herewith between Silicon Valley Bank and the Company (as amended and/or modified and in effect from time to time, the “**Loan Agreement**”) and the participation therein of Life Science Loans, LLC pursuant to an agreement between Silicon Valley Bank and Life Science Loans, LLC.

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, LIFE SCIENCE LOANS, LLC (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, “**Holder**”) is entitled to purchase up to such number of fully paid and non-assessable shares of the above-stated Type/Series of Stock (the “**Class**”) of the above-named company (the “**Company**”) as determined pursuant to Paragraph A below, at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant.

A. **Number of Shares.** This Warrant shall be exercisable for the Initial Shares, plus the Additional Shares, if any (collectively, and as may be adjusted from time to time in accordance with the provisions of this Warrant, the “**Shares**”).

(1) **Initial Shares.** As used herein, “**Initial Shares**” means 32,614 shares of the Class, subject to adjustment from time to time in accordance with the provisions of this Warrant.

(2) **Additional Shares.** All shares, if any, for which this Warrant shall become exercisable pursuant to this Paragraph A(2) and as may be adjusted from time to time in accordance with the provisions of this Warrant, are referred to herein collectively as the “**Additional Shares.**”

(a) Upon the making (if any) of the Term B Loan Advance (as defined in the Loan Agreement) to the Company, this Warrant automatically shall become exercisable for 6,989 additional shares of the Class, as such number may be adjusted from time to time in accordance with the provisions of this Warrant (including, without limitation, adjustments in respect of events occurring prior to the date, if any, on which this Warrant becomes exercisable for such additional shares as if they were “Shares” hereunder at all times from and after the Issue Date).



(b) Upon the making (if any) of the Term C Loan Advance (as defined in the Loan Agreement) to the Company, this Warrant automatically shall become exercisable for 6,988 additional shares of the Class, as such number may be adjusted from time to time in accordance with the provisions of this Warrant (including, without limitation, adjustments in respect of events occurring prior to the date, if any, on which this Warrant becomes exercisable for such additional shares as if they were “Shares” hereunder at all times from and after the Issue Date).

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

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

where:

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

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

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If shares of the Class are then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a “Trading Market”), the fair market value of a Share shall be the closing price or last sale price of a share of the Class reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If shares of the Class are not then traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver, or cause to be delivered, to Holder a certificate, or evidence of a book-entry interest, representing the

Shares issued to Holder upon such exercise and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, “**Acquisition**” means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license (other than a license permitted under Section 7.1 of the Loan Agreement), or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company’s domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company’s (or the surviving or successor entity’s) outstanding voting power immediately after such merger, consolidation or reorganization (or, if such Company stockholders beneficially own a majority of the outstanding voting power of the surviving or successor entity as of immediately after such merger, consolidation or reorganization, such surviving or successor entity is not the Company); or (iii) any sale or other transfer by the stockholders of the Company of shares representing at least a majority of the Company’s then-total outstanding combined voting power.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company’s stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a “**Cash/Public Acquisition**”), and the fair market value of one Share as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date immediately prior to such Cash/Public Acquisition, and Holder has not exercised this Warrant pursuant to Section 1.1 or Section 1.2 above as to all Shares, then this Warrant shall automatically be deemed to be Cashless Exercised pursuant to Section 1.2 above as to all Shares not previously exercised effective immediately prior to and contingent upon the consummation of a Cash/Public Acquisition. In connection with such Cashless Exercise, Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as of the date thereof and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon exercise. In the event of a Cash/Public Acquisition where the fair market value of one Share as determined in accordance with Section 1.3 above would be less than the Warrant Price in effect immediately prior to such Cash/Public Acquisition, then this Warrant will expire immediately prior to the consummation of such Cash/Public Acquisition.

(c) Upon the closing of any Acquisition other than a Cash/Public Acquisition, the acquiring, surviving or successor entity shall assume the obligations of this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(d) As used in this Warrant, “**Marketable Securities**” means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in a Trading Market, and (iii) following the closing of such Acquisition, Holder would not be restricted from publicly re-selling all of the issuer’s shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise this Warrant in full on or prior to the closing of such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

## SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

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

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company’s expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer or other Company officer having

similar duties, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

### SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) The initial Warrant Price first set forth above is not greater than the average closing price of a share of the Class on the principal Trading Market in which shares of the Class are traded as of the Issue Date hereof for the thirty (30) consecutive trading days ending on the trading day immediately prior to the Issue Date hereof.

(b) All Shares which may be issued upon the exercise of this Warrant shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws. The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class and other securities as will be sufficient to permit the exercise in full of this Warrant.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up;

then, in connection with each such event, the Company shall give Holder notice thereof at the same time and in the same manner as Holder notifies the holders of the outstanding shares of the Class of such event.

### SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. This Warrant and the Shares to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Stockholder Rights. Without limiting any provision of this Warrant, Holder agrees that as a Holder of this Warrant it will not have any rights (including, but not limited to, voting rights) as a stockholder of the Company with respect to the Shares issuable hereunder unless and until the exercise of this Warrant and then only with respect to the Shares issued on such exercise.

#### SECTION 5. MISCELLANEOUS.

5.1 Term; Automatic Cashless Exercise Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Pacific time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares issued upon such exercise to Holder.

5.2 Legends. Each certificate evidencing Shares shall be imprinted with a legend in substantially the following form:

THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO LIFE SCIENCE LOANS, LLC DATED NOVEMBER 9, 2016, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issued upon exercise of this Warrant may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not require Holder to provide an opinion of counsel if the transfer is to an affiliate of Holder, provided that such affiliate is an "accredited investor" as defined in Regulation D promulgated under the Act.

5.4 Transfer Procedure. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, Holder may transfer all or part of this Warrant or the Shares issued upon exercise of this Warrant to any transferee, provided, however, in connection with any such transfer, Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee shall agree in writing with the Company to be bound by all of the terms and conditions of this Warrant.

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3<sup>rd</sup>) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

Life Science Loans, LLC  
c/o Chief Financial Officer  
3720 Carillon Point  
Kirkland, Washington 98033-7455  
Attention: Trent Dawson  
Telephone: (425) 952-3951

Email: tdawson@westrivermgmt.com

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

Perkins Coie LLP  
1201 Third Avenue, Suite 4800  
Seattle, Washington 98101-3099  
Attention: David C. Clarke  
Telephone: (206) 359-8612  
Email: dclarke@perkinscoie.com

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

Axsome Therapeutics, Inc.  
Attn: Chief Executive Officer  
25 Broadway, 9<sup>th</sup> Floor  
New York, NY 10004  
Telephone: (212) 332-3241  
Facsimile: (212) 320-0245  
Email: htabuteau@axsome.com

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

DLA Piper LLP (US)  
Attn: Jeff Baglio, Esq.  
4365 Executive Drive Suite 1100  
San Diego, California 92121-2133  
Facsimile: (858) 638 5058  
Email: jeff.baglio@dlapiper.com

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

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

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

5.11 Business Days. "**Business Day**" is any day that is not a Saturday, Sunday or a day on which banks in Washington are closed.

[Remainder of page left blank intentionally]  
[Signature page follows]



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

“COMPANY”

AXSOME THERAPEUTICS, INC.

By: /s/ Herriot Tabuteau, M.D.

Name: Herriot Tabuteau, M.D.  
(Print)

Title: Chief Executive Officer

“HOLDER”

LIFE SCIENCE LOANS, LLC

By: Loan Manager, LLC, its  
Managing Member

By: /s/ Trent Dawson  
Trent Dawson, Chief Financial Officer

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned Holder hereby exercises its right to purchase \_\_\_\_\_ shares of the Common/Series \_\_\_\_\_ Preferred [circle one] Stock of (the "**Company**") in accordance with the attached Warrant To Purchase Stock, and tenders payment of the aggregate Warrant Price for such shares as follows:

- check in the amount of \$ \_\_\_\_\_ payable to order of the Company enclosed herewith
- Wire transfer of immediately available funds to the Company's account
- Cashless Exercise pursuant to Section 1.2 of the Warrant
- Other [Describe]

2. Please issue a certificate or certificates representing the Shares in the name specified below:

\_\_\_\_\_

Holder's Name

\_\_\_\_\_

\_\_\_\_\_

(Address)

3. By its execution below and for the benefit of the Company, Holder hereby restates each of the representations and warranties in Section 4 of the Warrant to Purchase Stock as of the date hereof.

HOLDER:

\_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

(Date): \_\_\_\_\_

\_\_\_\_\_

## LOAN AND SECURITY AGREEMENT

**THIS LOAN AND SECURITY AGREEMENT** (this “**Agreement**”) dated as of November 9, 2016 (the “**Effective Date**”) between **SILICON VALLEY BANK**, a California corporation with a loan production office located at 275 Grove Street, Suite 2-200, Newton, Massachusetts 02466 (“**Bank**”), and **AXSOME THERAPEUTICS, INC.**, a Delaware corporation (“**Borrower**”), provides the terms on which Bank shall lend to Borrower and Borrower shall repay Bank. The parties agree as follows:

**1. ACCOUNTING AND OTHER TERMS**

Accounting terms not defined in this Agreement shall be construed following GAAP. Calculations and determinations must be made following GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein.

**2. LOAN AND TERMS OF PAYMENT**

**2.1 Promise to Pay.** Borrower hereby unconditionally promises to pay Bank the outstanding principal amount of all Credit Extensions and accrued and unpaid interest thereon as and when due in accordance with this Agreement.

