

Fill in this information to identify the case:

Debtor Gritstone bio, Inc.

United States Bankruptcy Court for the: _____ District of Delaware
(State)

Case number 24-12305

Official Form 410

Proof of Claim

04/22

Read the instructions before filling out this form. This form is for making a claim for payment in a bankruptcy case. Do not use this form to make a request for payment of an administrative expense. Make such a request according to 11 U.S.C. § 503.

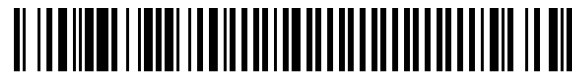
Filers must leave out or redact information that is entitled to privacy on this form or on any attached documents. Attach redacted copies or any documents that support the claim, such as promissory notes, purchase orders, invoices, itemized statements of running accounts, contracts, judgments, mortgages, and security agreements. **Do not send original documents;** they may be destroyed after scanning. If the documents are not available, explain in an attachment.

A person who files a fraudulent claim could be fined up to \$500,000, imprisoned for up to 5 years, or both. 18 U.S.C. §§ 152, 157, and 3571.

Fill in all the information about the claim as of the date the case was filed. That date is on the notice of bankruptcy (Form 309) that you received.

Part 1: Identify the Claim

1. Who is the current creditor?	<u>Hercules Capital, Inc., as administrative and collateral agent</u> Name of the current creditor (the person or entity to be paid for this claim)	
	Other names the creditor used with the debtor _____	
2. Has this claim been acquired from someone else?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. From whom? _____	
3. Where should notices and payments to the creditor be sent?	Where should notices to the creditor be sent? See summary page Federal Rule of Bankruptcy Procedure (FRBP) 2002(g) Contact phone <u>2015256331</u> Contact email <u>skomrower@coleschotz.com</u>	Where should payments to the creditor be sent? (if different) See summary page Contact phone _____ Contact email <u>smenon@htgc.com</u>
	Uniform claim identifier for electronic payments in chapter 13 (if you use one): _____	
4. Does this claim amend one already filed?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. Claim number on court claims registry (if known) _____ Filed on _____ <div style="text-align: right;">MM / DD / YYYY</div>	
5. Do you know if anyone else has filed a proof of claim for this claim?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. Who made the earlier filing? _____	



Part 2: Give Information About the Claim as of the Date the Case Was Filed

6. Do you have any number you use to identify the debtor?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. Last 4 digits of the debtor's account or any number you use to identify the debtor: __ __ __ __
7. How much is the claim?	\$ <u>43,838,527.50</u> Does this amount include interest or other charges? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. Attach statement itemizing interest, fees, expenses, or other charges required by Bankruptcy Rule 3001(c)(2)(A).
8. What is the basis of the claim?	Examples: Goods sold, money loaned, lease, services performed, personal injury or wrongful death, or credit card. Attach redacted copies of any documents supporting the claim required by Bankruptcy Rule 3001(c). Limit disclosing information that is entitled to privacy, such as health care information. <u>Loan</u>
9. Is all or part of the claim secured?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. The claim is secured by a lien on property. Nature or property: <input type="checkbox"/> Real estate: If the claim is secured by the debtor's principle residence, file a <i>Mortgage Proof of Claim Attachment</i> (Official Form 410-A) with this <i>Proof of Claim</i> . <input type="checkbox"/> Motor vehicle <input checked="" type="checkbox"/> Other. Describe: <u>See Addendum. Secured amount subject to change.</u> Basis for perfection: <u>See Addendum. Secured amount subject to change.</u> Attach redacted copies of documents, if any, that show evidence of perfection of a security interest (for example, a mortgage, lien, certificate of title, financing statement, or other document that shows the lien has been filed or recorded.) Value of property: <u>\$ 43,838,427.50</u> Amount of the claim that is secured: <u>\$ 43,838,427.50</u> Amount of the claim that is unsecured: <u>\$ 100.00</u> (The sum of the secured and unsecured amount should match the amount in line 7.) Amount necessary to cure any default as of the date of the petition: \$ _____ Annual Interest Rate (when case was filed) _____ % <input type="checkbox"/> Fixed <input type="checkbox"/> Variable
10. Is this claim based on a lease?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. Amount necessary to cure any default as of the date of the petition. \$ _____
11. Is this claim subject to a right of setoff?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes. Identify the property: _____



12. Is all or part of the claim entitled to priority under 11 U.S.C. § 507(a)?

A claim may be partly priority and partly nonpriority. For example, in some categories, the law limits the amount entitled to priority.

☒ No

☐ Yes. Check all that apply:

☐ Domestic support obligations (including alimony and child support) under 11 U.S.C. § 507(a)(1)(A) or (a)(1)(B).

Amount entitled to priority

\$ _____

☐ Up to \$3,350* of deposits toward purchase, lease, or rental of property or services for personal, family, or household use. 11 U.S.C. § 507(a)(7).

