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

FORM 8-K

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

Date of Report (Date of earliest event reported): July 2, 2018

Merrimack Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-35409
(Commission
File Number)

04-3210530
(IRS Employer
Identification No.)

**One Kendall Square, Suite B7201
Cambridge, MA**
(Address of Principal Executive Offices)

02139
(Zip Code)

Registrant's telephone number, including area code: (617) 441-1000

(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))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR 230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR 240.12b-2).

Emerging growth company ☐

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

Item 1.01. Entry into a Material Definitive Agreement.

On July 2, 2018, Merrimack Pharmaceuticals, Inc. (the “Company”) entered into a Loan and Security Agreement (the “Loan Agreement”) by and among the Company, certain subsidiaries of the Company from time to time party thereto, the several banks and other financial institutions or entities from time to time parties thereto (collectively referred to as “Lender”) and Hercules Capital, Inc., in its capacity as administrative agent and collateral agent for itself and Lender (in such capacity, “Agent”), pursuant to which a term loan of up to an aggregate principal amount of \$25.0 million is available to the Company. The Loan Agreement provides for an initial term loan advance of \$15.0 million, which closed on July 2, 2018, and, at the Company’s option, two additional term loan advances of \$5.0 million each upon the occurrence of certain funding conditions prior to December 31, 2018 and December 31, 2019, respectively.

The term loan bears interest at an annual rate equal to the greater of 9.25% and 9.25% plus the prime rate of interest minus 5.25%. The Loan Agreement provides for interest-only payments for eighteen months and repayment of the aggregate outstanding principal balance of the term loan in monthly installments starting on February 1, 2020 and continuing through August 1, 2021 (the “Maturity Date”). In addition, the Company paid a fee of \$250,000 upon closing and is required to pay a fee of 5.55% of the aggregate amount of advances under the Loan Agreement at maturity. At the Company’s option, the Company may elect to prepay all, but not less than all, of the outstanding term loan by paying the entire principal balance and all accrued and unpaid interest thereon plus a prepayment charge equal to the following percentage of the principal amount being prepaid: 3% if the term loan is prepaid during the first 12 months following the initial closing and 1% if the term loan is prepaid any time thereafter but prior to the Maturity Date.

In connection with the Loan Agreement, the Company granted Agent a security interest in all of the Company’s personal property now owned or hereafter acquired, excluding intellectual property but including licenses of and the proceeds from the sale, if any, of intellectual property, and a negative pledge on intellectual property. The Loan Agreement also contains certain events of default, representations, warranties and non-financial covenants of the Company. In addition, the Loan Agreement grants Lender an option to purchase up to an aggregate of \$1.0 million of the Company’s equity securities, or instruments exercisable for or convertible into equity securities, sold to investors in any private financing within one year after the initial closing under the Loan Agreement upon the same terms and conditions afforded to such other investors.

The foregoing description of the Loan Agreement does not purport to be complete and is qualified in its entirety by reference to the Loan Agreement filed as Exhibit 10.1 to this Current Report on Form 8-K and incorporated herein by reference.

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

The information set forth in Item 1.01 of this Current Report on Form 8-K with respect to the Loan Agreement is incorporated by reference into this Item 2.03.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
10.1	<u>Loan and Security Agreement, dated as of July 2, 2018, by and among the Registrant, certain subsidiaries of the Registrant from time to time party thereto, the several banks and other financial institutions or entities from time to time parties thereto and Hercules Capital, Inc.</u>

SIGNATURE

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

MERRIMACK PHARMACEUTICALS, INC.

Date: July 3, 2018

By: /s/ Jeffrey A. Munsie

Jeffrey A. Munsie

General Counsel

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of July 2, 2018 and is entered into by and between MERRIMACK PHARMACEUTICALS, INC., a Delaware corporation, and each of its Qualified Subsidiaries (collectively referred to as “Borrower”), the several banks and other financial institutions or entities from time to time parties to this Agreement (collectively, referred to as “Lender”) and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and Lender (in such capacity, “Agent”).

RECITALS

A. Borrower has requested Lender to make available to Borrower a loan or loans in an aggregate principal amount of up to Twenty-Five Million Dollars (\$25,000,000.00) (the “Term Loan”); and

B. Lender is willing to make the Term Loan on the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, Borrower, Agent and Lender agree as follows:

SECTION 1. DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

“Account Control Agreement(s)” means any agreement entered into by and among Agent, Borrower and a third party Bank or other institution (including a Securities Intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and which perfects Agent’s first priority security interest in the subject account or accounts.

“ACH Authorization” means the ACH Debit Authorization Agreement in substantially the form of Exhibit G, which account numbers may be redacted for security purposes if and when filed publicly by Borrower.

“Advance(s)” means a Term Loan Advance.

“Advance Date” means the funding date of any Advance.

“Advance Request” means a request for an Advance submitted by Borrower to Agent in substantially the form of Exhibit A, which account numbers may be redacted for security purposes if and when filed publicly by Borrower.

“Affiliate” means (a) any Person that directly or indirectly controls, is controlled by, or is under common control with the Person in question, (b) any Person directly or indirectly owning, controlling or holding the power to vote ten percent (10%) or more of the outstanding voting securities of another Person, (c) any Person ten percent (10%) or more of whose outstanding voting securities are directly or indirectly owned, controlled or held by another Person with power to vote such securities, or (d) any Person related by blood or marriage to any Person described in subsection (a), (b) or (c) of this paragraph. As used in the definition of “Affiliate,” the term “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through ownership of voting securities, by contract or otherwise.

“Agent” has the meaning given to such term in the preamble to this Agreement.

“Agreement” means this Loan and Security Agreement, as amended from time to time.

“Amortization Date” means February 1, 2020.

“Anti-Corruption Laws” shall mean all laws, rules, and regulations of any jurisdiction applicable to Borrower or any of its Affiliates from time to time concerning or relating to bribery or corruption, including without limitation the United States Foreign Corrupt Practices Act of 1977, as amended, the UK Bribery Act 2010 and other similar legislation in any other jurisdictions.

“Anti-Terrorism Laws” means any laws, rules, regulations or orders relating to terrorism or money laundering, including without limitation Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

“Assignee” has the meaning given to such term in Section 11.13.

“Blocked Person” means: (a) a Person listed in the annex to, or that is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports “terrorism” as defined in Executive Order No. 13224, or (e) a Person that is named a “specially designated national” or “blocked person” on the most current list published by OFAC or other similar list.

“Borrower” has the meaning given to such term in the preamble to this Agreement.

“Borrower Products” means all products, technical data or technology currently being developed, manufactured or sold by Borrower or which Borrower intends to sell, manufacture, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, technical data or technology that have been sold, developed, licensed or distributed by Borrower since its incorporation.

“Business Day” means any day other than Saturday, Sunday and any other day on which banking institutions in the State of California are closed for business.

“Cash” means all cash, cash equivalents and liquid funds.

“Change in Control” means any reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Merrimack, or sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower, in each case in which the holders of Merrimack’s outstanding shares immediately before consummation of such transaction or series of related transactions do not, immediately after consummation of such transaction or series of related transactions, retain shares representing more than fifty percent (50%) of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Merrimack is the surviving entity.

“Claims” has the meaning given to such term in Section 11.10.

“Closing Date” means the date of this Agreement.

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

“Collateral” means the property described in Section 3.

“Common Stock” means the common stock, \$0.01 par value per share, of Borrower.

“Confidential Information” has the meaning given to it in Section 11.12.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any Indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

“Copyright License” means any written agreement granting any right to use any Copyright or Copyright registration, now owneded or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Copyrights” means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States of America, any State thereof, or of any other country.

“Deposit Accounts” means any “deposit accounts,” as such term is defined in the UCC, and includes any checking account, savings account, or certificate of deposit.

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

“Due Diligence Fee” means Twenty-Five Thousand Dollars (\$25,000.00), which fee is due to Lender on or prior to the Closing Date and shall be deemed fully earned on such date regardless of the early termination of this Agreement.

“Eligible Foreign Subsidiary” means any Foreign Subsidiary whose execution of a Joinder Agreement could not result in a material adverse tax consequence to Borrower.

“End of Term Charge” has the meaning given to such term in Section 2.5.

“Equity Interests” means, with respect to any Person, the capital stock, partnership or limited liability company interest, or other equity securities or equity ownership interests of such Person.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

“Event of Default” has the meaning given to such term in Section 9.

“Excluded Accounts” shall mean (i) one (1) account with XXXX ending in XXXX (last four digits), provided that the amount in such account does not exceed One Hundred Ten Thousand Dollars (\$110,000.00) in the aggregate at any time and (ii) one (1) account with XXXX ending in XXXX (last four digits) or an analogous account at XXXX established for the same purpose, provided that the aggregate amount in such account does not exceed Five Hundred Ninety-Five Thousand Dollars (\$595,000.00) in the aggregate at any time.

“Excluded Taxes” shall mean (i) taxes imposed on or with respect to Lender’s overall net or gross income or gross receipts, or franchise taxes imposed in lieu of the foregoing, by any jurisdiction in which Lender is resident, has a branch or otherwise has any other former or present connection (other than any connection solely attributable to this Agreement), (ii) branch profits taxes, (iii) any withholding taxes imposed on Lender with respect to the payments it is entitled to receive hereunder pursuant to laws in effect on the date it becomes a party to this Agreement (which in the case of any permitted assignee of Lender, shall mean the date as of which Lender’s rights and obligations under this Agreement are assigned to such Person), (iv) Taxes attributable to Lender’s failure to comply with Sections 7.10(c) and 7.10(d), (v) any U.S. federal withholding taxes imposed on Lender under FATCA, and (vi) any U.S. federal backup withholding tax.

“Facility Charge” means a fully, earned, non-refundable charge of Two Hundred Fifty Thousand Dollars (\$250,000.00), due on the Closing Date.

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

“Financial Statements” has the meaning given to such term in Section 7.1.

“First Draw Period” means the period of time commencing upon the occurrence of Milestone Event 1, through the earlier to occur of (a) December 31, 2018 or (b) an Event of Default.

“Foreign Subsidiary” means any Subsidiary other than a Subsidiary organized under the laws of any state within the United States of America.

“GAAP” means generally accepted accounting principles in the United States of America, as in effect from time to time, provided that the parties agree that GAAP as in effect on the date of this Agreement shall be applicable for the interpretation of “capital lease obligations” in the definition of “Indebtedness”, unless the parties otherwise agree in writing.

“Indebtedness” means indebtedness of any kind, including (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business due within ninety (90) days), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

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

“Intellectual Property” means all of Borrower’s Copyrights; Trademarks; Patents; trade secrets, proprietary information (including preclinical, clinical and other data) and inventions; mask works; Borrower’s applications therefor and reissues, extensions, or renewals thereof; and Borrower’s goodwill associated with any of the foregoing, together with Borrower’s rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

“Inventory” means “inventory” as defined in Article 9 of the UCC.

“Investment” means any beneficial ownership (including stock, partnership or limited liability company interests) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of any capital asset of another Person.

“Investment Policy” is that certain investment policy of Borrower, approved by Borrower’s Board of Directors and effective on December 14, 2017, delivered to Agent by Borrower prior to the date hereof.