**2.1.1 Term Loan Advances.**

(a) **Availability.** Subject to the terms and conditions of this Agreement, Bank shall make one (1) advance (the “**Term A Loan Advance**”) available to Borrower as soon as practicable, but no later than November 15, 2016, in an original principal amount of Ten Million Dollars (\$10,000,000.00). Subject to the terms and conditions of this Agreement, during Draw Period B, Bank shall make one (1) advance (the “**Term B Loan Advance**”) available to Borrower in an original principal amount not to exceed Five Million Dollars (\$5,000,000.00). Subject to the terms and conditions of this Agreement, during Draw Period C, Bank shall make one (1) advance (the “**Term C Loan Advance**”) available to Borrower in an original principal amount not to exceed Five Million Dollars (\$5,000,000.00). The Term A Loan Advance, the Term B Loan Advance, and the Term C Loan Advance are hereinafter referred to singly as the “**Term Loan Advance**” and collectively as the “**Term Loan Advances.**” The aggregate principal amount of all Term Loan Advances shall not exceed Twenty Million Dollars (\$20,000,000.00). After repayment, no Term Loan Advance (or any portion thereof) may be reborrowed.

(b) **Interest Period.** Commencing on the first (1<sup>st</sup>) Payment Date of the month following the month in which the Funding Date of the applicable Term Loan Advance occurs, and continuing on each Payment Date thereafter, Borrower shall make monthly payments of interest on the principal amount of each Term Loan Advance at the rate set forth in Section 2.2(a).

(c) **Repayment.** Commencing on the Amortization Date, and continuing on each Payment Date thereafter, Borrower shall repay the Term Loan Advances in (i) equal consecutive monthly installments of principal based on the applicable Repayment Schedule, plus (ii) monthly payments of accrued interest at the rate set forth in Section 2.2(a). All outstanding principal and accrued and unpaid interest with respect to the Term Loan Advances, and all other outstanding Obligations with respect to the Term Loan Advances, are due and payable in full on the Term Loan Maturity Date.

(d) **Permitted Prepayment of Term Loan Advances.** Borrower shall have the option to prepay all, but not less than all, of the Term Loan Advances advanced by Bank under this Agreement, provided Borrower (i) provides written notice to Bank of its election to prepay the Term Loan Advances at least thirty (30) days prior to such prepayment, and (ii) pays, on the date of such prepayment (A) all outstanding principal plus accrued and unpaid interest, (B) the Final Payment, (C) the Prepayment Premium, plus (D) all other sums, if any, that shall have become due and payable, including interest at the Default Rate with respect to any past due amounts.

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(e) Mandatory Prepayment Upon an Acceleration. If a Term Loan Advance is accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Bank an amount equal to the sum of: (i) all outstanding principal plus accrued and unpaid interest, (ii) the Final Payment, (iii) the Prepayment Premium, plus (iv) all other sums, if any, that shall have become due and payable, including interest at the Default Rate with respect to any past due amounts.

## 2.2 Payment of Interest on the Credit Extensions.

(a) Interest Rate. Subject to Section 2.2(b), the principal amount outstanding for each Term Loan Advance shall accrue interest at a floating per annum rate equal to four and one-half of one percent (4.50%) above the Prime Rate, which interest shall be payable monthly in accordance with Section 2.2(d) below.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall bear interest at a rate per annum which is five percent (5.0%) above the rate that is otherwise applicable thereto (the “**Default Rate**”). Fees and expenses which are required to be paid by Borrower pursuant to the Loan Documents (including, without limitation, Bank Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 2.2(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Bank.

(c) Adjustment to Interest Rate. Changes to the interest rate of any Credit Extension based on changes to the Prime Rate shall be effective on the effective date of any change to the Prime Rate and to the extent of any such change.

(d) Payment; Interest Computation. Interest is payable monthly on the Payment Date and shall be computed on the basis of a 360-day year for the actual number of days elapsed. In computing interest, (i) all payments received after 12:00 p.m. Eastern time on any day shall be deemed received at the opening of business on the next Business Day, and (ii) the date of the making of any Credit Extension shall be included and the date of payment shall be excluded; provided, however, that if any Credit Extension is repaid on the same day on which it is made, such day shall be included in computing interest on such Credit Extension.

## 2.3 Fees. Borrower shall pay to Bank:

(a) Final Payment. The Final Payment, when due hereunder;

(b) Prepayment Premium. The Prepayment Premium, when due hereunder; and

(c) Bank Expenses. All Bank Expenses (including reasonable attorneys’ fees and expenses for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due (or, if no stated due date, upon demand by Bank).

(d) Good Faith Deposit. Borrower has paid to Bank a deposit of Twenty-Five Thousand Dollars (\$25,000.00) (the “**Good Faith Deposit**”) to initiate Bank’s due diligence review process, which Good Faith Deposit shall be used to pay Bank Expenses as of the Effective Date.

(e) Fees Fully Earned. Unless otherwise provided in this Agreement or in a separate writing by Bank, Borrower shall not be entitled to any credit, rebate, or repayment of any fees earned by Bank pursuant to this Agreement notwithstanding any termination of this Agreement or the suspension or termination of Bank’s obligation to make loans and advances hereunder. Bank may deduct amounts owing by Borrower under the clauses of this Section 2.3 pursuant to the terms of Section 2.4(c). Bank shall provide Borrower written notice of deductions made from the Designated Deposit Account pursuant to the terms of the clauses of this Section 2.3.

## 2.4 Payments; Application of Payments; Debit of Accounts.

(a) All payments to be made by Borrower under any Loan Document shall be made in immediately available funds in Dollars, without setoff or counterclaim, before 12:00 p.m. Eastern time on the date when due. Payments of principal and/or interest received after 12:00 p.m. Eastern/ time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment shall be due the next Business Day, and additional fees or interest, as applicable, shall continue to accrue until paid.

(b) Bank has the exclusive right to determine the order and manner in which all payments with respect to the Obligations may be applied. Borrower shall have no right to specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement.

(c) Bank may debit any of Borrower's deposit accounts, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes Bank when due. These debits shall not constitute a set-off.

## 3. CONDITIONS OF LOANS

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

- (a) duly executed original signatures to the Loan Documents;
- (b) the Operating Documents and long-form good standing certificates of Borrower certified by the Secretary of State (or equivalent agency) of Borrower's jurisdiction of organization or formation and each jurisdiction in which Borrower is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;
- (c) duly executed original signatures to the completed Borrowing Resolutions for Borrower;
- (d) certified copies, dated as of a recent date, of financing statement searches, as Bank may request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;
- (e) the Perfection Certificate of Borrower, together with the duly executed original signature thereto;
- (f) evidence satisfactory to Bank that the insurance policies and endorsements required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing lender loss payable and/or additional insured clauses or endorsements in favor of Bank; and
- (g) payment of the fees and Bank Expenses then due as specified in Section 2.3 hereof.

**3.2 Conditions Precedent to all Credit Extensions.** Bank's obligations to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

- (a) except as otherwise provided in Section 3.4, timely receipt of an executed Payment/Advance Form;
- (b) the representations and warranties in this Agreement shall be true, accurate, and complete in all material respects on the date of the Payment/Advance Form and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that

already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in this Agreement remain true, accurate, and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; and

(c) Bank determines to its reasonable satisfaction that there has not been any material impairment in the general affairs, management, results of operation, financial condition or the prospect of repayment of the Obligations.

**3.3 Covenant to Deliver.** Borrower agrees to deliver to Bank each item required to be delivered to Bank under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and the making of any Credit Extension in the absence of a required item shall be in Bank's sole discretion.

**3.4 Procedures for Borrowing.** Subject to the prior satisfaction of all other applicable conditions to the making of a Credit Extension set forth in this Agreement, to obtain a Credit Extension, Borrower shall notify Bank (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 p.m. Eastern time at least two (2) Business Days before the proposed Funding Date of the Credit Extension. Together with any such electronic or facsimile notification, Borrower shall deliver to Bank by electronic mail or facsimile a completed Payment/Advance Form executed by a Responsible Officer or his or her designee. Bank may rely on any telephone notice given by a person whom Bank believes is a Responsible Officer or designee. Bank shall credit the Credit Extensions to the Designated Deposit Account. Bank may make Credit Extensions under this Agreement based on instructions from a Responsible Officer or his or her designee or without instructions if the Credit Extensions are necessary to meet Obligations which have become due.

#### **4. CREATION OF SECURITY INTEREST**

**4.1 Grant of Security Interest.** Borrower hereby grants Bank, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Bank, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Bank's Lien in this Agreement).

If this Agreement is terminated, Bank's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (y) this Agreement is terminated, Bank shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment for Bank Services, if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then at least one hundred five percent (105.0%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then at least one hundred ten percent (110.0%), of the Dollar Equivalent of the face amount of all such Letters of Credit plus, in each case, all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its business judgment), to secure all of the Obligations relating to such Letters of Credit.

**4.2 Priority of Security Interest.** Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Bank's Lien under this Agreement). If Borrower shall acquire a commercial tort claim, Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof and grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank.

**4.3 Authorization to File Financing Statements.** Borrower hereby authorizes Bank to file financing statements, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Bank's interest or rights hereunder, including a notice that any disposition of the Collateral, by either Borrower or any other Person, in violation of this Agreement, shall be deemed to violate the rights of Bank under the Code.