\$ _____

☐ Wages, salaries, or commissions (up to \$15,150*) earned within 180 days before the bankruptcy petition is filed or the debtor's business ends, whichever is earlier. 11 U.S.C. § 507(a)(4).

\$ _____

☐ Taxes or penalties owed to governmental units. 11 U.S.C. § 507(a)(8).

\$ _____

☐ Contributions to an employee benefit plan. 11 U.S.C. § 507(a)(5).

\$ _____

☐ Other. Specify subsection of 11 U.S.C. § 507(a)() that applies.

\$ _____

* Amounts are subject to adjustment on 4/01/25 and every 3 years after that for cases begun on or after the date of adjustment.

13. Is all or part of the claim entitled to administrative priority pursuant to 11 U.S.C. 503(b)(9)?

☒ No

☐ Yes. Indicate the amount of your claim arising from the value of any goods received by the debtor within 20 days before the date of commencement of the above case, in which the goods have been sold to the Debtor in the ordinary course of such Debtor's business. Attach documentation supporting such claim.

\$ _____

Part 3: Sign Below

The person completing this proof of claim must sign and date it. FRBP 9011(b).

If you file this claim electronically, FRBP 5005(a)(2) authorizes courts to establish local rules specifying what a signature is.

A person who files a fraudulent claim could be fined up to \$500,000, imprisoned for up to 5 years, or both. 18 U.S.C. §§ 152, 157, and 3571.

Check the appropriate box:

☐ I am the creditor.

☒ I am the creditor's attorney or authorized agent.

☐ I am the trustee, or the debtor, or their authorized agent. Bankruptcy Rule 3004.

☐ I am a guarantor, surety, endorser, or other codebtor. Bankruptcy Rule 3005.

I understand that an authorized signature on this *Proof of Claim* serves as an acknowledgement that when calculating the amount of the claim, the creditor gave the debtor credit for any payments received toward the debt.

I have examined the information in this *Proof of Claim* and have reasonable belief that the information is true and correct.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on date 01/13/2025
MM / DD / YYYY

/s//s/ Stuart Komrower
Signature

Print the name of the person who is completing and signing this claim:

Name /s/ Stuart Komrower
First name Middle name Last name

Title Member

Company Cole Schotz P.C.
Identify the corporate servicer as the company if the authorized agent is a servicer.

Address _____

Contact phone _____ Email _____



Verita (KCC) ePOC Electronic Claim Filing Summary

For phone assistance: Domestic (877) 709-4754 | International (424) 236-7233

Debtor: 24-12305 - Gritstone bio, Inc. District: District of Delaware		
Creditor: Hercules Capital, Inc., as administrative and collateral agent Stuart Komrower Cole Schotz P.C. Court Plaza North, 25 Main Street Hackensack, New Jersey, 07601 United States Phone: 2015256331 Phone 2: Fax: Email: skomrower@coleschotz.com	Has Supporting Documentation: Yes, supporting documentation successfully uploaded Related Document Statement:	
	Has Related Claim: No Related Claim Filed By:	
	Filing Party: Authorized agent	
Disbursement/Notice Parties: Hercules Capital, Inc. 1 N B Street Suite 2000 San Mateo, California, 94401 United States Phone: Phone 2: Fax: E-mail: smenon@htgc.com DISBURSEMENT ADDRESS		
Other Names Used with Debtor:	Amends Claim: No Acquired Claim: No	
Basis of Claim: Loan	Last 4 Digits: No	Uniform Claim Identifier:
Total Amount of Claim: 43,838,527.50	Includes Interest or Charges: Yes	
Has Priority Claim: No	Priority Under:	
Has Secured Claim: Yes: 43,838,427.50 Amount of 503(b)(9): No Based on Lease: No Subject to Right of Setoff: No	Nature of Secured Amount: Other Describe: See Addendum. Secured amount subject to change. Value of Property: 43,838,427.50 Annual Interest Rate: Arrearage Amount: Basis for Perfection: See Addendum. Secured amount subject to change. Amount Unsecured: 100.00	

Submitted By:

/s/ Stuart Komrower on 13-Jan-2025 4:06:36 p.m. Eastern Time

Title:

Member

Company:

Cole Schotz P.C.

ADDENDUM TO PROOF OF CLAIM

(GRITSTONE BIO, INC., Chapter 11, Case No. 24-12305)

This Addendum to Proof of Claim (“Addendum”) forms a part of and is incorporated into the proof of claim (the “Proof of Claim”) submitted by Hercules Capital, Inc., as Agent (defined below), in the chapter 11 bankruptcy case of Debtor, Gritstone bio, Inc. (“Debtor”) pending in the United States Bankruptcy Court for the District of Delaware as Case No. 24-12305.