“IPSEN Agreement” means that certain Asset Purchase and Sale Agreement by and between Borrower and IPSEN S.A., dated as of January 7, 2017.

“Joinder Agreements” means for each Qualified Subsidiary, a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit F.

“Lender” has the meaning given to such term in the preamble to this Agreement.

“License” means any Copyright License, Patent License, Trademark License or other license of rights or interests from a third party.

“Lien” means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

“Loan” means the Advances made under this Agreement.

“Loan Documents” means this Agreement, any Notes, the ACH Authorization, the Account Control Agreements, the Joinder Agreements, all UCC Financing Statements, any subordination agreement, and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

“Material Adverse Effect” means a material adverse effect upon: (i) the business, operations, properties, assets or financial condition of Borrower and its Subsidiaries taken as a whole; or (ii) the ability of Borrower to perform or pay the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Agent or Lender to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Agent’s Liens on the Collateral or the priority of such Liens.

“Maximum Rate” has the meaning given to such term in Section 2.2.

“Merrimack” means Merrimack Pharmaceuticals, Inc.

“Milestone Event 1” means confirmation by Agent that, on or prior to December 31, 2018, that Borrower has delivered to Agent, evidence satisfactory to Agent in its sole but reasonable discretion, that Borrower has received top-line data from a Phase 2 clinical study of MM-121 in patients with non-small cell lung cancer (SHERLOC study) which, taken as a whole, is deemed to be supportive of the continued development of Borrower’s MM-121 product.

“Milestone Event 2” means the satisfaction of all of the following events prior to December 31, 2019: (i) no default or Event of Default shall have occurred or is continuing, (ii) the Term B Loan Advance has been made to Borrower, and (iii) Agent has confirmed that Borrower

has received, after the Closing Date but on or prior to December 31, 2019, unrestricted and unencumbered net cash proceeds in a minimum aggregate amount of at least Fifty Million Dollars (\$50,000,000.00) resulting from either (A) the issuance and sale by Borrower of its equity securities, and/or (B) cash payments in connection with strategic partnerships or other corporate transactions (including cash payments received in connection with the IPSEN Agreement).

“Note(s)” means a Term Note.

“OCB” means in the ordinary course of business and shall include (i) collaboration or licensing transactions, or options to enter into collaboration or licensing transactions, that are customary in Borrower’s industry, and (ii) arrangements to use Borrower’s research and development capabilities to develop product candidates on behalf of third party pharmaceutical companies.

“OFAC” means the U.S. Department of Treasury Office of Foreign Assets Control.

“OFAC Lists” means, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

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

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

“Patent License” means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

“Patents” means all letters patent of, or rights corresponding thereto, in the United States of America or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States of America or any other country.

“Perfection Certificate” is that certain perfection certificate delivered by Borrower to Agent, dated as of the date hereof.

“Permitted Indebtedness” means: (i) Indebtedness of Borrower in favor of Lender or Agent arising under this Agreement or any other Loan Document; (ii) Indebtedness existing on the Closing Date which is disclosed in Schedule 1A; (iii) Indebtedness of up to One Million Dollars (\$1,000,000.00) outstanding at any time secured by a Lien described in clause (vii) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the cost of the Equipment financed with such Indebtedness; (iv) Indebtedness to trade creditors incurred in the ordinary course of business, including Indebtedness incurred in the ordinary course of business with corporate credit cards; (v) Indebtedness that also constitutes a Permitted Investment; (vi) Subordinated Indebtedness; (vii) reimbursement obligations in connection with letters of credit that are secured by Cash and issued on behalf of Borrower or a Subsidiary thereof in an amount not to exceed Seven Hundred Fifty Thousand Dollars (\$750,000.00) at any time outstanding, (viii) other unsecured Indebtedness in an amount not to exceed Two Hundred Fifty Thousand Dollars (\$250,000.00) at any time outstanding, (ix) Contingent Obligations of up to Two Hundred Thousand Dollars (\$200,000.00) described in clause (iii) of the definition of Contingent Obligations entered into to mitigate risk and not for speculative purposes; (x) Indebtedness among Borrowers or of Borrower to any non-Borrower Subsidiary; provided such Indebtedness owed by Borrower to any non-Borrower Subsidiary is Subordinated Indebtedness, and (ix) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be..

“Permitted Investment” means: (i) Investments existing on the Closing Date which are disclosed in Schedule 1B; (ii) any Investments permitted by Borrower’s Investment Policy, as amended from time to time, provided that such Investment Policy (and any such amendment thereto) has been approved in writing by Agent; (iii) repurchases of stock from former employees, directors, or consultants of Borrower under agreements approved by Borrower’s Board of Directors in an aggregate amount not to exceed Two Hundred Fifty Thousand Dollars (\$250,000.00) in any fiscal year, provided that no Event of Default has occurred, is continuing or could exist after giving effect to the repurchases; (iv) Investments accepted in connection with Permitted Transfers; (v) 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 Borrower’s business; (vi) 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 subparagraph (vi) shall not apply to Investments of Borrower in any Subsidiary; (vii) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower’s Board of Directors; (viii) Investments consisting of travel advances or moving expenses in the ordinary course of business; (ix) Investments in existing or newly-formed Domestic Subsidiaries, provided that each such Domestic Subsidiary has executed and delivered to Agent a Joinder Agreement and such other documents as shall be reasonably requested by Agent; (x) Investments in Foreign Subsidiaries approved in advance in writing by Agent; (xi) joint ventures, collaboration agreements, strategic alliances and similar arrangements in the OCB, provided that any cash Investments by Borrower do not exceed One Hundred Thousand Dollars (\$100,000.00) in the aggregate in any fiscal year; (xii) Investments consisting of the nonexclusive licensing of technology, the development of technology, the providing of

technical support and in-licensing of technology, provided that any cash Investments by Borrower do not exceed One Hundred Thousand Dollars (\$100,000.00) in the aggregate in any fiscal year; (xiii) additional Investments that do not exceed Two Hundred Fifty Thousand Dollars (\$250,000.00) in the aggregate; (xiv) Investments by Borrower in another Borrower; and (xv) additional Investments that do not exceed Five Hundred Thousand Dollars (\$500,000.00) in the aggregate.

“Permitted Liens” means any and all of the following: (i) Liens in favor of Agent or Lender; (ii) Liens existing on the Closing Date which are disclosed in Schedule 1C; (iii) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP; (iv) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower’s business and imposed without action of such parties; provided, that the payment thereof is not yet required; (v) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker’s compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than Liens arising under ERISA or environmental Liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) Liens on Equipment or software or other intellectual property, or other capital assets, constituting purchase money Liens and Liens in connection with capital leases securing Indebtedness permitted in clause (iii) of “Permitted Indebtedness”; (viii) Liens incurred in connection with Subordinated Indebtedness; (ix) leasehold interests in leases or subleases and licenses granted in the OCB and not interfering in any material respect with the business of the licensor; (x) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) Liens on insurance proceeds securing the payment of financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to such insurance proceeds and not to any other property or assets); (xii) statutory, common law and contractual rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property; (xiv) (A) Liens on Cash securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness and (B) security deposits in connection with real property leases, the combination of (A) and (B) in an aggregate amount not to exceed Seven Hundred Fifty Thousand Dollars (\$750,000.00) at any time; (xv) Liens in connection with operating leases in the Equipment that is the subject of such leases; (xvi) Permitted Transfers; and (xvii) Liens incurred in connection with the extension, renewal or refinancing of the Indebtedness secured by Liens of the type described in clauses (i) through (xi) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

“Permitted Transfers” means (i) sales of Inventory in the OCB, (ii) licenses, joint ventures, collaboration agreements, strategic alliances and similar arrangements in the OCB providing for the licensing of Borrower’s technology or Intellectual Property; provided that such licenses do not result in a legal transfer of title of the licensed property, (iii) dispositions of worn-out, obsolete or surplus Equipment in the OCB, (iv) use of cash in the OCB, (v) Permitted Investments, (vi) Permitted Liens, (vii) dispositions of Copyright rights in connection with publications in scientific journals, or (viii) other Transfers of assets having a fair market value of not more than Two Hundred Fifty Thousand Dollars (\$250,000.00) in the aggregate in any fiscal year.

“Person” means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

“Preferred Stock” means at any given time any equity security issued by Borrower that has any rights, preferences or privileges senior to Borrower’s Common Stock.

“Prepayment Charge” has the meaning given to such term in Section 2.4.

“Prime Rate” means the “prime rate” as reported in the Wall Street Journal or any successor publication thereto.

“Qualified Subsidiary” means any direct or indirect Domestic Subsidiary or Eligible Foreign Subsidiary.

“Receivables” means (i) all of Borrower’s Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

“Register” shall have the meaning assigned to such term in Section 11.7(b).

“Required Lenders” means at any time, the holders of more than fifty percent (50.0%) of the sum of the aggregate unpaid principal amount of the Term Loans then outstanding.

“Sanctioned Country” means, at any time, a country or territory which is the subject or target of any Sanctions.

“Sanctioned Person” means, at any time, (a) any Person listed in any Sanctions-related list of designated Persons maintained by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, or by the United Nations Security Council, the European Union or any EU member state, (b) any Person operating, organized or resident in a Sanctioned Country or (c) any Person controlled by any such Person.

“Sanctions” means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, or (b) the United Nations Security Council, the European Union or Her Majesty’s Treasury of the United Kingdom.

“SEC” means the Securities and Exchange Commission.

“Second Draw Period” means the period of time commencing upon the occurrence of Milestone Event 2, through the earlier to occur of (a) December 31, 2019 or (b) an Event of Default.

“Secured Obligations” means Borrower’s obligations under this Agreement and any Loan Document, including any obligation to pay any amount now owing or later arising (including, without limitation, the End of Term Charge and the Prepayment Charge).

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

“Subordinated Indebtedness” means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Agent in its sole discretion and subject to a subordination agreement in form and substance satisfactory to Agent in its sole discretion.

“Subsequent Financing” means any Borrower financing which becomes effective after the Closing Date, in a single transaction or series of related transactions not registered under the Securities Act of 1933, as amended, of shares of its preferred stock, common stock or other equity security, or of any instrument exercisable for or convertible into or otherwise representing the right to acquire shares of Borrower preferred stock, common stock or other equity security, to one or more investors for cash for financing purposes (including, without limitation, any so-called PIPE transaction).

“Subsidiary” means an entity, whether corporate, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls fifty percent (50.0%) or more of the outstanding voting securities, including each entity listed on Schedule 1 hereto.

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

“Term A Loan Advance” has the meaning given to such term in Section 2.1(a).

“Term B Loan Advance” has the meaning given to such term Section 2.1(a).

“Term C Loan Advance” has the meaning given to such term in Section 2.1(a).

“Term Commitment” means as to any Lender, the obligation of such Lender, if any, to make a Term Loan Advance to Borrower in a principal amount not to exceed the amount set forth under the heading “Term Commitment” opposite such Lender’s name on Schedule 1.1.

“Term Loan” shall have the meaning assigned to such term in the preamble of this Agreement.

“Term Loan Advance” and “Term Loan Advances” has the meaning given to such term in Section 2.1(a).