## **5. REPRESENTATIONS AND WARRANTIES**

Borrower represents and warrants as follows:

**5.1 Due Organization, Authorization; Power and Authority.** Borrower is duly existing and in good standing as a Registered Organization in its jurisdiction of formation and is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its business or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a material adverse effect on Borrower's business. In connection with this Agreement, Borrower has delivered to Bank a completed certificate signed by Borrower, entitled "Perfection Certificate". Borrower represents and warrants to Bank that (a) Borrower's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof; (b) Borrower is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (c) the Perfection Certificate accurately sets forth Borrower's organizational identification number or accurately states that Borrower has none; (d) the Perfection Certificate accurately sets forth Borrower's place of business, or, if more than one, its chief executive office as well as Borrower's mailing address (if different than its chief executive office); (e) Borrower (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificate pertaining to Borrower and each of its Subsidiaries is accurate and complete (it being understood and agreed that Borrower may from time to time update certain information in the Perfection Certificate after the Effective Date to the extent of any notice required or permitted by one or more specific provisions in this Agreement). If Borrower is not now a Registered Organization but later becomes one, Borrower shall promptly notify Bank of such occurrence and provide Bank with Borrower's organizational identification number.

The execution, delivery and performance by Borrower of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or any of its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect (or are being obtained pursuant to Section 6.1(b))) or (v) conflict with, contravene, constitute a default or breach under, or result in or permit the termination or acceleration of, any material agreement by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a material adverse effect on Borrower's business.

**5.2 Collateral.** Borrower has good title to, rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens. Borrower has no Collateral Accounts at or with any bank or financial institution other than Bank or Bank's Affiliates except for the Collateral Accounts described in the Perfection Certificate delivered to Bank in connection herewith and which Borrower has taken such actions as are necessary to give Bank a perfected security interest therein, pursuant to the terms of Section 6.6(b) to the extent required under Section 6.6(b) hereof. The Accounts are bona fide, existing obligations of the Account Debtors.

The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate, locations disclosed to Bank pursuant to Section 7.2, and locations of Experimental Compounds in the ordinary course of business in connection with clinical trials. None of the components of the Collateral shall be maintained at locations other than: (i) locations as provided in the Perfection Certificate, (ii) locations as permitted pursuant to Section 7.2, (iii) locations of mobile equipment, including phones, tablets and computers with employees and consultants in the ordinary course of business, (iv) locations where Collateral may be temporarily located for sales, testing or demonstration purposes in the ordinary course of business, (v) locations where biopharmaceutical compounds and therapeutic materials are located in the ordinary course of business in connection with clinical trials, and (vi) other locations where not more than Fifty Thousand Dollars (\$50,000.00) of Collateral in the aggregate may be located at any time.

All Inventory is in all material respects of good and marketable quality, free from material defects, except for Inventory for which adequate reserves have been made in accordance with GAAP. The foregoing representation shall not apply to Inventory consisting Experimental Compounds.

Borrower is the sole owner of the Intellectual Property which it owns or purports to own except for (a) non-exclusive licenses granted to its third parties in the ordinary course of business, (b) over-the-counter software and software that is commercially available to the public, (c) licenses that are disclosed in writing to Bank pursuant to Section 6.7(b), (d) material Intellectual Property licensed to Borrower and noted on the Perfection Certificate, and (e) immaterial Intellectual Property licensed to Borrower in the ordinary course of business. To the best of Borrower's knowledge, each Patent (other than patent applications) which it owns or purports to own and which is material to Borrower's business is valid and enforceable, and no part of the Intellectual Property which Borrower owns or purports to own and which is material to Borrower's business has been judged invalid or unenforceable, in whole or in part. To the best of Borrower's knowledge, no claim has been made that any part of the Intellectual Property violates the rights of any third party except to the extent such claim would not reasonably be expected to have a material adverse effect on Borrower's business.

Except as noted on the Perfection Certificate, Borrower is not a party to, nor is it bound by, any Restricted License.

**5.3 Litigation.** There are no actions or proceedings pending or, to the knowledge of any Responsible Officer, threatened in writing by or against Borrower or any of its Subsidiaries involving more than, individually or in the aggregate, One Hundred Thousand Dollars (\$100,000.00).

**5.4 Financial Statements; Financial Condition.** All consolidated financial statements for Borrower and any of its Subsidiaries delivered to Bank fairly present in all material respects Borrower's consolidated financial condition and Borrower's consolidated results of operations. There has not been any material deterioration in Borrower's consolidated financial condition since the date of the most recent financial statements submitted to Bank.

**5.5 Solvency.** Borrower is not left with unreasonably small capital after the transactions in this Agreement; and Borrower is able to pay its debts (including trade debts) as they mature.

**5.6 Regulatory Compliance.** Borrower is not an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Borrower is not engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower (a) has complied in all material respects with all Requirements of Law, and (b) has not violated any Requirements of Law, in each case where the failure to comply or the violation of which could reasonably be expected to have a material adverse effect on its business. None of Borrower's or any of its Subsidiaries' properties or assets has been used by Borrower or any Subsidiary or, to the best of Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than legally. Borrower and each of its Subsidiaries have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted except where failure to do so would not reasonably be expected to have a material adverse effect on Borrower's business.



**5.7 Subsidiaries; Investments.** Borrower does not own any stock, partnership, or other ownership interest or other equity securities except for Permitted Investments.

**5.8 Tax Returns and Payments; Pension Contributions.** Borrower has timely filed all required tax returns and reports (or appropriate extensions therefor), and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except (a) to the extent such taxes are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted, so long as such reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made therefor, or (b) if such taxes, assessments, deposits and contributions do not, individually or in the aggregate, exceed Twenty-Five Thousand Dollars (\$25,000.00).

To the extent Borrower defers payment of any contested taxes, Borrower shall (i) notify Bank in writing of the commencement of, and any material development in, the proceedings, and (ii) post bonds or take any other steps required to prevent the governmental authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "Permitted Lien." Borrower is unaware of any claims or adjustments proposed for any of Borrower's prior tax years which could result in additional taxes becoming due and payable by Borrower in excess of Twenty-Five Thousand Dollars (\$25,000.00). Borrower has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and Borrower has not withdrawn from participation in, and has not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

**5.9 Use of Proceeds.** Borrower shall use the proceeds of the Credit Extensions as working capital and to fund its general business requirements and not for personal, family, household or agricultural purposes.

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

**5.11 Definition of "Knowledge."** For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower's knowledge or awareness, to the "best of" Borrower's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of any Responsible Officer.

## **6. AFFIRMATIVE COVENANTS**

Borrower shall do all of the following:

### **6.1 Government Compliance.**

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the failure to so qualify would reasonably be expected to have a material adverse effect on Borrower's business or operations. Borrower shall comply, and have each Subsidiary comply, in all material respects, with all laws, ordinances and regulations to which it is subject, noncompliance with which could reasonably be expected have a material adverse effect on Borrower's business. Notwithstanding anything to the contrary set forth herein, Borrower's Subsidiaries (which are not a co-borrower or secured guarantor to this Agreement) may wind-up and dissolve to the extent that Borrower determines that it is reasonable to do so and any remaining assets from such Subsidiaries which are not a co-

borrower or secured guarantor to this Agreement) are transferred to Borrower or another Subsidiary in accordance with applicable law.

(b) Obtain all of the Governmental Approvals necessary for the performance by Borrower of its obligations under the Loan Documents to which it is a party and the grant of a security interest to Bank in all of the Collateral. Pursuant to the terms of the prior sentence, Borrower shall promptly provide copies of any such obtained Governmental Approvals to Bank.

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

(a) Monthly Financial Statements. As soon as available, but no later than forty (40) days after the last day of each month, a company prepared consolidated balance sheet and income statement covering Borrower's consolidated operations for such month certified by a Responsible Officer and in a form acceptable to Bank (the "**Monthly Financial Statements**");

(b) Monthly Compliance Certificate. Within forty (40) days after the last day of each month and together with the Monthly Financial Statements, a duly completed Compliance Certificate signed by a Responsible Officer, certifying that as of the end of such month, Borrower was in full compliance with all of the terms and conditions of this Agreement, and such other information as Bank may reasonably request;

(c) Board Projections. As soon as available, at least annually, and in any event no later than within sixty (60) days after the end of each fiscal year of Borrower, and promptly following any material updates or changes thereto, annual Board-approved operating budget and financial projections, in a form acceptable to Bank;

(d) Annual Audited Financial Statements. As soon as available, but no later than one hundred eighty (180) days after the last day of Borrower's fiscal year, audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion on the financial statements from an independent certified public accounting firm reasonably acceptable to Bank;

(e) Other Statements. Within five (5) days of delivery, copies of all statements, reports and notices made available to Borrower's security holders or to any holders of Subordinated Debt;

(f) 10-Q Reports, 10-K Reports, and Annual Financial Statements. Within (i) forty-five (45) days after the last day of each fiscal quarter, Borrower's 10-Q report, (ii) ninety (90) days after the last day of Borrower's fiscal year, Borrower's 10-K report, and (iii) ninety (90) days after the last day of Borrower's fiscal year, a company prepared consolidated balance sheet and income statement covering Borrower's consolidated operations for such fiscal year.

(g) SEC Filings. Within five (5) days of filing, copies of all other periodic and other reports, proxy statements and other materials filed by Borrower with the SEC, any Governmental Authority succeeding to any or all of the functions of the SEC or with any national securities exchange, or distributed to its shareholders, as the case may be. Documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the Internet at Borrower's website address; provided, however, Borrower shall promptly notify Bank in writing (which may be by electronic mail) of the posting of any such documents;

(h) Legal Action Notice. A prompt report of any legal actions pending or threatened in writing against Borrower or any of its Subsidiaries that could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of, individually or in the aggregate, One Hundred Thousand Dollars (\$100,000.00) or more; and

(i) Other Financial Information. Other financial information reasonably requested by Bank.

**6.3 Inventory; Returns.** Keep all Inventory in good and marketable condition, free from material defects except for Inventory for which adequate reserves have been made in accordance with GAAP; provided that the foregoing covenant shall not apply to Inventory consisting of Experimental Compounds. Returns and allowances between Borrower and its Account Debtors shall follow Borrower's customary practices as they exist at the Effective Date. Borrower must promptly notify Bank of all returns, recoveries, disputes and claims that involve more than Fifty Thousand Dollars (\$50,000.00).

**6.4 Taxes; Pensions.** Timely file, and require each of its Subsidiaries to timely file, all required tax returns and reports (and extensions therefor) and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower and each of its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.8 hereof, and shall deliver to Bank, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

**6.5 Insurance.**

(a) Keep its business and the Collateral insured for risks and in amounts standard for companies in Borrower's industry and location and as Bank may reasonably request. Insurance policies shall be in a form, with financially sound and reputable insurance companies that are not Affiliates of Borrower, and in amounts that are satisfactory to Bank. All property policies shall have a lender's loss payable endorsement showing Bank as the sole lender loss payee. All liability policies shall show, or have endorsements showing, Bank as an additional insured. Bank shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral.

(b) Ensure that proceeds payable under any property policy are, at Bank's option, payable to Bank on account of the Obligations. Notwithstanding the foregoing, (i) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to Two Hundred Fifty Thousand Dollars (\$250,000.00) with respect to any loss, but not exceeding Two Hundred Fifty Thousand Dollars (\$250,000.00) in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (A) shall be of equal or like value as the replaced or repaired Collateral and (B) shall be deemed Collateral in which Bank has been granted a first priority security interest, and (ii) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Bank, be payable to Bank on account of the Obligations.

(c) At Bank's request, Borrower shall deliver certified copies of insurance policies and evidence of all premium payments. Each provider of any such insurance required under this Section 6.5 shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to Bank, that it will give Bank thirty (30) days prior written notice before any such policy or policies shall be materially altered or canceled (or ten (10) days prior written notice for cancellation for non-payment of premiums). If Borrower fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons and Bank, Bank may make all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Bank deems prudent.

**6.6 Operating Accounts.**

(a) Within thirty (30) days after the Effective Date (the "**Transition Period**"), maintain all of its and all of its Subsidiaries' operating, depository and securities accounts with Bank and Bank's Affiliates. Notwithstanding the foregoing, Australian Subsidiary and UK Subsidiary may maintain accounts outside of the United States with financial institutions other than Bank and Bank's Affiliates, provided that the maximum aggregate balance in all such accounts shall not exceed One Hundred Fifty Thousand Dollars (\$150,000.00) at any time.

(b) Provide Bank five (5) days prior written notice before establishing any Collateral Account at or with any bank or financial institution other than Bank or Bank's Affiliates. For each Collateral Account that Borrower at any time maintains, Borrower shall cause the applicable bank or financial institution (other

than Bank) at or with which any Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder which Control Agreement may not be terminated without the prior written consent of Bank. The provisions of the previous sentence shall not apply (i) during the Transition Period or (ii) to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such.

(c) Notwithstanding anything to the contrary contained herein, and without limiting any of the foregoing, immediately upon the occurrence of the Cash Collateralization Event and at all times thereafter, Borrower shall at all times have on deposit as cash collateral in a segregated money market bank account in the name of Borrower and maintained with Bank, cash in an amount equal to the aggregate amount of all outstanding Obligations of Borrower to Bank determined by Bank as of the date that the Cash Collateralization Event occurs (and such cash collateral amount shall decrease as and when such Obligations are repaid). Bank may restrict withdrawals or transfers by or on behalf of Borrower that would violate this Section, regardless of whether an Event of Default exists at such time.

#### **6.7 Protection of Intellectual Property Rights.**

(a) (i) Use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to its business; (ii) promptly advise Bank in writing of material infringements or any other event that could reasonably be expected to materially and adversely affect the value of its Intellectual Property that is material to its business; and (iii) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Bank's written consent.

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

**6.8 Litigation Cooperation.** From the date hereof and continuing through the termination of this Agreement, make available to Bank, without expense to Bank, Borrower and its officers, employees and agents and Borrower's books and records, to the extent that Bank may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

**6.9 Access to Collateral; Books and Records.** Allow Bank, or its agents, at reasonable times, on one (1) Business Day's notice (provided no notice is required if an Event of Default has occurred and is continuing), to inspect the Collateral and audit and copy Borrower's Books. Such inspections or audits shall be conducted no more often than once every twelve (12) months unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Bank shall determine is necessary. The foregoing inspections and audits shall be at Borrower's expense, and the charge therefor shall be One Thousand Dollars (\$1,000.00) per person per day (or such higher amount as shall represent Bank's then-current standard charge for the same), plus reasonable out-of-pocket expenses. In the event Borrower and Bank schedule an audit more than ten (10) days in advance, and Borrower cancels or seeks to reschedule the audit with less than ten (10) days written notice to Bank, then (without limiting any of Bank's rights or remedies), Borrower shall pay Bank a fee of One Thousand Dollars (\$1,000.00) plus any out-of-pocket expenses incurred by Bank to compensate Bank for the anticipated costs and expenses of the cancellation or rescheduling.

**6.10 Further Assurances.** Execute any further instruments and take further action as Bank reasonably requests to perfect or continue Bank's Lien in the Collateral or to effect the purposes of this Agreement. Deliver to Bank, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority regarding compliance with or maintenance of

Governmental Approvals or Requirements of Law or that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals that are material to its business or otherwise on the operations of Borrower or any of its Subsidiaries.

## 7. NEGATIVE COVENANTS

Borrower shall not do any of the following without Bank's prior written consent:

**7.1 Dispositions.** Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out or obsolete Equipment that is, in the reasonable judgment of Borrower, no longer economically practicable to maintain or useful in the ordinary course of business of Borrower; (c) consisting of Permitted Liens and Permitted Investments; (d) consisting of the sale or issuance of any stock of Borrower permitted under Section 7.2 of this Agreement; (e) consisting of Borrower's use or transfer of money or Cash Equivalents in a manner that is not prohibited by the terms of this Agreement or the other Loan Documents; and (f) of non-exclusive licenses for the use of the property of Borrower or its Subsidiaries in the ordinary course of business and licenses that could not result in a legal transfer of title of the licensed property but that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discreet geographical areas outside of the United States.

**7.2 Changes in Business, Management, Control, or Business Locations.** (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses currently engaged in by Borrower and such Subsidiary, as applicable, or reasonably related thereto; (b) liquidate or dissolve; (c) fail to provide notice to Bank of any Key Person departing from or ceasing to be employed by Borrower within five (5) days after such Key Person's departure from Borrower; or (d) permit or suffer any Change in Control.

Borrower shall not, without at least thirty (30) days prior written notice to Bank: (1) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than Fifty Thousand Dollars (\$50,000.00) in Borrower's assets or property or are clinical locations used in the ordinary course of business for trials of Experimental Compounds) or deliver any portion of the Collateral valued, individually or in the aggregate, in excess of Fifty Thousand Dollars (\$50,000.00) to a bailee at a location other than to a bailee and at a location already disclosed in the Perfection Certificate (including clinical locations used in the ordinary course of business for trials of Experimental Compounds), (2) change its jurisdiction of organization, (3) change its organizational structure or type, (4) change its legal name, or (5) change any organizational number (if any) assigned by its jurisdiction of organization. If Borrower intends to deliver any portion of the Collateral valued, individually or in the aggregate, in excess of Fifty Thousand Dollars (\$50,000.00) to a bailee, and Bank and such bailee are not already parties to a bailee agreement governing both the Collateral and the location to which Borrower intends to deliver the Collateral, then Borrower will first receive the written consent of Bank, and such bailee shall execute and deliver a bailee agreement in form and substance reasonably satisfactory to Bank. The foregoing requirement shall not apply to Experimental Compounds and materials that are located at clinical sites for testing purposes.

**7.3 Mergers or Acquisitions.** Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person (including, without limitation, by the formation of any Subsidiary). A Subsidiary may merge or consolidate into another Subsidiary or into Borrower.

**7.4 Indebtedness.** Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

**7.5 Encumbrance.** Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Bank) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's

Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of “Permitted Liens” herein.

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

**7.7 Distributions; Investments.** (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any of its capital stock provided that (i) Borrower may convert any of its convertible securities (including warrants and convertible debt) into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, (ii) Borrower may pay dividends solely in common stock, and (iii) Borrower may purchase fractional shares of capital stock arising out of stock dividends, splits or combinations, provided such purchases do not exceed Twenty-Five Thousand Dollars (\$25,000.00) in the aggregate in any fiscal year; or (b) directly or indirectly make any Investment (including, without limitation, by the formation of any Subsidiary) other than Permitted Investments, or permit any of its Subsidiaries to do so.

**7.8 Transactions with Affiliates.** Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower, except for (a) transactions that are in the ordinary course of Borrower’s business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm’s length transaction with a non-affiliated Person, (b) Subordinated Debt and equity investments by Borrower’s investors in Borrower, (c) reasonable and customary fees paid to members of Borrower’s Board and its Subsidiaries, (d) customary employment arrangements with executive officers, (e) Permitted Investments, (f) transactions with Subsidiaries listed on the Perfection Certificate as of the Effective Date, and (g) transactions permitted under Section 7.7.