“Term Loan Interest Rate” means for any day a floating per annum rate of interest equal to the greater of (a) the sum of (i)(A) the Prime Rate minus (B) five and one-quarter of one percent (5.25%) plus (ii) nine and one quarter of one percent (9.25%), and (b) nine and one-quarter of one percent (9.25%).

“Term Loan Maturity Date” means August 1, 2021.

“Term Note” means a Secured Term Promissory Note in substantially the form of Exhibit B.

“Trademark License” means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Trademarks” means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States of America, any State thereof or any other country or any political subdivision thereof.

“UCC” means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Agent’s Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term “UCC” shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC.

SECTION 2. THE LOAN

2.1 Term Loan.

(a) **Advances.** Subject to the terms and conditions of this Agreement, Lender will severally (and not jointly) make in an amount equal to its respective Term Commitment, and Borrower agrees to draw, one (1) advance in a principal amount of Fifteen Million Dollars (\$15,000,000.00) (the “Term A Loan Advance”) on the Closing Date. Subject to the terms and conditions of this Agreement, during the First Draw Period, upon Borrower’s written request in accordance with this Agreement, Lender will severally (and not jointly) make in an amount equal to its respective Term Commitment, one (1) advance in a principal amount of Five Million Dollars (\$5,000,000.00) (the “Term B Loan Advance”). Subject to the terms and conditions of this Agreement, during the Second Draw Period, upon Borrower’s written request in accordance with this Agreement, Lender will severally (and not jointly) make in an amount equal to its respective Term Commitment, one (1) advance in a principal amount of Five Million Dollars (\$5,000,000.00) (the “Term C Loan Advance”). The Term A Loan Advance, the Term B Loan Advance, and the Term C Loan Advance shall hereinafter be referred to individually as a “Term Loan Advance” and collectively as the “Term Loan Advances”. The aggregate outstanding Term Loan Advances shall not exceed the Term Loan. Proceeds of any Term Loan Advance shall be deposited into an account that is subject to a first priority perfected security interest in favor of Agent perfected by an Account Control Agreement.

(b) **Advance Request.** To obtain a Term Loan Advance, Borrower shall complete, sign and deliver to Agent an Advance Request (at least three (3) Business Days before any Advance Date other than the Closing Date, which shall be at least one (1) Business Day). Lender shall fund the Term Loan Advance in the manner requested by the Advance Request provided that each of the conditions precedent in Section 4 of this Agreement applicable to such Term Loan Advance is satisfied as of the requested Advance Date.

(c) **Term Loan Interest Rate.** The principal balance of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Interest Rate will float and change on the day the Prime Rate changes from time to time.

(d) **Payment.** Borrower will pay interest on each Term Loan Advance on the first Business Day of each month, beginning the month after the Advance Date. Borrower shall repay the aggregate Term Loan principal balance that is outstanding on the day immediately preceding the Amortization Date, in equal monthly installments of principal and interest (mortgage style) beginning on the Amortization Date and continuing on the first Business Day of each month thereafter until the Secured Obligations (other than inchoate indemnity obligations) are repaid. The entire Term Loan principal balance and all accrued but unpaid interest hereunder, shall be due and payable on the Term Loan Maturity Date. Borrower shall make all payments under this Agreement without setoff, recoupment or deduction (except as provided in Section 7.10(b)) and regardless of any counterclaim or defense. Lender will initiate debit entries to Borrower’s account as authorized on the ACH Authorization (i) on each payment date of all periodic obligations payable to Lender under each Term Loan Advance and (ii) out-of-

pocket legal fees and costs incurred by Agent or Lender in connection with Section 11.11 of this Agreement; provided that, with respect to clause (i) above, in the event that Lender or Agent informs Borrower that Lender will not initiate a debit entry to Borrower's account for a certain amount of the periodic obligations due on a specific payment date, Borrower shall pay to Lender such amount of periodic obligations in full in immediately available funds on such payment date; provided, further, that, with respect to clause (i) above, if Lender or Agent informs Borrower that Lender will not initiate a debit entry as described above later than the date that is three (3) Business Days prior to such payment date, Borrower shall pay to Lender such amount of periodic obligations in full in immediately available funds on the date that is three (3) Business Days after the date on which Lender or Agent notifies Borrower of such; provided, further, that, with respect to clause (ii) above, in the event that Lender or Agent informs Borrower that Lender will not initiate a debit entry to Borrower's account for certain amount of such out-of-pocket legal fees and costs incurred by Agent or Lender, Borrower shall pay to Lender such amount in full in immediately available funds within three (3) Business Days. Once repaid, a Term Loan Advance or any portion thereof may not be reborrowed.

2.2 Maximum Interest. Notwithstanding any provision in this Agreement, the Notes, or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lender an amount of interest in excess of the amount that would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of the Secured Obligations consisting of the outstanding principal; second, after all principal is repaid, to the payment of Lender's accrued interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.3 Default Interest. In the event any payment is not paid on the scheduled payment date (other than due to an ACH failure; provided that Borrower had the funds to make the payments when due), subject to applicable grace periods, if any, an amount equal to four percent (4.0%) of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and professional fees, shall bear interest at a rate per annum equal to the rate set forth in Section 2.1(c) plus four percent (4.0%) per annum. In the event any interest is not paid when due hereunder, such delinquent interest shall be added to principal and shall bear interest on interest, compounded at the rate set forth in Section 2.1(c) or this Section 2.3, as applicable.

2.4 Prepayment. At its option, upon at least seven (7) Business Days prior written notice to Agent, Borrower may prepay all, but not less than all, of the outstanding Advances by paying the entire principal balance, all accrued and unpaid interest thereon, together with a prepayment charge equal to the following percentage of the Advance amount being prepaid: if such Advance amounts are prepaid in any of the first twelve (12) months following the Closing Date, three percent (3.0%); and thereafter, one percent (1.0%) (each, a "Prepayment Charge"). Borrower agrees that the Prepayment Charge is a reasonable calculation of Lender's lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advances. Borrower shall prepay the outstanding amount of all principal and accrued interest through the prepayment date and the Prepayment Charge upon the occurrence of a Change in Control. Notwithstanding the foregoing, Agent and Lender agree to waive the Prepayment Charge if Agent and Lender (in its sole and absolute discretion) agree in writing to refinance the Advances prior to the Term Loan Maturity Date.

2.5 End of Term Charge. On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations (other than any inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) in full, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lender a charge of five and fifty-five hundredths of one percent (5.55%) of the Advances (the "End of Term Charge"). Notwithstanding the required payment date of such charge, it shall be deemed earned by Lender as of the Closing Date.

2.6 Notes. If so requested by Lender by written notice to Borrower, then Borrower shall execute and deliver to Lender (and/or, if applicable and if so specified in such notice, to any Person who is an assignee of Lender pursuant to Section 11.13) (promptly after Borrower's receipt of such notice) a Term Note to evidence Lender's Loans.

2.7 Pro Rata Treatment. Each payment (including prepayment) on account of any fee and any reduction of the Term Loans shall be made pro rata according to the Term Commitments of the relevant Lender.

SECTION 3. SECURITY INTEREST

3.1 As security for the prompt and complete payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Agent a security interest in all of Borrower's right, title, and interest in, to and under all of Borrower's personal property and other assets including without limitation the following (except as set forth herein) whether now owned or hereafter acquired (collectively, the "Collateral"): (a) Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles (other than Intellectual Property); (e) Inventory; (f) Investment Property; (g) Deposit Accounts; (h) Cash; (i) Goods; (j) license agreements; (k) franchise agreements, (l) commercial tort claims; and all other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located, and any of Borrower's property in the possession or under the control of Agent; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing. Notwithstanding any of the foregoing, the Collateral shall not

under any circumstances include, and no security interest is granted in (i) Borrower's owned Intellectual Property; provided, however, that the Collateral shall include all Accounts and General Intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the Intellectual Property (the "Rights to Payment"); (ii) any equipment financed by capital leases or purchase money financing that is subject to a Lien that is otherwise permitted by clause (vii) of the definition of Permitted Lien hereunder if inclusion of such equipment would constitute a breach by Borrower of its agreement with a third-party equipment lessor or lender, provided, that upon the release of any such Lien such equipment shall be deemed to be Collateral hereunder and shall be subject to the security interest granted herein; and (iii) any deposit account and Cash described in clause (vii) of the definition of Permitted Indebtedness. Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of the date of this Agreement, include the Intellectual Property to the extent necessary to permit perfection of Agent's security interest in the Rights to Payment.

3.2 If this Agreement is terminated in accordance with its terms, Agent's Lien in the Collateral shall continue until the Secured Obligations (other than inchoate indemnity obligations) are satisfied in full, and at such time Agent shall, at Borrower's sole cost and expense, authorize Borrower to terminate its security interest in the Collateral and all rights therein shall automatically revert to Borrower. Agent shall execute such documents and take such other steps as are reasonably necessary for Borrower to accomplish the foregoing, all at Borrower's sole cost and expense.

SECTION 4. CONDITIONS PRECEDENT TO LOAN

The obligations of Lender to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Advance. On or prior to the Closing Date, Borrower shall have delivered to Agent the following:

(a) executed copies of the Loan Documents, Account Control Agreements, a legal opinion of Borrower's counsel, and all other documents and instruments reasonably required by Agent to effectuate the transactions contemplated hereby or to create and perfect the Liens of Agent with respect to all Collateral, in all cases in form and substance reasonably acceptable to Agent;

(b) certified copy of resolutions of Borrower's board of directors evidencing approval of the Loan and other transactions evidenced by the Loan Documents;

(c) certified copies of the Certificate of Incorporation and the Bylaws, as amended through the Closing Date, of Borrower;

(d) a certificate of good standing for Borrower from its state of incorporation and similar certificates from all other jurisdictions in which it does business and where the failure to be qualified could have a Material Adverse Effect;

(e) payment of the Due Diligence Fee (if not paid prior to the Closing Date), the Facility Charge and reimbursement of Agent's and Lender's current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance;

(f) all certificates of insurance; and

(g) such other documents as Agent may reasonably request.

4.2 All Advances. On each Advance Date:

(a) Agent shall have received (i) an Advance Request for the relevant Advance as required by Section 2.1(b), each duly executed by Borrower's Chief Executive Officer or Chief Financial Officer, and (ii) any other documents Agent may reasonably request.

(b) The representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance no Event of Default shall have occurred and be continuing.

(d) Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in paragraphs (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

4.3 No Default. As of the Closing Date and each Advance Date, as applicable, (i) no fact or condition exists that could (or could, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF BORROWER

Borrower represents and warrants that:

5.1 Corporate Status. Merrimack is a corporation duly organized, legally existing and in good standing under the laws of the State of Delaware, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications and where the failure to be qualified could reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), owned and leased locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit C, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Agent after the Closing Date.

5.2 Collateral. Borrower owns the Collateral and the Intellectual Property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Agent a Lien in the Collateral as security for the Secured Obligations.