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

**7.10 Compliance.** Become an “investment company” or a company controlled by an “investment company”, under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to (a) meet the minimum funding requirements of ERISA, (b) prevent a Reportable Event or Prohibited Transaction, as defined in ERISA, from occurring, or (c) comply with the Federal Fair Labor Standards Act, the failure of any of the conditions described in clauses (a) through (c) which could reasonably be expected to have a material adverse effect on Borrower’s business; or violate any other law or regulation, if the violation could reasonably be expected to have a material adverse effect on Borrower’s business, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

## **8. EVENTS OF DEFAULT**

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

**8.1 Payment Default.** Borrower fails to (a) make any payment of principal or interest on any Credit Extension when due, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day cure period shall not apply to payments due on the Term Loan Maturity Date). During the cure period, the failure to make or pay any payment specified under clause (b) hereunder is not an Event of Default (but no Credit Extension will be made during the cure period);

## 8.2 Covenant Default.

(a) Borrower fails or neglects to perform any obligation in Sections 6.2, 6.4, 6.5, 6.6, or 6.7(b), or violates any covenant in Section 7; or

(b) Borrower fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Cure periods provided under this section shall not apply, among other things, to financial covenants or any other covenants set forth in clause (a) above;

**8.3 Material Adverse Change.** A Material Adverse Change occurs;

## 8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or of any entity under the control of Borrower (including a Subsidiary), or (ii) a notice of lien or levy is filed against any of Borrower's assets by any Governmental Authority, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; or

(b) (i) any material portion of Borrower's assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower from conducting all or any material part of its business;

**8.5 Insolvency.** (a) Borrower is unable to pay its debts (including trade debts) as they become due; (b) Borrower begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower and is not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while any of the conditions described in clause (a) exist and/or until any Insolvency Proceeding is dismissed);

**8.6 Other Agreements.** There is, under any agreement to which Borrower is a party with a third party or parties, (a) any default resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of One Hundred Thousand Dollars (\$100,000.00); or (b) any breach or default by Borrower, the result of which could have a material adverse effect on Borrower's business; provided, however, that the Event of Default under this Section 8.6 caused by the occurrence of a breach or default under such other agreement shall be cured or waived for purposes of this Agreement upon Bank receiving written notice from the party asserting such breach or default of such cure or waiver of the breach or default under such other agreement, if at the time of such cure or waiver under such other agreement (x) Bank has not declared an Event of Default under this Agreement and/or exercised any rights with respect thereto; (y) any such cure or waiver does not result in an Event of Default under any other provision of this Agreement or any Loan Document; and (z) in connection with any such cure or waiver under such other agreement, the terms of any agreement with such third party are not modified or amended in any manner which could in the good faith business judgment of Bank be materially less advantageous to Borrower;

**8.7 Judgments; Penalties.** One or more fines, penalties or final judgments, orders or decrees for the payment of money in an amount, individually or in the aggregate, of at least One Hundred Thousand Dollars (\$100,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower by any Governmental Authority, and the same are not, within ten (10) days after the entry, assessment or issuance thereof, discharged, satisfied, or paid, or after execution thereof,

stayed or bonded pending appeal, or such judgments are not discharged prior to the expiration of any such stay (provided that no Credit Extensions will be made prior to the satisfaction, payment, discharge, stay, or bonding of such fine, penalty, judgment, order or decree);

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

**8.9 Subordinated Debt.** Any document, instrument, or agreement evidencing any Subordinated Debt shall for any reason be revoked or invalidated or otherwise cease to be in full force and effect, any Person shall be in breach thereof or contest in any manner the validity or enforceability thereof or deny that it has any further liability or obligation thereunder, or the Obligations shall for any reason be subordinated or shall not have the priority contemplated by this Agreement; or

**8.10 Governmental Approvals.** Any Governmental Approval shall have been (a) revoked, rescinded, suspended, modified in an adverse manner or not renewed in the ordinary course for a full term or (b) subject to any decision by a Governmental Authority that designates a hearing with respect to any applications for renewal of any of such Governmental Approval or that could result in the Governmental Authority taking any of the actions described in clause (a) above, and such decision or such revocation, rescission, suspension, modification or non-renewal cause, or could reasonably be expected to cause, a Material Adverse Change.

## **9. BANK'S RIGHTS AND REMEDIES**

**9.1 Rights and Remedies.** Upon the occurrence and during the continuance of an Event of Default, Bank may, without notice or demand, do any or all of the following:

(a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Bank);

(b) stop advancing money or extending credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Bank;

(c) demand that Borrower (i) deposit cash with Bank in an amount equal to at least (A) one hundred five percent (105.0%) of the Dollar Equivalent of the aggregate face amount of all Letters of Credit denominated in Dollars remaining undrawn, and (B) one hundred ten percent (110.0%) of the Dollar Equivalent of the aggregate face amount of all Letters of Credit denominated in a Foreign Currency remaining undrawn, (plus, in each case, all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment)), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit;

(d) terminate any FX Contracts;

(e) verify the amount of, demand payment of and performance under, and collect any Accounts and General Intangibles, settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Bank considers advisable, and notify any Person owing Borrower money of Bank's security interest in such funds;

(f) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Bank requests and make it available as Bank designates. Bank may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be



prior or superior to its security interest and pay all expenses incurred. Borrower grants Bank a license to enter and occupy any of its premises, without charge, to exercise any of Bank's rights or remedies;

(g) apply to the Obligations (i) any balances and deposits of Borrower it holds, or (ii) any amount held by Bank owing to or for the credit or the account of Borrower;

(h) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral. Bank is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's labels, Patents, Copyrights, mask works, rights of use of any name, trade secrets, trade names, Trademarks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section, Borrower's rights under all licenses and all franchise agreements inure to Bank's benefit;

(i) place a "hold" on any account maintained with Bank and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(j) demand and receive possession of Borrower's Books; and

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

**9.2 Power of Attorney.** Borrower hereby irrevocably appoints Bank as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's name on any checks or other forms of payment or security; (b) sign Borrower's name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Bank determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Bank or a third party as the Code permits. Borrower hereby appoints Bank as its lawful attorney-in-fact to sign Borrower's name on any documents necessary to perfect or continue the perfection of Bank's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied in full and Bank is under no further obligation to make Credit Extensions hereunder. Bank's foregoing appointment as Borrower's attorney in fact, and all of Bank's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been fully repaid and performed and Bank's obligation to provide Credit Extensions terminates.

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

**9.4 Application of Payments and Proceeds Upon Default.** If an Event of Default has occurred and is continuing, Bank shall have the right to apply in any order any funds in its possession, whether from Borrower account balances, payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations. Bank shall pay any surplus to Borrower by credit to the Designated Deposit Account or to other Persons legally entitled thereto; Borrower shall remain liable to Bank for any deficiency. If Bank, directly or indirectly, enters into a deferred payment or other credit transaction with any

purchaser at any sale of Collateral, Bank shall have the option, exercisable at any time, of either reducing the Obligations by the principal amount of the purchase price or deferring the reduction of the Obligations until the actual receipt by Bank of cash therefor.

**9.5 Bank's Liability for Collateral.** So long as Bank complies with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Bank, Bank shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

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

**9.7 Demand Waiver.** Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Bank on which Borrower is liable.

## **10. NOTICES**

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

If to Borrower:           Axsome Therapeutics, Inc.  
25 Broadway, 9<sup>th</sup> Floor  
New York, New York 10004  
Attn:   Chief Executive Officer  
Phone:   (212) 332-3241  
Fax:     (212) 320-0245  
Email:   htabuteau@axsome.com

with a copy to:           DLA Piper LLP (US)  
4365 Executive Drive, Suite 1100  
San Diego, California 92121-2133  
Attn:   Jeff Baglio, Esquire  
Fax:     (858) 638-5058  
Email:   jeff.baglio@dlapiper.com

If to Bank: Silicon Valley Bank  
275 Grove Street, Suite 2-200  
Newton, Massachusetts 02466  
Attn: Katherine Anderson  
Fax: (617) 527-0177  
Email: KAnderson@svb.com

with a copy to: Riemer & Braunstein LLP  
Three Center Plaza  
Boston, Massachusetts 02108  
Attn: David A. Ephraim, Esquire  
Fax: (617) 880-3456  
Email: DEphraim@riemerlaw.com

#### **11. CHOICE OF LAW, VENUE, AND JURY TRIAL WAIVER**

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

**BORROWER AND BANK EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR BOTH PARTIES TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.**

This Section 11 shall survive the termination of this Agreement.

#### **12. GENERAL PROVISIONS**

**12.1 Termination Prior to Term Loan Maturity Date; Survival.** All covenants, representations and warranties made in this Agreement continue in full force until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. So long as Borrower has satisfied the Obligations (other than inchoate indemnity obligations, any other obligations which, by their terms, are to survive the termination of this Agreement, and any Obligations under Bank Services Agreements that are cash collateralized in accordance with Section 4.1 of this Agreement), this Agreement may be terminated prior to the Term Loan Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank. Those obligations that are expressly specified in this Agreement as surviving this Agreement's termination shall continue to survive notwithstanding this Agreement's termination.

**12.2 Successors and Assigns.** This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign this Agreement or any rights or obligations under it

without Bank's prior written consent (which may be granted or withheld in Bank's discretion). Bank has the right, without the consent of or notice to Borrower, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents (other than the Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof).

**12.3 Indemnification.** Borrower agrees to indemnify, defend and hold Bank and its directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Bank (each, an "**Indemnified Person**") harmless against: (i) all obligations, demands, claims, and liabilities (collectively, "**Claims**") claimed or asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (ii) all losses or expenses (including Bank Expenses) in any way suffered, incurred, or paid by such Indemnified Person as a result of, following from, consequential to, or arising from transactions between Bank and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct.