5.3 Consents. Borrower's execution, delivery and performance of this Agreement and all other Loan Documents and the Term Note, (i) have been duly authorized by all necessary corporate action of Borrower, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens and the Liens created by this Agreement and the other Loan Documents, (iii) do not violate any provisions of Borrower's Certificate of Incorporation, bylaws, or any material law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject and (iv) except as described on Schedule 5.3, do not violate any material contract or agreement or require the consent or approval of any other Person which has not already been obtained. The individual or individuals executing the Loan Documents on behalf of Borrower are duly authorized to do so.

5.4 Material Adverse Effect. No event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing. Borrower is not aware of any event likely to occur that is reasonably expected to result in a Material Adverse Effect. 5.5 Actions Before Governmental Authorities. Except as described on Schedule 5.5, there are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower, threatened against or affecting Borrower or its property, that is reasonably expected to result in a Material Adverse Effect.

5.6 Laws. Neither Borrower nor any of its Subsidiaries is in violation of any material law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Borrower is not in default in any material respect under any provision of any agreement or instrument evidencing material Indebtedness, or any other material agreement to which it is a party or by which it is bound, which default could reasonably be expected to have a Material Adverse Effect.

Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is 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 and each of its Subsidiaries has

complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a “holding company” or an “affiliate” of a “holding company” or a “subsidiary company” of a “holding company” as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower’s nor any of its Subsidiaries’ properties or assets has been used by Borrower or such Subsidiary or, to Borrower’s Knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has 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 to the extent that the failure to obtain, make or give any of the foregoing could not reasonably be expected to have a Material Adverse Effect.

None of Borrower, any of its Subsidiaries, or to Borrower’s knowledge any of Borrower’s or its Subsidiaries’ Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower and any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law. None of the funds to be provided under this Agreement will be used, directly or indirectly, (a) for any activities in violation of any applicable anti-money laundering, economic sanctions and anti-bribery laws and regulations laws and regulations or (b) for any payment to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

5.7 Information Correct and Current. No written information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Agent in connection with any Loan Document or included therein or delivered pursuant thereto contained, or, when taken as a whole, contains any material misstatement of fact or, when taken together with all other such information or documents, omitted, omits or will omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or will be made, not materially misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Agent, whether prior to or after the Closing Date, shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections provided to Borrower’s Board of Directors.

5.8 Tax Matters. Except as described on Schedule 5.8 and except those being contested in good faith with adequate reserves under GAAP, (a) Borrower has filed all material federal, state and local tax returns that it is required to file (or validly filed extensions thereof), (b) Borrower has duly paid or fully reserved for all material taxes or installments thereof (including any interest or penalties) as and when due, which have or may become due pursuant to such returns, and (c) Borrower has paid or fully reserved for any material tax assessment received by Borrower for the three (3) years preceding the Closing Date, if any (including any taxes being contested in good faith and by appropriate proceedings).

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property material to its business. Except as described on Schedule 5.9, (i) to Borrower's knowledge, each of the material issued Copyrights, Trademarks and Patents is valid and enforceable, (ii) no material Intellectual Property of Borrower has been judged by a decision of a court of competent jurisdiction, invalid or unenforceable, in whole or in part, and (iii) no claim has been made in writing to Borrower that any material part of the Intellectual Property of Borrower violates the material rights of any third party. Schedule 5(a) to the Perfection Certificate is a true, correct and complete list of each of Borrower's Patents, registered Trademarks, registered Copyrights, and material agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform any material obligations under, any of the foregoing contracts, licenses or agreements and, to Borrower's knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property. Except as described on Schedule 5.10, Borrower has all material rights with respect to Intellectual Property necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, other than in connection with Permitted Transfers, and in the case of material in-bound Licenses, except for restrictions that are unenforceable under Division 9 of the UCC, (i) and except as provided in Schedule 5.10, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property, without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, and (ii) no material in-bound License prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such License, except as described on the Schedule 5.10. Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are material to Borrower's business and used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products except customary covenants in inbound license agreements and equipment leases where Borrower is the licensee or lessee. For the avoidance of doubt, shrink-wrap licenses, click on license agreements, open source code and other licenses available to the public without customization shall not be considered a material License.

5.11 Borrower Products. Except as described on Schedule 5.11, no Intellectual Property owned by Borrower or Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened (in writing) litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts in any material respect Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof, in each case, which could reasonably be expected to have a material adverse effect on Borrower's business. To Borrower's knowledge, there is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future material Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. As of the Closing Date, except as described on Schedule 5.11, Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any material Intellectual Property (or written notice of any claim challenging or questioning the ownership in any material licensed Intellectual Property of the owner thereof) or suggesting that any third party has any claim of legal or beneficial ownership with respect thereto. Except as described on Schedule 5.11, to Borrower's knowledge, neither Borrower's use of its material Intellectual Property nor the production and sale of Borrower Products infringes in any material respect the Intellectual Property or other rights of others.

5.12 Financial Accounts. Exhibit D, as may be updated by Borrower in a written notice provided to Agent after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any Subsidiary maintains an account holding Investment Property, and such exhibit correctly identifies in all material respects the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Except as permitted as a Permitted Investment, Borrower has no outstanding loans to any employee, officer or director of Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of Borrower by a third party.

5.14 Capitalization and Subsidiaries. Borrower's capitalization as of the Closing Date is set forth on Schedule 5.14 annexed hereto. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. Attached as Schedule 5.14, as may be updated by Borrower in a written notice provided after the Closing Date, is a true, correct and complete list of each Subsidiary.

5.15 Foreign Subsidiary Voting Rights. No decision or action in any governing document of any Foreign Subsidiary (other than an Eligible Foreign Subsidiary) requires a vote of greater than fifty and one tenth of one percent (50.1%) of the Equity Interests or voting rights of such Foreign Subsidiary.

SECTION 6. INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower must maintain a minimum of Two Million Dollars (\$2,000,000.00) of commercial general liability insurance for each occurrence. Borrower has and agrees to maintain a minimum of Two Million Dollars (\$2,000,000) of directors' and officers' insurance for each occurrence and Five Million Dollars (\$5,000,000.00) in the aggregate. So long as there are any Secured Obligations outstanding, Borrower shall also cause to be carried and maintained insurance upon the Collateral, insuring against all risks of physical loss or damage howsoever caused, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles.

6.2 Certificates. Borrower shall deliver to Agent certificates of insurance that evidence Borrower's compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall state Agent (shown as "Hercules Capital, Inc.", as Agent") is an additional insured for commercial general liability, a loss payee for all risk property damage insurance, subject to the insurer's approval, and a loss payee for property insurance and additional insured for liability insurance for any future insurance that Borrower may acquire from such insurer. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements for all risk property damage insurance. All certificates of insurance will provide for a minimum of thirty (30) days advance written notice to Agent of cancellation (other than cancellation for non-payment of premiums, for which ten (10) days' advance written notice shall be sufficient) or any other change adverse to Agent's interests. Any failure of Agent to scrutinize such insurance certificates for compliance is not a waiver of any of Agent's rights, all of which are reserved. Borrower shall provide Agent with copies of each insurance policy (excluding D&O), and upon entering or materially amending any insurance policy required hereunder, Borrower shall provide Agent with copies of such policies (excluding D&O) and shall promptly deliver to Agent updated insurance certificates with respect to such policies.

6.3 Indemnity. Borrower agrees to indemnify and hold Agent, Lender and their officers, directors, employees, agents, in-house attorneys, representatives and shareholders (each, an "Indemnified Person") harmless from and against any and all claims, costs, expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including

reasonable attorneys' fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal) (collectively, "Liabilities"), that may be instituted or asserted against or incurred by such Indemnified Person as the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases Liabilities to the extent resulting from any Indemnified Person's gross negligence or willful misconduct. Borrower agrees to pay, and to save Agent and Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Agent or Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement. In no event shall any Indemnified Person be liable on any theory of liability for any special, indirect, consequential or punitive damages (including any loss of profits, business or anticipated savings). This Section 6.3 shall survive the repayment of indebtedness under, and otherwise shall survive the expiration or other termination of, this Agreement. This Section 6.3 shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim.

SECTION 7. COVENANTS OF BORROWER

Borrower agrees as follows:

7.1 Financial Reports. Merrimack shall furnish to Agent the financial statements and reports listed hereinafter (the "Financial Statements"):

(a) as soon as practicable (and in any event within thirty (30) days) after the end of each month, unaudited financial statements as of the end of such month (prepared on a consolidated basis, if applicable), including a summary balance sheet and statement of income and, together with a Compliance Certificate in the form of Exhibit E signed on behalf of Borrower by Merrimack's Chief Executive Officer or Chief Financial Officer;

(b) as soon as practicable (and in any event within 45 days) after the end of each of the first three calendar quarters of each year, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated basis, if applicable), including balance sheet and statements of income and cash flows, together with a Compliance Certificate in the form of Exhibit E signed on behalf of Borrower by Merrimack's Chief Executive Officer or Chief Financial Officer;

(c) as soon as practicable (and in any event within ninety (90) days) after the end of each fiscal year, audited financial statements as of the end of such year (prepared on a consolidated basis, if applicable), including balance sheet and related statements of income and cash flows, and setting forth in comparative form the corresponding figures for the preceding fiscal year, accompanied by an audit report that is unqualified as to scope of audit (other than a "going concern" qualification due to a lack of liquidity) from PricewaterhouseCoopers LLP or another firm of certified public accountants selected by Borrower and reasonably acceptable to Agent, together with a Compliance Certificate in the form of Exhibit E signed on behalf of Borrower by Merrimack's Chief Executive Officer or Chief Financial Officer;

(d) as soon as practicable (and in any event within thirty (30) days) after the end of each month, a report showing agings of accounts receivable, if applicable, and accounts payable;

(e) promptly after the sending or filing thereof, as the case may be, copies of any proxy statements, financial statements or reports that Borrower has made available to holders of its Preferred Stock and copies of any regular, periodic and special reports or registration statements that Borrower files with the Securities and Exchange Commission or any governmental authority that may be substituted therefor, or any national securities exchange;

(f) budgets promptly following their approval by Borrower's Board of Directors, and in any event, within 30 days after the end of Borrower's fiscal year, as well as budgets, operating plans and other financial information reasonably requested by Agent (provided that Borrower shall not be obligated to disclosure pursuant to this Section 7.1(f) any privileged attorney-client communication); and

(g) immediate notice if Borrower or any Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering.

Borrower shall not make any change in its fiscal years or fiscal quarters or, without notice to Agent, any change in its accounting policies or reporting practices other than those changes made in accordance with GAAP and accounting guidance. The fiscal year of Borrower shall end on December 31.

The executed Compliance Certificate may be sent via email to Agent at XXXX. All Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) shall be sent via e-mail to XXXX with a copy to XXXX provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be faxed to Agent at: XXXX, attention Account Manager: Merrimack Pharmaceuticals, Inc.

Notwithstanding the foregoing, documents required to be delivered under Sections 7.1(a), (b), (c) or (f) (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 emails a link thereto to Agent; provided that Borrower shall directly provide Agent all Financial Statements required to be delivered pursuant to Section 7.1(b) and (c) hereunder.