This Section 12.3 shall survive until all statutes of limitation with respect to the Claims, losses, and expenses for which indemnity is given shall have run.

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

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

**12.6 Correction of Loan Documents.** Bank may correct patent errors and fill in any blanks in the Loan Documents consistent with the agreement of the parties so long as Bank provides Borrower with written notice of such correction and allows Borrower at least ten (10) days to object to such correction. In the event of such objection, such correction shall not be made except by an amendment signed by both Bank and Borrower.

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

**12.8 Counterparts.** This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

**12.9 Confidentiality.** In handling any confidential information, Bank shall exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to Bank's Subsidiaries or Affiliates (such Subsidiaries and Affiliates, together with Bank, collectively, "**Bank Entities**"); (b) to prospective transferees or purchasers of any interest in the Credit Extensions (provided, however, Bank shall use its best efforts to obtain any prospective transferee's or purchaser's agreement to the terms of this provision); (c) as required by law, regulation, subpoena, or other order; (d) to Bank's regulators or as otherwise required in connection with Bank's examination or audit; (e) as Bank considers appropriate in exercising remedies under the Loan Documents; and (f) to third-party service providers of Bank so long as such service providers have executed a confidentiality agreement with Bank with terms no less restrictive than those contained herein. Confidential information does not include information that is either: (i) in the public domain or in Bank's possession when disclosed to Bank, or becomes part of the public domain (other than as a result of its disclosure by Bank in violation

of this Agreement) after disclosure to Bank; or (ii) disclosed to Bank by a third party, if Bank does not know that the third party is prohibited from disclosing the information.

Bank Entities may use anonymous forms of confidential information for aggregate datasets, for analyses or reporting, and for any other uses not expressly prohibited in writing by Borrower. The provisions of this Section 12.9 shall survive termination of this Agreement.

**12.10 Right of Set Off.** Borrower hereby grants to Bank, a lien, security interest and right of set off as security for all Obligations to Bank, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Bank or any entity under the control of Bank (including a Bank subsidiary) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Bank may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE BANK TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

**12.11 Electronic Execution of Documents.** The words “execution,” “signed,” “signature” and words of like import in any Loan Document shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act.

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

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

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

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

### **13. DEFINITIONS**

**13.1 Definitions.** As used in the Loan Documents, the word “shall” is mandatory, the word “may” is permissive, the word “or” is not exclusive, the words “includes” and “including” are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative. As used in this Agreement, the following capitalized terms have the following meanings:

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

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

“**Affiliate**” is, with respect to any Person, each other Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person’s senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person’s managers and members.

“**Agreement**” is defined in the preamble hereof.

“**Amortization Date**” is December 1, 2017; provided however, that upon the occurrence of the Term B Event, the Amortization Date shall be June 1, 2018.

“**Australian Subsidiary**” is Axsome Therapeutics Australia Pty Ltd, a company organized under the laws of Australia.

“**AXS-02**” means Borrower’s AXS-02 product candidate for the treatment of pain relating to complex regional pain syndrome, knee osteoarthritis associated with bone marrow lesions, and chronic low back pain associated with Modic changes.

“**AXS-02 CRPS**” means Borrower’s AXS-02 product candidate for the treatment of pain relating to complex regional pain syndrome.

“**Bank**” is defined in the preamble hereof.

“**Bank Entities**” is defined in Section 12.9.

“**Bank Expenses**” are all audit fees and expenses, costs, and expenses (including reasonable attorneys’ fees and expenses) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower.

“**Bank Services**” are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank’s various agreements related thereto (each, a “**Bank Services Agreement**”).

“**Bank Services Agreement**” is defined in the definition of Bank Services.

“**Board**” means Borrower’s board of directors.

“**Borrower**” is defined in the preamble hereof.

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

“**Borrowing Resolutions**” are, with respect to any Person, those resolutions adopted by such Person’s board of directors (and, if required under the terms of such Person’s Operating Documents, stockholders) and delivered by such Person to Bank approving the Loan Documents to which such Person is a party and the transactions contemplated thereby, together with a certificate executed by its secretary on behalf of such Person certifying (a) such Person has the authority to execute, deliver, and perform its obligations under each of the Loan Documents to which it is a party, (b) that set forth as a part of or attached as an exhibit to such certificate is a true, correct, and complete copy of the resolutions then in full force and effect authorizing and ratifying the execution, delivery, and performance by such Person of the Loan Documents to which it is a party, (c) the name(s) of the Person(s) authorized to execute the Loan Documents, including any Credit Extension request, on behalf of such

Person, together with a sample of the true signature(s) of such Person(s), and (d) that Bank may conclusively rely on such certificate unless and until such Person shall have delivered to Bank a further certificate canceling or amending such prior certificate.

“**Business Day**” is any day that is not a Saturday, Sunday or a day on which Bank is closed.

“**Cash Collateralization Event**” means confirmation by Bank that a safety issue involving AXS-02 that is of a magnitude to result in the stoppage of any study involving AXS-02 or the inability to advance any clinical program for AXS-02 has occurred.

“**Cash Equivalents**” means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc.; and (c) Bank’s certificates of deposit issued maturing no more than one (1) year after issue.

“**Change in Control**” means (a) at any time, any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act), shall become, or obtain rights (whether by means of warrants, options or otherwise) to become, the “beneficial owner” (as defined in Rules 13(d)-3 and 13(d)-5 under the Exchange Act), directly or indirectly, of forty percent (40.0%) or more of the ordinary voting power for the election of directors of Borrower (determined on a fully diluted basis) other than by the sale of Borrower’s equity securities in a public offering or to venture capital or private equity investors so long as Borrower identifies to Bank the venture capital or private equity investors at least seven (7) Business Days prior to the closing of the transaction and provides to Bank a description of the material terms of the transaction; (b) during any period of twelve (12) consecutive months, a majority of the members of the board of directors or other equivalent governing body of Borrower cease to be composed of individuals (i) who were members of that board or equivalent governing body on the first day of such period, (ii) whose election or nomination to that board or equivalent governing body was approved by individuals referred to in clause (i) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body or (iii) whose election or nomination to that board or other equivalent governing body was approved by individuals referred to in clauses (i) and (ii) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body; or (c) at any time, Borrower shall cease to own and control, of record and beneficially, directly or indirectly, one hundred percent (100.0%) of each class of outstanding capital stock of each Subsidiary of Borrower free and clear of all Liens (except Liens created by this Agreement).

“**Claims**” is defined in Section 12.3.

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

“**Collateral**” is any and all properties, rights and assets of Borrower described on Exhibit A.

“**Collateral Account**” is any Deposit Account, Securities Account, or Commodity Account.

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

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

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

“**Control Agreement**” is any control agreement entered into among the depository institution at which Borrower maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower maintains a Securities Account or a Commodity Account, Borrower, and Bank pursuant to which Bank obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

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

“**Credit Extension**” is any Term Loan Advance, or any other extension of credit by Bank for Borrower’s benefit.

“**Currency**” is coined money and such other banknotes or other paper money as are authorized by law and circulate as a medium of exchange.

“**Default Rate**” is defined in Section 2.2(b).

“**Deposit Account**” is any “deposit account” as defined in the Code with such additions to such term as may hereafter be made.

“**Designated Deposit Account**” is the multicurrency account denominated in Dollars, account number \_\_\_\_\_, maintained by Borrower with Bank.

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

“**Dollar Equivalent**” is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

“**Draw Period B**” is the period of time commencing upon the occurrence of the Term B Event and continuing through November 9, 2017.

“**Draw Period C**” is the period of time commencing upon the occurrence of both (i) the Term B Event and (ii) the NDA Event and continuing through December 31, 2017.

“**Effective Date**” is defined in the preamble hereof.

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



“**Equity Event**” means confirmation by Bank that Borrower has received, after the Effective Date, but on or prior to November 9, 2017, unrestricted and unencumbered (other than Liens in favor of Bank) net cash proceeds in an amount of at least Thirty Million Dollars (\$30,000,000.00) from the issuance and sale by Borrower of its equity securities to investors.

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

“**Event of Default**” is defined in Section 8.

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

“**Experimental Compounds**” means biopharmaceutical compounds and therapeutic materials that remain subject to clinical trials and have not yet received regulatory approval.

“**FDA**” shall mean the United States Food and Drug Administration, and any successor thereto.

“**Final Payment**” is a payment (in addition to and not in substitution for the regular monthly payments of principal plus accrued interest) equal to the original principal amount of the Term Loan Advances extended by Bank to Borrower hereunder multiplied by eight and one-half of one percent (8.50%), due on the earliest to occur of (a) the Term Loan Maturity Date, (b) the acceleration of the Term Loan Advances, (c) the prepayment of the Term Loan Advances pursuant to Section 2.1.1(d) or 2.1.1(e), (d) the repayment in full of all Obligations under the Term Loan Advances, or (e) the termination of this Agreement.

“**Foreign Currency**” means lawful money of a country other than the United States.

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

“**FX Contract**” is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

“**GAAP**” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination.

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

“**Good Faith Deposit**” is defined in Section 2.3(d).

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

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

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

“**Indemnified Person**” is defined in Section 12.3.

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

“**Intellectual Property**” means, with respect to any Person, all of such Person’s right, title, and interest in and to the following:

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

“**Inventory**” is all “inventory” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of Borrower’s custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

“**Investment**” is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

“**Key Person**” is Borrower’s Chief Executive Officer, who is Herriot Tabuteau as of the Effective Date.