7.2 Management Rights. Borrower shall permit any representative that Agent or Lender authorizes, including its attorneys and accountants, to inspect the Collateral and examine and make copies and abstracts of the books of account and records of Borrower at reasonable times and upon reasonable notice during normal business hours; provided, however, that so long as no Event of Default has occurred and is continuing, such examinations shall be limited to no more often than once in any twelve month period. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records. In addition, Agent or Lender shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Agent and Lender shall constitute "management rights" within the meaning of 29 C.F.R. Section 2510.3-101(d)(3)(ii), but that any advice, recommendations or participation by Agent or Lender with respect to any business issues shall not be deemed to give Agent or Lender, nor be deemed an exercise by Agent or Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall from time to time execute, deliver and file, alone or with Agent, any financing statements, security agreements, collateral assignments, notices, control agreements, or other documents to perfect or give the highest priority to Agent's Lien on the Collateral. Borrower shall from time to time procure any instruments or documents as may be reasonably requested by Agent, and take all further action that may be necessary, or that Agent may reasonably request, to perfect and protect the Liens granted hereby and thereby. In addition, and for such purposes only, Borrower hereby authorizes Agent to execute and deliver on behalf of Borrower and to file such financing statements (including an indication that the financing statement covers "all assets or all personal property" of Borrower in accordance with Section 9-504 of the UCC), collateral assignments, notices, control agreements, security agreements and other documents without the signature of Borrower either in Agent's name or in the name of Agent as agent and attorney-in-fact for Borrower. Borrower shall in its reasonable business judgment protect and defend Borrower's title to the Collateral and Agent's Lien thereon against all Persons claiming any interest adverse to Borrower or Agent other than Permitted Liens.

7.4 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, at any time before any applicable maturity date, except for (a) the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion, (b) purchase money Indebtedness pursuant to its then applicable payment schedule, (c) prepayments and actions that impose an obligation to prepay the convertible notes disclosed on Schedule 1A, (d) prepayment by any Subsidiary of (i) inter-company Indebtedness owed by such Subsidiary to any Borrower, or (ii) if such Subsidiary is not a Borrower, intercompany Indebtedness owed by such Subsidiary to another Subsidiary that is not a Borrower or (d) as otherwise permitted hereunder or approved in writing by Agent.

7.5 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other material property and material assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from any legal process or Liens whatsoever (except for Permitted Liens), and shall give Agent prompt written notice of any legal process affecting the Collateral, the Intellectual Property, such other material property and material assets, or any Liens thereon, provided however, that the Collateral and such other material property and material assets may be subject to Permitted Liens except that there shall be no Liens whatsoever on Intellectual Property. Borrower shall not agree with any Person other than Agent or Lender not to encumber its material property (including Intellectual Property). Borrower shall not enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of any Borrower to create, incur, assume or suffer to exist any Lien upon any of its material property (including Intellectual Property), whether now owned or hereafter acquired, to secure its obligations under the Loan Documents to which it is a party other than (a) this Agreement and the other Loan Documents, and (b) any agreements governing any purchase money Liens or capital lease obligations otherwise permitted hereby (in which case, any prohibition or limitation shall only be effective against the material assets financed thereby) and in connection with any Permitted Liens or Permitted Transfers. Borrower shall cause its Subsidiaries to protect and defend such Subsidiary's title to its material assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause its Subsidiaries at all times to keep such Subsidiary's material property and material assets free and clear from any legal process or Liens whatsoever (except for Permitted Liens, provided however, that there shall be no Liens whatsoever on Intellectual Property), and shall give Agent prompt written notice of any legal process affecting such Subsidiary's material assets.

7.6 Investments. Borrower shall not directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments.

7.7 Distributions. Borrower shall not, and shall not allow any Subsidiary to, (a) repurchase or redeem any class of stock or other Equity Interest other than pursuant to employee, director or consultant repurchase plans or other similar agreements, provided, however, in each case the repurchase or redemption price does not exceed the original consideration paid for such stock or Equity Interest in an aggregate amount not to exceed Two Hundred Fifty Thousand Dollars (\$250,000.00), or (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other Equity Interest, except that a Subsidiary may pay dividends or make distributions to Borrower, or (c) lend money to any employees, officers or directors or guarantee the payment of any such loans granted by a third party other than Permitted Investments.

7.8 Transfers. Except for Permitted Transfers, Permitted Investments and Permitted Liens, Borrower shall not, and shall not allow any Subsidiary to, voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of its assets (including cash).

7.9 Mergers or Acquisitions. Borrower shall not merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of (a) a Subsidiary which is not a Borrower into another Subsidiary or into Borrower or (b) a Borrower into another Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person. Borrower may dissolve any Subsidiary (that is not a party to this Agreement) as long as the assets of that Subsidiary are distributed to such Subsidiary's shareholders and Borrower provides prompt notice to Agent.

7.10 Taxes.

(a) Borrower and its Subsidiaries shall pay when due all material taxes, fees or other charges of any nature whatsoever (together with any related interest or penalties) now or hereafter imposed or assessed against Borrower, Agent, Lender or the Collateral or upon Borrower's ownership, possession, use, operation or disposition thereof or upon Borrower's rents, receipts or earnings arising therefrom (other than Excluded Taxes).

(b) Any and all payments by or on account of any obligation of Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law requires the deduction or withholding of any Tax from any such payment, then Borrower (or applicable withholding agent) shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant governmental authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 7.10(b)), the applicable Lender receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(c) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to Borrower and Agent, at the time or times reasonably requested by Borrower or Agent, such properly completed and executed documentation reasonably requested by Borrower or Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, Lender, if reasonably requested by Borrower or Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by Borrower or Agent as will enable Borrower and Agent to determine whether or not Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than Internal Revenue Service Form W-9 or the relevant Internal Revenue Service Form W-8) shall not be required if in Lender's reasonable judgment such completion, execution or submission would subject Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of Lender.

(d) Without limiting the generality of the foregoing, if a payment made to a Lender would be subject to U.S. federal withholding Tax imposed by FATCA if Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), Lender shall deliver to Borrower and Agent at the time or times prescribed by law and at such time or times reasonably requested by Borrower or Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by Borrower or Agent as may be necessary for Borrower and Agent to comply with its obligations under FATCA and to determine that Lender has complied with Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (c), "FATCA" shall include any amendments made to FATCA after the date hereof.

(e) Borrower shall file on or before the due date therefor all personal property tax returns (or validly filed extensions) in respect of the Collateral. Notwithstanding the foregoing, Borrower may contest, in good faith and by appropriate proceedings, taxes for which Borrower maintains adequate reserves therefor in accordance with GAAP.

7.11 Corporate Changes. Neither Borrower nor any Subsidiary shall change its corporate name, legal form or jurisdiction of formation without twenty (20) days' prior written notice to Agent. Neither Borrower nor any Subsidiary shall suffer a Change in Control. Neither Borrower nor any Subsidiary shall relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Agent; and (ii) such relocation shall be within the continental United States of America. Neither Borrower nor any Qualified Subsidiary shall relocate any item of Collateral (other than (u) Borrower Products, including compounds and raw materials used to manufacture biopharmaceuticals or which are used for preclinical testing or clinical trials, in the OCB, (v) Permitted Transfers, (w) sales of Inventory in the ordinary course of business, (y) relocations of Equipment having an aggregate value of up to Two Hundred Thousand Dollars (\$200,000.00) in any fiscal year, (y) relocations of Equipment located outside of the United States of America, and (z) relocations of Collateral from a location described on Exhibit C to another location described on Exhibit C) unless (i) it has provided prompt written notice to Agent, (ii) such relocation is within the continental United States of America and, (iii) if such relocation is to a third party bailee, and the Collateral has a value in excess of Two Hundred Thousand Dollars (\$200,000.00), it has delivered a bailee agreement in form and substance reasonably acceptable to Agent.

7.12 Deposit Accounts. Neither Borrower nor any Qualified Subsidiary shall maintain any Deposit Accounts (other than the Excluded Accounts), or accounts holding Investment Property, except with respect to which Agent has an Account Control Agreement, if applicable.

7.13 Joinder. Borrower shall notify Agent of each Subsidiary formed subsequent to the Closing Date and, within 15 days following such formation, shall cause any such Qualified Subsidiary to execute and deliver to Agent a Joinder Agreement.

7.14 Notification of Event of Default. Borrower shall notify Agent immediately of the occurrence of any Event of Default.

7.15 Use of Proceeds. Borrower agrees that the proceeds of the Loans shall be used solely to pay related fees and expenses in connection with this Agreement and for working capital and general corporate purposes. The proceeds of the Loans Credit will not be used in violation of Anti-Corruption Laws or applicable Sanctions.

7.16 Foreign Subsidiary Voting Rights. Borrower shall not, and shall not permit any Subsidiary, to amend or modify any governing document of any Foreign Subsidiary of Borrower (other than an Eligible Foreign Subsidiary) the effect of which is to require a vote of greater than fifty and one-tenth of one percent (50.1%) of the Equity Interests or voting rights of such entity for any decision or action of such entity.

7.17 Compliance with Laws.

Borrower shall maintain, and shall cause its Subsidiaries to maintain, compliance in all material respect with all applicable laws, rules or regulations (including any law, rule or regulation with respect to the making or brokering of loans or financial accommodations), and shall, or cause its Subsidiaries to, obtain and maintain all required governmental authorizations, approvals, licenses, franchises, permits or registrations reasonably necessary in connection with the conduct of Borrower's business.

Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit, to Borrower's knowledge, any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit, to Borrower's knowledge, any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

Borrower has implemented and maintains in effect policies and procedures designed to ensure material compliance by Borrower, its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws and applicable Sanctions, and Borrower, its Subsidiaries and their respective officers and employees and to the knowledge of Borrower its directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects.

None of Borrower, any of its Subsidiaries or any of their respective directors, officers or employees, or to the knowledge of Borrower, any agent for Borrower or its Subsidiaries that will act in any capacity in connection with or benefit from the credit facility established hereby, is a Sanctioned Person. No Loan, use of proceeds or other transaction contemplated by this Agreement will violate Anti-Corruption Laws or applicable Sanctions.

7.18 Intellectual Property.

(a) Borrower shall use commercially reasonable efforts to (i) protect, defend and maintain the validity and enforceability of its Intellectual Property; (ii) promptly advise Agent in writing of material infringements of its Intellectual Property of which it is aware; and (iii) not allow any Intellectual Property material to Borrowers' business to be abandoned, forfeited or dedicated to the public without Agent's written consent.

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

7.19 Transactions with Affiliates. Borrower shall not and shall not permit any Subsidiary to, directly or indirectly, enter into or permit to exist any transaction of any kind with any Affiliate of Borrower or such Subsidiary on terms that are less favorable to Borrower or such Subsidiary, as the case may be, than those that might be obtained in an arm's length transaction from a Person who is not an Affiliate of Borrower or such Subsidiary other than (a) transactions, arrangements and contracts otherwise permitted pursuant to Sections 7.4, 7.5, 7.6, 7.7, 7.8, 7.9 and 7.11 and (b) transaction between (i) a Borrower and another Borrower, or (ii) a Qualified Subsidiary and another Qualified Subsidiary which are not party to this Agreement.

7.20 Post-Closing Deliverables. Borrower shall deliver to Agent within (i) thirty (30) Business Days after the Closing Date, endorsements to Borrower's property and liability policies, which endorsements shall name Agent as lender loss payee or additional insured, as applicable and provide that Agent shall receive prior notice of cancellation of such property and liability policies, and (ii) five (5) Business Days, a duly executed Securities Account Control Agreement from Silicon Valley Bank.