“**Letter of Credit**” is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement.

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

“**Loan Documents**” are, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Warrant, the Perfection Certificate, any Bank Services Agreement, any subordination agreement, any note, or notes or guaranties executed by Borrower, and any other present or future agreement by Borrower with or for the benefit of Bank in connection with this Agreement or Bank Services, all as amended, restated, or otherwise modified.

“**Material Adverse Change**” is (a) a material impairment in the perfection or priority of Bank’s Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations, or condition

(financial or otherwise) of Borrower; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

“**Milestone Event**” means confirmation by Bank, in its sole but reasonable direction, after the Effective Date, but on or prior to November 9, 2017, of Borrower’s receipt of positive interim results of the AXS-02 CRPS trial in complex regional pain syndrome; it being agreed that positive interim results shall mean that an independent data safety monitoring board determines that the study should be stopped for efficacy or should proceed to full enrollment.

“**Monthly Financial Statements**” is defined in Section 6.2(a).

“**NDA**” means a new drug application.

“**NDA Event**” means confirmation by Bank, in Bank’s sole but reasonable direction, after the Effective Date, but on or prior to December 31, 2017, of Borrower’s receipt of positive data (including, without limitation, data which meets the primary or secondary endpoints of such study) with respect to Borrower’s phase 3 clinical trial of AXS-02 CRPS sufficient to file an NDA with the FDA.

“**Obligations**” are Borrower’s obligations to pay when due any debts, principal, interest, fees, the Final Payment, the Prepayment Premium, Bank Expenses, and other amounts Borrower owes Bank now or later, whether under this Agreement, the other Loan Documents (other than the Warrant), or otherwise, including, without limitation, any interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and to perform Borrower’s duties under the Loan Documents (other than the Warrant).

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

“**Patents**” means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

“**Payment/Advance Form**” is that certain form attached hereto as Exhibit C.

“**Payment Date**” is the first (1<sup>st</sup>) calendar day of each calendar month.

“**Perfection Certificate**” is defined in Section 5.1.

“**Permitted Indebtedness**” is:

- (a) Borrower’s Indebtedness to Bank;
- (b) Indebtedness existing on the Effective Date which is shown on the Perfection Certificate;
- (c) Subordinated Debt;
- (d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;
- (e) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of business;
- (f) intercompany Indebtedness of the Australian Subsidiary to Borrower with respect to Investments permitted under clause (h) of the definition of Permitted Investments;

(g) Indebtedness secured by Liens permitted under clauses (a) and (c) of the definition of “Permitted Liens” hereunder;

(h) other unsecured Indebtedness not otherwise permitted hereunder, in an aggregate amount not to exceed Twenty-Five Thousand Dollars (\$25,000.00) at any time outstanding; and

(i) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (h) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

**“Permitted Investments” are:**

(a) Investments (including, without limitation, Subsidiaries) existing on the Effective Date which are shown on the Perfection Certificate;

(b) Investments consisting of (i) Cash Equivalents and (ii) any other Investments permitted by Borrower’s Investment Policy and Guidelines dated as of August 2016 and provided to Bank on November 5, 2016, as amended from time to time, provided that any amendments thereto have been approved in writing by Bank;

(c) Investments consisting of deposit and securities accounts to the extent that (i) such accounts are permitted to be maintained pursuant to Section 6.6 and (ii) Bank has a first priority perfected security interest to the extent required under Section 6.6;

(d) Investments accepted in connection with Transfers permitted by Section 7.1;

(e) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower’s Board;

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

(g) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (g) shall not apply to Investments of Borrower in any Subsidiary;

(h) Investments (i) by Borrower in Australian Subsidiary for ordinary, necessary and current operating expenses not to exceed One Million Five Hundred Thousand Dollars (\$1,500,000.00) in the aggregate in any fiscal year and (ii) by Borrower in UK Subsidiary for ordinary, necessary and current operating expenses not to exceed Fifty Thousand Dollars (\$50,000.00) in the aggregate in any fiscal year, provided, in each case, no Event of Default has occurred and is continuing at the time of such Investments or would result from such Investments; and

(i) non-cash Investments in joint ventures or strategic alliances in the ordinary course of Borrower’s business consisting of the non-exclusive licensing of technology, the development of Intellectual Property or the providing of technical support.

**“Permitted Liens” are:**

(a) Liens existing on the Effective Date which are shown on the Perfection Certificate or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) purchase money Liens or capital leases (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than Fifty Thousand Dollars (\$50,000.00) in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens, deposits and pledges to secure the performance of bids, tenders, contracts (other than contracts for the payment of money), public or statutory obligations, surety, stay, appeal, indemnity, performance or other similar bonds or other similar obligations arising in the ordinary course of Borrower's business;

(g) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest therein;

(h) non-exclusive license of Intellectual Property granted to third parties in the ordinary course of business, and licenses of Intellectual Property that could not result in a legal transfer of title of the licensed property that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discreet geographical areas outside of the United States;

(i) Liens in favor of other financial institutions arising in connection with Borrower's deposit and/or securities accounts held at such institutions (but only to the extent such accounts are permitted to be maintained pursuant to Section 6.6), provided that Bank has a first priority perfected security interest in the amounts held in such deposit and/or securities accounts to the extent required under Section 6.6;

(j) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 8.4 and 8.7; and

(k) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase.

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

“**Prepayment Premium**” shall be an additional fee payable to Bank in amount equal to:

(a) for a prepayment of the Term Loan Advances made on or prior to the second (2<sup>nd</sup>) anniversary of the Effective Date, three percent (3.0%) of the then outstanding principal amount of the Term Loan Advances as of the date immediately and prior to such prepayment;

(b) for a prepayment of the Term Loan Advances made after the second (2<sup>nd</sup>) anniversary of the Effective Date, but on or prior to the third (3<sup>rd</sup>) anniversary of the Effective Date, two percent (2.0%) of the then outstanding principal amount of the Term Loan Advances as of the date immediately and prior to such prepayment; and

(c) for a prepayment of the Term Loan Advances made after the third (3<sup>rd</sup>) anniversary of the Effective Date, but prior to the Term Loan Maturity Date, one percent (1.0%) of the then outstanding principal amount of the Term Loan Advances as of the date immediately and prior to such prepayment.

“**Prime Rate**” is the greater of (i) three and one-half of one percent (3.50%) and (ii) the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the “prime rate” then in effect; provided that if such rate of interest, as set forth from time to time in the money rates section of The Wall Street Journal, becomes unavailable for any reason as determined by Bank, the “Prime Rate” shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors).

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

“**Repayment Schedule**” means the period of time equal to thirty-six (36) consecutive months; provided, however, that upon the occurrence of the Term B Event, the Repayment Schedule shall mean the period of time equal to thirty (30) consecutive months.

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

“**Responsible Officer**” is any of the Chief Executive Officer, President, Chief Financial Officer, VP-Finance, and Controller of Borrower.

“**Restricted License**” is any material license or other material agreement with respect to which Borrower is the licensee (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower’s interest in such license or agreement or any other property, or (b) for which a default under or termination of could reasonably be expected to interfere with the Bank’s right to sell any Collateral.

“**SEC**” shall mean the Securities and Exchange Commission, any successor thereto, and any analogous Governmental Authority.

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

“**Subordinated Debt**” is indebtedness incurred by Borrower subordinated to all of Borrower’s now or hereafter indebtedness to Bank (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Bank entered into between Bank and the other creditor), on terms acceptable to Bank.

“**Subsidiary**” is, as to any Person, a corporation, partnership, limited liability company or other entity of which shares of stock or other ownership interests having ordinary voting power (other than stock or such other ownership interests having such power only by reason of the happening of a contingency) to elect a majority of the board of directors or other managers of such corporation, partnership or other entity are at the time owned, or the

management of which is otherwise controlled, directly or indirectly through one or more intermediaries, or both, by such Person. Unless the context otherwise requires, each reference to a Subsidiary herein shall be a reference to a Subsidiary of Borrower.

“**Term A Loan Advance**” is defined in Section 2.1.1(a).

“**Term B Event**” means the occurrence of both (i) the Milestone Event and (ii) the Equity Event.

“**Term B Loan Advance**” is defined in Section 2.1.1(a).

“**Term C Loan Advance**” is defined in Section 2.1.1(a).

“**Term Loan Advance**” and “**Term Loan Advances**” are each defined in Section 2.1.1(a).

“**Term Loan Maturity Date**” is November 1, 2020.

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

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

“**Transition Period**” is defined in Section 6.6(a).

“**UK Subsidiary**” is Axsome Therapeutics Limited, a company organized under the laws of England and Wales.

“**Warrant**” is, collectively, (i) that certain warrant to purchase stock dated as of the Effective Date executed between Borrower and Bank and (ii) that certain warrant to purchase stock dated as of the Effective Date executed between Borrower and Life Science Loans, LLC, as each may be amended, modified, supplemented, or restated from time to time.

[Signature page follows.]

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the Effective Date.

**BORROWER:**

AXSOME THERAPEUTICS, INC.

By /s/ Herriot Tabuteau, M.D.  
Name: Herriot Tabuteau, M.D.  
Title: Chief Executive Officer

**BANK:**

SILICON VALLEY BANK

By /s/ Ryan Roller  
Name: Ryan Roller  
Title: Vice President

Signature Page to Loan and Security Agreement

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## **EXHIBIT A — COLLATERAL DESCRIPTION**

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as provided below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

all Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) more than sixty-five percent (65.0%) of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of Australian Subsidiary and UK Subsidiary which shares entitle the holder thereof to vote for directors or any other matter, (ii) rights held under a license that are not assignable by their terms without the consent of the licensor thereof (but only to the extent such restriction on assignment is enforceable under applicable law), or (iii) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Bank's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property.