SECTION 8. RIGHT TO INVEST

8.1 For a period of twelve (12) months following the Closing Date, Lender or its assignee or nominee shall have the right, in its discretion, to participate in any one or more Subsequent Financings in an aggregate amount, for all such Subsequent Financings in which Lender and/or its assignee(s) or nominee(s) participate, of up to One Million Dollars (\$1,000,000.00), on the same terms, conditions and pricing afforded to others participating in any such Subsequent Financing. To the extent Lender is offered the opportunity to participate in one or more Subsequent Financings in an amount of at least One Million Dollars (\$1,000,000.00) in the aggregate, the requirements of this Section 8.1 shall be satisfied and Lender's right to participate in any future Subsequent Financing shall terminate.

SECTION 9. EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall be an Event of Default:

9.1 Payments. Borrower fails to pay any amount due under this Agreement or any of the other Loan Documents on the due date; provided, however, that an Event of Default shall not occur on account of a failure to pay due solely to an administrative or operational error of Agent or Lender or Borrower's bank if Borrower had the funds to make the payment when due and makes the payment within three (3) Business Days following Borrower's knowledge of such failure to pay; or

9.2 Covenants. Borrower breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement, or any of the other Loan Documents or any other agreement among Borrower, Agent and Lender, and (a) with respect to a default under any covenant under this Agreement (other than under Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16, 7.17, 7.18(b), and 7.20) any other Loan Document or any other agreement among Borrower, Agent and Lender, such default continues for more than ten (10) days after the earlier of the date on which (i) Agent or Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default or (b) with respect to a default under any of Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16, 7.17, 7.18(b), and 7.20 the occurrence of such default; or

9.3 Material Adverse Effect. A circumstance has occurred that could reasonably be expected to have a Material Adverse Effect; provided that solely for the purposes of this Section 9.3, the occurrence of adverse results or delays in any nonclinical or clinical trial, including without limitation, the failure to demonstrate the desired safety or efficacy of any of Borrower's clinical assets shall not, in and of itself, constitute a Material Adverse Effect; or

9.4 Representations. Any representation or warranty made by Borrower in any Loan Document shall have been false or misleading in any material respect when made or when deemed made; or

9.5 Insolvency. Borrower (A) (i) shall make an assignment for the benefit of creditors; or (ii) shall be unable to pay its debts as they become due, or be unable to pay or perform under the Loan Documents, or shall become insolvent; or (iii) shall file a voluntary petition in bankruptcy; or (iv) shall file any petition, answer, or document seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (v) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of Borrower or of all or any substantial part (i.e., 33-1/3% or more) of the assets or property of Borrower; or (vi) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its

employees; or (vii) Borrower or its directors or majority shareholders shall take any action initiating any of the foregoing actions described in clauses (i) through (vi); or (B) either (i) forty-five (45) days shall have expired after the commencement of an involuntary action against Borrower seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of Borrower being stayed; or (ii) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (iii) Borrower shall file any answer admitting or not contesting the material allegations of a petition filed against Borrower in any such proceedings; or (iv) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (v) forty-five (45) days shall have expired after the appointment, without the consent or acquiescence of Borrower, of any trustee, receiver or liquidator of Borrower or of all or any substantial part of the properties of Borrower without such appointment being vacated; or

9.6 Attachments; Judgments. Any portion of Borrower's assets is attached or seized, or a levy is filed against any such assets, or a judgment or judgments is/are entered for the payment of money (not covered by independent third party insurance as to which liability has not been rejected by such insurance carrier), individually or in the aggregate, of at least Two Hundred Thousand Dollars (\$200,000.00), and remains unstayed, unbonded and unsatisfied for more than ten (10) days, or Borrower is enjoined or in any way prevented by court order from conducting any part of its business; or

9.7 Other Obligations. The occurrence of any default under any agreement or obligation of Borrower involving any Indebtedness in excess of One Hundred Thousand Dollars (\$100,000.00).

9.8 Stop Trade. At any time, an SEC stop trade order or NASDAQ market trading suspension of the Common Stock shall be in effect for five (5) consecutive days or five (5) days during a period of ten (10) consecutive days, excluding in all cases a suspension of all trading on a public market, provided that Borrower shall not have been able to cure such trading suspension within thirty (30) days of the notice thereof or list the Common Stock on another public market within sixty (60) days of such notice.

SECTION 10. REMEDIES

10.1 General. Upon and during the continuance of any one or more Events of Default, (i) Agent may, and at the direction of the Required Lenders shall, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 9.5, all of the Secured Obligations shall automatically be accelerated and made due and payable, in each case without any further notice or act), (ii) Agent may, at its option, sign and file in Borrower's name any and all collateral assignments, notices, control agreements, security agreements and other documents it deems necessary or appropriate to perfect or protect the repayment of the Secured Obligations, and in furtherance thereof, Borrower hereby grants Agent an

irrevocable power of attorney coupled with an interest, and (iii) Agent may notify any of Borrower's account debtors to make payment directly to Agent, compromise the amount of any such account on Borrower's behalf and endorse Agent's name without recourse on any such payment for deposit directly to Agent's account. Agent may, and at the direction of the Required Lenders shall, exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Agent's rights and remedies shall be cumulative and not exclusive.

10.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Agent may, and at the direction of the Required Lenders shall, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Agent may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon ten (10) calendar days' prior written notice to Borrower. Agent may require Borrower to assemble the Collateral and make it available to Agent at a place designated by Agent that is reasonably convenient to Agent and Borrower. The proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Agent in the following order of priorities:

First, to Agent and Lender in an amount sufficient to pay in full Agent's and Lender's reasonable costs and professionals' and advisors' fees and expenses as described in Section 11.11;

Second, to Lender in an amount equal to the then unpaid amount of the Secured Obligations (including principal, interest, and the Default Rate interest), in such order and priority as Agent may choose in its sole discretion; and

Finally, after the full and final payment in Cash of all of the Secured Obligations (other than inchoate obligations), to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Agent shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

10.3 Account Control Agreements. Agent agrees not to issue a notice of exclusive control or any other instruction with respect to control or disposition of funds under any Account Control Agreement unless an Event of Default has occurred and is continuing.

10.4 No Waiver. Agent shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Agent to marshal any Collateral.

10.5 Cumulative Remedies. The rights, powers and remedies of Agent hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Agent.

SECTION 11. MISCELLANEOUS

11.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

11.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of:

- (i) the day of transmission by electronic transmission or hand delivery or delivery by an overnight express service or overnight mail delivery service; or
- (ii) the third calendar day after deposit in the United States of America mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

(a) If to Agent:

HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Bryan Jadot
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Email: XXXX
Telephone: XXXX

(b) If to Lender:

HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Telephone: XXXX

(c) If to Borrower:

MERRIMACK PHARMACEUTICALS, INC.
One Kendall Square, Suite B7201
Cambridge, MA 02139
Attention: Jean Franchi
Facsimile: XXXX
Email: XXXX
Telephone: XXXX

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

Merrimack Pharmaceuticals, Inc.
One Kendall Square, Suite B7201
Cambridge, MA 02139
Attention: Jeff Munsie, General Counsel
Email: XXXX
Telephone: XXXX

and to:

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109
Attention: Jamie Class
Email: XXXX
Telephone: XXXX

or to such other address as each party may designate for itself by like notice.

11.3 Entire Agreement; Amendments.

(a) This Agreement and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, non-disclosure or confidentiality agreements, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof or thereof (including Agent's proposal letter dated June 11, 2018).

(b) Neither this Agreement, any other Loan Document, nor any terms hereof or thereof may be amended, supplemented or modified except in accordance with the provisions of this Section 11.3(b). The Required Lenders and Borrower party to the relevant Loan Document may, or, with the written consent of the Required Lenders, Agent and Borrower party to the relevant Loan Document may, from time to time, (i) enter into written amendments, supplements or modifications hereto and to the other Loan Documents for the purpose of adding any provisions to this Agreement or the other Loan Documents or changing in any manner the rights of Lenders or of Borrower hereunder or thereunder or (ii) waive, on such terms and conditions as the Required Lenders or Agent, as the case may be, may specify in such instrument, any of the requirements of this Agreement or the other Loan Documents or any default or Event of Default and its consequences; provided, however, that no such waiver and no such amendment, supplement or modification shall (A) forgive the principal amount or extend

the final scheduled date of maturity of any Loan, extend the scheduled date of any amortization payment in respect of any Term Loan Advance, reduce the stated rate of any interest or fee payable hereunder) or extend the scheduled date of any payment thereof, in each case without the written consent of each Lender directly affected thereby; (B) eliminate or reduce the voting rights of any Lender under this Section 11.3(b) without the written consent of such Lender; (C) reduce any percentage specified in the definition of Required Lenders, consent to the assignment or transfer by Borrower of any of its rights and obligations under this Agreement and the other Loan Documents, release all or substantially all of the Collateral or release a Borrower from its obligations under the Loan Documents, in each case without the written consent of all Lenders; or (D) amend, modify or waive any provision of Section 11.17 without the written consent of Agent. Any such waiver and any such amendment, supplement or modification shall apply equally to each Lender and shall be binding upon Borrower, Lender, Agent and all future holders of the Loans.

11.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

11.5 No Waiver. The powers conferred upon Agent and Lender by this Agreement are solely to protect its rights hereunder and under the other Loan Documents and its interest in the Collateral and shall not impose any duty upon Agent or Lender to exercise any such powers. No omission or delay by Agent or Lender at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Agent or Lender is entitled, nor shall it in any way affect the right of Agent or Lender to enforce such provisions thereafter.

11.6 Survival. All agreements, representations and warranties contained in this Agreement and the other Loan Documents or in any document delivered pursuant hereto or thereto shall be for the benefit of Agent and Lender and shall survive the execution and delivery of this Agreement. Sections 6.3, 8.1 and 11.14 shall survive the termination of this Agreement.

11.7 Successors and Assigns.

(a) The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). Borrower shall not assign its obligations under this Agreement or any of the other Loan Documents without Agent's express prior written consent, and any such attempted assignment shall be void and of no effect. Agent and Lender may assign, transfer, or endorse its rights hereunder (except for Section 8.1, which may not be assigned without Borrower written consent) and under the other Loan Documents to an Assignee (defined in Section 11.13) without prior notice to Borrower, and all of such rights shall inure to the benefit of Agent's and Lender's successors and assigns; provided that as long as no Event

of Default has occurred and is continuing, neither Agent nor any Lender may assign, transfer or endorse its rights hereunder or under the Loan Documents to any party that is a direct competitor of Borrower (as reasonably determined by Agent) without the prior consent of Borrower, which shall not be unreasonably withheld conditioned or delayed; provided however Borrower's consent shall not be required if such assignment occurs following an Event of Default that is continuing or in connection with the a sale or disposition of Agent or Lender or all or a portion of a Lender's loan portfolio, or any merger, acquisition or corporate reorganization affecting a Lender. In addition to the foregoing, in all cases, any transfer to an Affiliate of any Lender or Agent shall be allowed.

(b) The Agent, acting solely for this purpose as an agent of the Borrower, shall maintain a copy of each assignment and assumption delivered to it and a register for the recordation of the names and addresses of the Lender, and the commitments of, and principal amounts (and stated interest) of the Term Loans owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and the Borrower, the Agent and the Lender shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of the Loan Documents. The Register shall be available for inspection by the Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

11.8 Governing Law. This Agreement and the other Loan Documents have been negotiated and delivered to Agent and Lender in the State of California, and shall have been accepted by Agent and Lender in the State of California. Payment to Agent and Lender by Borrower of the Secured Obligations is due in the State of California. This Agreement and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

11.9 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 11.10 is not applicable) arising in or under or related to this Agreement or any of the other Loan Documents (except as expressly provided otherwise in any other Loan Document) shall be brought in any state or federal court located in the county of San Francisco or Santa Clara, in the state of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) submits and consents to exclusive jurisdiction in such courts except that Agent may bring suit or take legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations or as provided in any other Loan Document; (b) waives any objection as to lack of jurisdiction or improper venue or forum non conveniens; and (c) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement or the other Loan Documents. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 11.2, and shall be deemed effective and received as set forth in Section 11.2.

11.10 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert Person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER, AGENT AND LENDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE OR BY AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Agent, Borrower and Lender; Claims that arise out of or are in any way connected to the relationship among Borrower, Agent and Lender; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement, any other Loan Document.

(b) If the waiver of jury trial set forth in Section 11.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 11.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

11.11 Professional Fees. Borrower promises to pay Agent's and Lender's fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable attorneys fees, UCC searches, filing costs, and other miscellaneous expenses. In addition, Borrower promises to pay any and all reasonable attorneys' and other professionals' fees and expenses incurred by Agent and Lender after the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, audit, field exam, sale, lease, liquidation, or disposition of Collateral or the exercise of remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Agent or Lender in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

11.12 Confidentiality. Agent and Lender acknowledge that certain items of Collateral and information provided to Agent and Lender by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (x) is marked as confidential by Borrower at the time of disclosure, or (y) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Agent and Lender agree that any Confidential Information it may obtain in the course of acquiring, administering, or perfecting Agent's security interest in the Collateral shall not be disclosed to any other Person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Agent and Lender may disclose any such information: (a) to its own directors, officers, employees, accountants, counsel and other professional advisors and to its Affiliates if Agent or Lender in their sole discretion determines that any such party should have access to such information in connection with such party's responsibilities in connection with the Loan or this Agreement and, provided that such recipient of such Confidential Information either (i) agrees to be bound by the confidentiality provisions of this paragraph or (ii) is otherwise subject to confidentiality restrictions that reasonably protect against the disclosure of Confidential Information; (b) if such information is generally available to the public without any disclosure by Agent or Lender or breach of this Section 11.12; (c) if required or appropriate in any report, statement or testimony submitted to any governmental authority having or claiming to have jurisdiction over Agent or Lender; (d) if required or appropriate in response to any summons or subpoena or in connection with any litigation, to the extent permitted or deemed advisable by Agent's or Lender's counsel; (e) to comply with any legal requirement or law applicable to Agent or Lender; (f) to the extent reasonably necessary in connection with the exercise of any right or remedy under any Loan Document, including Agent's sale, lease, or other disposition of Collateral after default and during the continuation of an Event of Default; (g) to any participant or assignee of Agent or Lender or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee agrees in writing to be bound by this Section prior to disclosure; or (h) otherwise with the prior consent of Borrower; provided, that any disclosure made in violation of this Agreement shall not affect the obligations of Borrower or any of its Affiliates or any guarantor under this Agreement or the other Loan Documents. Agent's and Lender's obligations under this Section 11.12 shall supersede all of their respective obligations under any non-disclosure agreement.

11.13 Assignment of Rights. Borrower acknowledges and understands that Agent or Lender may, subject to Section 11.7, sell and assign all or part of its interest hereunder and under the Loan Documents to any Person or entity (an "Assignee"), provided that no such assignment shall be made to a direct competitor of Borrower without the prior written consent of Borrower, which shall not be unreasonably withheld conditioned or delayed; provided however Borrower's consent shall not be required if such assignment occurs following an Event of Default that is continuing or in connection with the a sale or disposition of Agent or Lender or all or a portion of a Lender's loan portfolio, or any merger, acquisition or corporate reorganization affecting a Lender. After such assignment the term "Agent" or "Lender" as used in the Loan Documents shall mean and include such Assignee, and such Assignee shall be vested with all rights, powers and remedies of Agent and Lender hereunder with respect to the interest so assigned; but with

respect to any such interest not so transferred, Agent and Lender shall retain all rights, powers and remedies hereby given. No such assignment by Agent or Lender shall relieve Borrower of any of its obligations hereunder. Lender agrees that in the event of any transfer by it of the Term Note (if any), it will endorse thereon a notation as to the portion of the principal of the Term Note(s), which shall have been paid at the time of such transfer and as to the date to which interest shall have been last paid thereon.

11.14 Revival of Secured Obligations. This Agreement and the Loan Documents shall remain in full force and effect and continue to be effective if any petition is filed by or against Borrower for liquidation or reorganization, if Borrower becomes insolvent or makes an assignment for the benefit of creditors, if a receiver or trustee is appointed for all or any significant part of Borrower's assets, or if any payment or transfer of Collateral is recovered from Agent or Lender. The Loan Documents and the Secured Obligations and Collateral security shall continue to be effective, or shall be revived or reinstated, as the case may be, if at any time payment and performance of the Secured Obligations or any transfer of Collateral to Agent, or any part thereof is rescinded, avoided or avoidable, reduced in amount, or must otherwise be restored or returned by, or is recovered from, Agent, Lender or by any obligee of the Secured Obligations, whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment, performance, or transfer of Collateral had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, avoided, avoidable, restored, returned, or recovered, the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full, final, and indefeasible payment to Agent or Lender in Cash.

11.15 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

11.16 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any Person other than Agent, Lender and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents will be personal and solely among Agent, Lender and Borrower.

11.17 Agency.

(a) Lender hereby irrevocably appoints Hercules Capital, Inc. to act on its behalf as Agent hereunder and under the other Loan Documents and authorizes Agent to take such actions on its behalf and to exercise such powers as are delegated to Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto.

(b) Lender agrees to indemnify Agent in its capacity as such (to the extent not reimbursed by Borrower and without limiting the obligation of Borrower to do so), according to its respective Term Commitment percentage (based upon the total outstanding Term Loan Commitments) in effect on the date on which indemnification is sought under this Section 11.17, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind whatsoever that may at any time be imposed on, incurred by or asserted against Agent in any way relating to or arising out of, this Agreement, any of the other Loan Documents or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or any action taken or omitted by Agent under or in connection with any of the foregoing. The agreements in this Section shall survive the payment of the Loans and all other amounts payable hereunder.

(c) Agent in Its Individual Capacity. The Person serving as Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not Agent and the term “Lender” shall, unless otherwise expressly indicated or unless the context otherwise requires, include each such Person serving as Agent hereunder in its individual capacity.

(d) Exculpatory Provisions. Agent shall have no duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, Agent shall not:

- (i) be subject to any fiduciary or other implied duties, regardless of whether any default or any Event of Default has occurred and is continuing;
- (ii) have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that Agent is required to exercise as directed in writing by Lender, provided that Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose Agent to liability or that is contrary to any Loan Document or applicable law; and
- (iii) except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and Agent shall not be liable for the failure to disclose, any information relating to Borrower or any of its Affiliates that is communicated to or obtained by any Person serving as Agent or any of its Affiliates in any capacity.

(e) Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of Required Lenders or as Agent shall believe in good faith shall be necessary, under the circumstances or (ii) in the absence of its own gross negligence or willful misconduct.

(f) Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or

other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Section 4 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to Agent.

(g) Reliance by Agent. Agent may rely, and shall be fully protected in acting, or refraining to act, upon, any resolution, statement, certificate, instrument, opinion, report, notice, request, consent, order, bond or other paper or document that it has no reason to believe to be other than genuine and to have been signed or presented by the proper party or parties or, in the case of cables, telecopies and telexes, to have been sent by the proper party or parties. In the absence of its gross negligence or willful misconduct, Agent may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to Agent and conforming to the requirements of the Loan Agreement or any of the other Loan Documents. Agent may consult with counsel, and any opinion or legal advice of such counsel shall be full and complete authorization and protection in respect of any action taken, not taken or suffered by Agent hereunder or under any Loan Documents in accordance therewith. Agent shall have the right at any time to seek instructions concerning the administration of the Collateral from any court of competent jurisdiction. Agent shall not be under any obligation to exercise any of the rights or powers granted to Agent by this Agreement, the Loan Agreement and the other Loan Documents at the request or direction of Lenders unless Agent shall have been provided by Lender with adequate security and indemnity against the costs, expenses and liabilities that may be incurred by it in compliance with such request or direction.

11.18 Publicity. None of the parties hereto nor any of its respective member businesses and Affiliates shall, without the other parties' prior written consent (which shall not be unreasonably withheld or delayed), publicize or use (a) the other party's name (including a brief description of the relationship among the parties hereto), logo or hyperlink to such other parties' web site, separately or together, in written and oral presentations, advertising, promotional and marketing materials, client lists, public relations materials or on its web site (together, the "Publicity Materials"); (b) the names of officers of such other parties in the Publicity Materials; and (c) such other parties' name, trademarks, servicemarks in any news or press release concerning such party; provided however, notwithstanding anything to the contrary herein, no such consent shall be required (i) to the extent necessary to comply with the requests of any regulators, legal requirements or laws applicable to such party, including pursuant to any listing agreement with any national securities exchange (so long as such party provides prior notice to the other party hereto to the extent reasonably practicable) and (ii) to comply with Section 11.12.

(SIGNATURES TO FOLLOW)

IN WITNESS WHEREOF, Borrower, Agent and Lender have duly executed and delivered this Loan and Security Agreement as of the day and year first above written.

BORROWER:
MERRIMACK PHARMACEUTICALS, INC.

Signature: /s/ Jean M. Franchi
Print Name: Jean M. Franchi
Title: Chief Financial Officer

Accepted in Palo Alto, California:

AGENT:
HERCULES CAPITAL, INC.

Signature: /s/ Zhuo Huang
Print Name: Zhuo Huang
Title: Associate General Counsel

LENDER:
HERCULES CAPITAL, INC.