Pursuant to the terms of a certain negative pledge arrangement with Bank, Borrower has agreed not to encumber any of its Intellectual Property in violation of this Agreement without Bank's prior written consent.

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**EXHIBIT B**

**COMPLIANCE CERTIFICATE**

TO: SILICON VALLEY BANK  
FROM: AXSOME THERAPEUTICS, INC.

Date: \_\_\_\_\_

The undersigned authorized officer of AXSOME THERAPEUTICS, INC. (“Borrower”) certifies that under the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the “Agreement”):

(1) Borrower is in complete compliance for the period ending \_\_\_\_\_ with all required covenants except as noted below; (2) there are no Events of Default; (3) all representations and warranties in the Agreement are true and correct in all material respects on this date except as noted below; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; (4) Borrower, and each of its Subsidiaries, has timely filed all required tax returns and reports (or appropriate extensions therefor), and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 5.8 of the Agreement; and (5) no Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank.

Attached are the required documents supporting the certification. The undersigned certifies that these are prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The undersigned acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

**Please indicate compliance status by circling Yes/No under “Complies” column.**

<b><u>Reporting Covenants</u></b>	<b><u>Required</u></b>	<b><u>Complies</u></b>	
Monthly financial statements with Compliance Certificate	Monthly within 40 days	Yes	No
Annual financial statement (CPA Audited)	FYE within 180 days	Yes	No
Filed 10-Q, 10-K and 8-K	Within 5 days after filing with SEC	Yes	No
10-Q Report, 10-K Report, and annual financial statement	Within 45 days of quarter end for 10-Q; FYE within 90 days for 10-K; and FYE within 90 days for annual financial statements	Yes	No
Board-Approved Projections	FYE within 60 days and promptly following changes	Yes	No

**Other Matters**

Have there been any amendments of or other changes to the capitalization table of Borrower and to the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate. Yes                      No

The following are the exceptions with respect to the certification above: (If no exceptions exist, state “No exceptions to note.”)

AXSOME THERAPEUTICS, INC.

**BANK USE ONLY**

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

Received by: \_\_\_\_\_  
AUTHORIZED SIGNER

Date: \_\_\_\_\_

Verified: \_\_\_\_\_  
AUTHORIZED SIGNER

Date: \_\_\_\_\_

Compliance Status:                      Yes    No

**EXHIBIT C — LOAN PAYMENT/ADVANCE REQUEST FORM**

**DEADLINE FOR SAME DAY PROCESSING IS NOON EASTERN TIME**

Fax To: \_\_\_\_\_

Date: \_\_\_\_\_

**LOAN PAYMENT: AXSOME THERAPEUTICS, INC.**

From Account # \_\_\_\_\_ To Account # \_\_\_\_\_  
(Deposit Account #) (Loan Account #)

Principal \$ \_\_\_\_\_ and/or Interest \$ \_\_\_\_\_  
Authorized Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
Print Name/Title: \_\_\_\_\_

**LOAN ADVANCE:**

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account # \_\_\_\_\_ To Account # \_\_\_\_\_  
(Loan Account #) (Deposit Account #)

Amount of Advance \$ \_\_\_\_\_

All Borrower's representations and warranties in the Loan and Security Agreement are true, correct and complete in all material respects on the date of the request for an advance; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date:

Authorized Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
Print Name/Title: \_\_\_\_\_

**OUTGOING WIRE REQUEST:**

**Complete only if all or a portion of funds from the loan advance above is to be wired.**

Deadline for same day processing is noon, Eastern Time

Beneficiary Name: \_\_\_\_\_ Amount of Wire: \$ \_\_\_\_\_  
Beneficiary Bank: \_\_\_\_\_ Account Number: \_\_\_\_\_  
City and State: \_\_\_\_\_  
Beneficiary Bank Transit (ABA) #: \_\_\_\_\_ Beneficiary Bank Code (Swift, Sort, Chip, etc.): \_\_\_\_\_  
**(For International Wire Only)**  
Intermediary Bank: \_\_\_\_\_ Transit (ABA) #: \_\_\_\_\_  
For Further Credit to: \_\_\_\_\_  
Special Instruction: \_\_\_\_\_

*By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreements(s) covering funds transfer service(s), which agreements(s) were previously received and executed by me (us).*

Authorized Signature: \_\_\_\_\_ 2<sup>nd</sup> Signature (if required): \_\_\_\_\_  
Print Name/Title: \_\_\_\_\_ Print Name/Title: \_\_\_\_\_  
Telephone #: \_\_\_\_\_ Telephone #: \_\_\_\_\_

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### **Axsome Therapeutics Enters into \$20 Million Term Loan Agreement with Silicon Valley Bank**

NEW YORK, November 10, 2016 (Globe Newswire) — Axsome Therapeutics, Inc. (NASDAQ: AXSM), a clinical-stage biopharmaceutical company developing novel therapies for the management of central nervous system (CNS) disorders, announced today that it has entered into a \$20 million term loan agreement with Silicon Valley Bank. Axsome intends to use the additional capital to support the ongoing development of its late-stage clinical pipeline.

“The initial \$10 million tranche of the term loan will allow us to conduct our planned Phase 2/3 trial of AXS-05 in agitation in patients with Alzheimer’s disease and simultaneously extend our cash runway through the end of 2017,” said Herriot Tabuteau, M.D., Chief Executive Officer of Axsome. “Importantly, this term loan bolsters our cash position ahead of meaningful clinical milestones including the interim analysis of our Phase 3 trial with AXS-02 in patients with complex regional pain syndrome. The subsequent funds, totaling an additional \$10 million, if drawn, would extend our cash runway further into the second quarter of 2018. We are pleased to enter into this collaboration with Silicon Valley Bank which allows us to broaden our development pipeline and strengthen our balance sheet at an attractive cost of capital.”

“Silicon Valley Bank is pleased to support Axsome’s growth as it advances its clinical pipeline, which includes several Phase 3 clinical trials,” said Ryan Roller, Vice President of Silicon Valley Bank. “We look forward to our partnership with Axsome, whose vision is to develop products with the potential to positively affect the lives of patients with serious and difficult to treat conditions.”

Under the terms of the three-tranche loan agreement, the initial \$10 million tranche is triggered upon closing. The remaining \$10 million can be drawn, at Axsome’s option, subject to the achievement of certain clinical and financial milestones. The loan bears interest at an annual rate equal to 4.50% plus the prime rate, which is currently 3.50%. It matures in November 2020 and has an interest-only payment period of 12 months, which may be extended to 18 months upon the drawing of the second tranche. In addition, upon the funding of each tranche, Axsome will issue warrants to purchase shares of Axsome common stock equal to between approximately 2.1% and 4.8% of each tranche drawn. Additional details of the loan agreement, and a copy of the agreement itself, will be filed with the Securities and Exchange Commission on a Current Report on Form 8-K.

#### **About Axsome Therapeutics, Inc.**

Axsome Therapeutics, Inc. is a clinical-stage biopharmaceutical company developing novel therapies for the management of central nervous system (CNS) disorders for which there are limited existing treatment options. Axsome’s product candidate portfolio includes two late-stage candidates, AXS-02 and AXS-05. AXS-02 is currently in Phase 3 trials in complex regional pain syndrome (CRPS) and knee osteoarthritis (OA) associated with bone marrow lesions (BMLs) with an additional Phase 3 trial planned in chronic low back pain (CLBP) associated with Modic changes (MCs). AXS-05 is currently in a Phase 3 trial in treatment resistant depression (TRD), and a Phase 2/3 trial in agitation in patients with Alzheimer’s disease (AD) is planned. AXS-02 and AXS-05 are investigational product candidates not approved by the FDA. For more information, please visit the company website at [www.axsome.com](http://www.axsome.com). The company may occasionally disseminate material, nonpublic information on the company website.

#### **About Silicon Valley Bank**

For more than 30 years, Silicon Valley Bank (SVB) has helped innovative companies and their investors move bold ideas forward, fast. SVB provides targeted financial services and expertise through its offices in innovation centers around the world. With commercial, international and private banking services, SVB helps address the unique needs of innovators.

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#### **Forward Looking Statements**

Certain matters discussed in this press release are “forward-looking statements”. We may, in some cases, use terms such as “predicts,” “believes,” “potential,” “continue,” “estimates,” “anticipates,” “expects,” “plans,” “intends,”

“may,” “could,” “might,” “will,” “should” or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. In particular, the Company’s statements regarding trends and potential future results are examples of such forward-looking statements. The forward-looking statements include risks and uncertainties, including, but not limited to, the success, timing and cost of our ongoing clinical trials and anticipated clinical trials for our current product candidates, including statements regarding the timing of initiation and completion of the trials; the timing of and our ability to obtain and maintain U.S. Food and Drug Administration or other regulatory authority approval of, or other action with respect to, our product candidates; the Company’s ability to successfully defend its intellectual property or obtain the necessary licenses at a cost acceptable to the Company, if at all; the successful implementation of the Company’s research and development programs and collaborations; the success of the Company’s license agreements; the acceptance by the market of the Company’s product candidates, if approved; and other factors, including general economic conditions and regulatory developments, not within the Company’s control. The factors discussed herein could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this press release and the Company undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstance.

**Axsome Contact:**

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