By: /s/ Zhuo Huang
Name: Zhuo Huang
Its: Associate General Counsel

Table of Exhibits and Schedules

Exhibit A:	Advance Request Attachment to Advance Request
Exhibit B:	Term Note
Exhibit C:	Name, Locations, and Other Information for Borrower
Exhibit D:	Borrower's Deposit Accounts and Investment Accounts
Exhibit E:	Compliance Certificate
Exhibit F:	Joinder Agreement
Exhibit G:	ACH Debit Authorization Agreement
Schedule 1	Subsidiaries
Schedule 1.1	Commitments
Schedule 1A	Existing Permitted Indebtedness
Schedule 1B	Existing Permitted Investments
Schedule 1C	Existing Permitted Liens
Schedule 5.3	Consents, Etc.
Schedule 5.5	Actions Before Governmental Authorities
Schedule 5.8	Tax Matters
Schedule 5.9	Intellectual Property Claims
Schedule 5.10	Intellectual Property
Schedule 5.11	Borrower Products
Schedule 5.14	Capitalization

EXHIBIT A

ADVANCE REQUEST

To: Agent: _____ Date: _____, 2018

Hercules Capital, Inc. (“Agent”)
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: XXXX
Attn:

Merrimack Pharmaceuticals, Inc. (“Borrower”) hereby requests from Hercules Capital, Inc. (“Lender”) an Advance in the amount of _____ Dollars (\$ _____) on _____, 2018 (the “Advance Date”) pursuant to the Loan and Security Agreement among Borrower, each of its Qualified Subsidiaries, Agent and Lender (the “Agreement”). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

- (a) Issue a check payable to Borrower _____
or
(b) Wire Funds to Borrower’s account _____

Bank: _____
Address: _____

ABA Number: _____
Account Number: _____
Account Name: _____
Contact Person: _____
Phone Number _____
To Verify Wire Info: _____
Email address: _____

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance in all material respects with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that could (or could, with the passage of time, the giving of notice, or both)

constitute an Event of Default under the Loan Documents. Borrower understands and acknowledges that Agent has the right to review the financial information supporting this representation and, based upon such review in its sole discretion, Lender may decline to fund the requested Advance.

Borrower hereby represents that Borrower's corporate status and location of its chief executive office address have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Agent promptly before the funding of the Loan if any of the matters which have been represented above shall not be true and correct on the Borrowing Date and if Agent has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.

Executed as of [], 2018.

BORROWER: MERRIMACK PHARMACEUTICALS, INC.

SIGNATURE: _____

TITLE: _____

PRINT NAME: _____

ATTACHMENT TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Agent that Borrower's current name and organizational status is as follows:

Name:	MERRIMACK PHARMACEUTICALS, INC.
Type of organization:	Corporation
State of organization:	Delaware
Organization file number:	4833458

Borrower hereby represents and warrants to Agent that the street addresses, cities, states and postal codes of its current locations are as follows:

One Kendall Square, Suite B7201, Cambridge, MA 02139

EXHIBIT B

SECURED TERM PROMISSORY NOTE

\$[],000,000

Advance Date: , 20[]

Maturity Date: , 20[]

FOR VALUE RECEIVED, MERRIMACK PHARMACEUTICALS, INC., a Delaware corporation, for itself and each of its Qualified Subsidiaries (“Borrower”) hereby promises to pay to the order of Hercules Capital, Inc., a Maryland corporation, or the holder of this Note (“Lender”) at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this “Promissory Note”) may specify from time to time in writing, in lawful money of the United States of America, the principal amount of [] Million Dollars (\$[],000,000) or such other principal amount as Lender has advanced to Borrower, together with interest at a rate as set forth in Section 2.2(c) of the Loan Agreement based upon a year consisting of 360 days, with interest computed daily based on the actual number of days in each month.

This Promissory Note is the Note referred to in, and is executed and delivered in connection with, that certain Loan and Security Agreement dated [], 2018, by and among Borrower, each of its Qualified Subsidiaries, Hercules Capital, Inc., a Maryland corporation (“Agent”) and the several banks and other financial institutions or entities from time to time party thereto as lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the “Loan Agreement”), and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement. All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

BORROWER FOR ITSELF AND
ON BEHALF OF ITS QUALIFIED SUBSIDIARIES:

MERRIMACK PHARMACEUTICALS, INC.

By: _____

Title: _____

EXHIBIT C

NAME, LOCATIONS, AND OTHER INFORMATION FOR BORROWER

1. Borrower represents and warrants to Agent that Borrower's current name and organizational status as of the Closing Date is as follows:

Name:	MERRIMACK PHARMACEUTICALS, INC.
Type of organization:	Corporation
State of organization:	Delaware
Organization file number:	4833458

2. Borrower represents and warrants to Agent that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Name: Merrimack Pharmaceuticals, Inc.
Used during dates of: Five (5) years prior to the Closing Date
Type of Organization: Corporation
State of organization: Delaware
Organization file Number: 4833458
Borrower's fiscal year ends on December 31
Borrower's federal employer tax identification number is: 04-3210530

3. Borrower represents and warrants to Agent that its chief executive office is located at One

Kendall Square, Suite B7201, Cambridge, MA 02139.

EXHIBIT D

BORROWER’S DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS

Bank Name	Account Number	Branch Address	Company/Subsidiary
XXXX	XXXX	XXXX	Merrimack Pharmaceuticals, Inc.
XXXX	XXXX	XXXX	Merrimack Pharmaceuticals, Inc.
XXXX	XXXX	XXXX	Merrimack Pharmaceuticals, Inc.

EXHIBIT E

COMPLIANCE CERTIFICATE

Hercules Capital, Inc. (as “Agent”)
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated July 2, 2018 and the Loan Documents (as defined therein) entered into in connection with such Loan and Security Agreement all as may be amended from time to time (hereinafter referred to collectively as the “Loan Agreement”) by and among Merrimack Pharmaceuticals, Inc. (the “Company”) as Borrower, each of its Qualified Subsidiaries, the several banks and other financial institutions or entities from time to time party thereto (collectively, the “Lender”) and Hercules Capital, Inc., as agent for the Lender (the “Agent”). All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of the Company, knowledgeable of all Company financial matters, and is authorized to provide certification of information regarding the Company; hereby certifies, in such capacity, that in accordance with the terms and conditions of the Loan Agreement, the Company is in compliance for the period ending _____ of all covenants, conditions and terms and hereby reaffirms that all representations and warranties contained therein are true and correct on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties or except as otherwise disclosed below. Attached are the required documents supporting the above certification. The undersigned further certifies that these are prepared in accordance with GAAP (except for (1) the absence of footnotes with respect to unaudited financial statements, (2) subject to normal year-end adjustments and (3) with respect to the financial statements provided pursuant to Section 7.1(a) of the Loan Agreement) and are consistent from one period to the next except as explained below.

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Interim Financial Statements	Monthly within 30 days	
Interim Financial Statements	Quarterly within 45 days	
Audited Financial Statements	FYE within 90 days	

Disclosures regarding representations and warranties:

The undersigned hereby also confirms the below disclosed accounts represent all depository accounts and securities accounts presently open in the name of each Borrower or Borrower Subsidiary/Affiliate, as applicable.

		<u>Depository AC #</u>	<u>Financial Institution</u>	<u>Account Type (Depository / Securities)</u>	<u>Last Month Ending Account Balance</u>	<u>Purpose of Account</u>
BORROWER Name/Address:	1					
	2					
	3					
	4					
	5					
	6					
	7					
BORROWER SUBSIDIARY / AFFILIATE COMPANY Name/Address	1					
	2					
	3					
	4					
	5					
	6					
	7					

Very Truly Yours,

MERRIMACK PHARMACEUTICALS, INC.

By: _____
Name: _____
Its: _____

EXHIBIT F

FORM OF JOINDER AGREEMENT

This Joinder Agreement (the “Joinder Agreement”) is made and dated as of [], 20[], and is entered into by and between a corporation (“Subsidiary”), and HERCULES CAPITAL, INC., a Maryland corporation (as “Agent”).

RECITALS

A. Subsidiary’s Affiliate, MERRIMACK PHARMACEUTICALS, INC. (“Company”) has entered into that certain Loan and Security Agreement dated July 2, 2018, with, among others, the several banks and other financial institutions or entities from time to time party thereto as lender (collectively, the “Lender”) and the Agent, as such agreement may be amended (the “Loan Agreement”), together with the other agreements executed and delivered in connection therewith;

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company’s execution of the Loan Agreement and the other agreements executed and delivered in connection therewith;

AGREEMENT

NOW THEREFORE, Subsidiary and Agent agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.
2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were the Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided however, that (a) with respect to (i) Section 5.1 of the Loan Agreement, Subsidiary represents that it is an entity duly organized, legally existing and in good standing under the laws of [], (b) neither Agent nor Lender shall have any duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other Loan Documents, (c) that if Subsidiary is covered by Company’s insurance, Subsidiary shall not be required to maintain separate insurance or comply with the provisions of Sections 6.1 and 6.2 of the Loan Agreement, and (d) that as long as Company satisfies the requirements of Section 7.1 of the Loan Agreement, Subsidiary shall not have to provide Agent separate Financial Statements. To the extent that Agent or Lender has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other Loan Documents, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other Person or entity. By way of example (and not an exclusive list): (i) Agent’s providing notice to Company in accordance with the Loan Agreement or as otherwise agreed among Company, Agent and Lender shall be deemed provided to Subsidiary; (ii) a Lender’s providing an Advance to Company shall be deemed an Advance to Subsidiary; and (iii) Subsidiary shall have no right to request an Advance or make any other demand on Lender.
3. Subsidiary agrees not to certificate its equity securities without Agent’s prior written consent, which consent may be conditioned on the delivery of such equity securities to Agent in order to perfect Agent’s security interest in such equity securities.
4. Subsidiary acknowledges that it benefits, both directly and indirectly, from the Loan Agreement, and hereby waives, for itself and on behalf on any and all successors in interest (including without limitation any assignee for the benefit of creditors, receiver, bankruptcy trustee or itself as debtor-in-possession under any bankruptcy proceeding) to the fullest extent provided by law, any and all claims, rights or defenses to the enforcement of this Joinder Agreement on the basis that (a) it failed to receive adequate consideration for the execution and delivery of this Joinder Agreement or (b) its obligations under this Joinder Agreement are avoidable as a fraudulent conveyance.

-
5. As security for the prompt, complete and indefeasible payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Subsidiary grants to Agent a security interest in all of Subsidiary's right, title, and interest in and to the Collateral.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SUBSIDIARY:

By:

Name:

Title:

Address:

Telephone: _____

email: _____

AGENT:

HERCULES CAPITAL, INC.

By: _____

Name: _____

Title: _____

Address:

400 Hamilton Ave., Suite 310

Palo Alto, CA 94301 email: XXXX

Telephone: XXXX

EXHIBIT G

ACH DEBIT AUTHORIZATION AGREEMENT

Hercules Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Re: Loan and Security Agreement dated July 2, 2018 (the “Agreement”) by and among Merrimack Pharmaceuticals, Inc. (“Borrower”), each of its Qualified Subsidiaries, the several banks and other financial institutions or entities from time to time party thereto (collectively, the “Lender”), and Hercules Capital, Inc., as agent (“Company”)

In connection with the above referenced Agreement, the Borrower hereby authorizes the Company to initiate debit entries for (i) the periodic payments due under the Agreement and (ii) out-of-pocket legal fees and costs incurred by Agent or Lender pursuant to Section 11.11 of the Agreement to the Borrower’s account indicated below. The Borrower authorizes the depository institution named below to debit to such account.

[IF FILED PUBLICLY, ACCOUNT INFO REDACTED FOR SECURITY PURPOSES] [*Borrower to complete table below*]

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

Merrimack Pharmaceuticals, Inc.

(Borrower)(Please Print)

By: _____

Date: _____