1. The Loan Documents

Prior to the date of the Debtor’s bankruptcy filing (the “Petition Date”), Debtor, as borrower, and Hercules Capital, Inc., a Maryland corporation, as administrative and collateral agent (in such capacity, the “Agent”) and co-lender with Silicon Valley Bank, a division of First-Citizens Bank & Trust Company (“SVB”) (Hercules and SVB, collectively, the “Co-Lenders”), entered into that certain Loan and Security Agreement dated as of July 19, 2022 (attached hereto as **Exhibit “A”**) (as amended, the “LSA” and, together with the any promissory note, control account agreement, and other documents and agreements relating to the LSA, the “Loan Documents”), pursuant to which the Co-Lenders made loan advance(s) (collectively, the “Loan”) to the Debtor.

Pursuant to the LSA and the other Loan Documents, the obligations of Debtor are secured by all “Collateral”, which is defined in the LSA as follows:

Borrower’s right, title, and interest in, to and under all of Borrower’s personal property and other assets whether now existing 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; 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; 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”).

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.

The Agent and Co-Lenders perfected their security interests in the Collateral pursuant to, among other things, entering into an account control agreement (attached hereto as **Exhibit “B”**) and the filing of a UCC-1 financing statement (attached hereto as **Exhibit “C”**). Copies of other Loan Documents may be provided upon request.

2. The Co-Lenders’ Claim

Debtor was, as of the Petition Date, indebted to the Agent and Co-Lenders in the aggregate amount of \$43,838,527.50 (the “Prepetition Claim”), consisting of:

Principal Outstanding	\$40,000,000.00
Accrued PIK thru 10/10/24	\$1,416,675.68
Accrued cash interest thru 10/10/24	\$89,518.80
End of Term/Final Payment	\$2,300,000.00
Pre-Petition Legal Fees/Expenses	\$26,190.50/\$6,142.50

Agent and Co-Lenders may be entitled to interest, fees and expenses (including reimbursement of its reasonably, documented, out- of-pocket attorneys’ fees) after the Petition Date pursuant to section 506(b) of the Bankruptcy Code.

The LSA provides that cash interest accrues at the rate of a per annum rate of interest equal to the greater of (i) (x) the Cash Prime Rate (defined as the lesser of means the lesser of (a)

the Prime Rate and (b) five and one-half percent (5.50%)) *plus* (y) 3.15%, and (ii) 7.15%. The LSA also provides that PIK interest accrues at the per annum rate of interest equal to 2.00%. Additionally, the LSA provides that interest accrues at the default rate equal to 4.00% per annum (the “Default Rate Premium”) plus the regular non-default interest rate under the LSA (together, the “Default Rate”) following the occurrence of an Event of Default.

Agent’s and Co-Lenders’ Claim is secured to the extent provided in the LSA up to the value of the security granted by Debtor and unsecured for any amounts not secured by the LSA and the other Loan Documents or in excess of the value of the security pledged by such Debtor.

3. Reservation of Rights

Agent reserves its right to amend or further supplement this Proof of Claim in all respects, including but not limited to liquidating any unliquidated amounts, asserting a claim or claims for additional amounts due and/or claims based on alternative theories or liabilities, and any claims for damages arising from events or conduct by Debtor. Agent further reserves the right to assert all or part of its claim as administrative claims or other priority claims, and to file additional claim(s) for administrative claims or other priority claims.

By executing and filing this Proof of Claim, Agent does not waive any right to any security or any other right or rights with respect to any claim it has or may have against Debtor, any other borrower, guarantor, or any other person, persons, entity or entities. Agent expressly reserves all rights accruing to it and the filing of this Proof of Claim is not intended and should not to be construed to be: (i) an election of remedies, (ii) a waiver of any past, present or future defaults or events of default under any of documents described herein, (iii) a waiver or limitation of any of Agent’s rights, including without limitation, a waiver of the obligations owing to Agent’s or rights, claims, actions or defenses to which any Lender is or may be entitled under the

LSA, in law or equity or otherwise, or (iv) a waiver or limitation of any other rights of any Lender.

EXHIBIT A
TO
ADDENDUM TO PROOF OF CLAIM

Loan and Security Agreement

[See attached]

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of July 19, 2022 and is entered into by and among GRITSTONE BIO, INC., a Delaware corporation, each of its Subsidiaries from time to time party hereto as borrower (individually or collectively, as the context may require, “Borrower”), HERCULES CAPITAL, INC., a Maryland corporation (“Hercules”), SILICON VALLEY BANK, a California corporation (“SVB”), and the several banks and other financial institutions or entities from time to time parties to this Agreement (each, a “Lender,” and collectively “Lenders”), and Hercules, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, “Agent”).

RECITALS

A. Borrower has requested Lenders to make available to Borrower one or more Advances in an aggregate principal amount of up to \$80,000,000; and

B. Lenders are willing to make such Advances on the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, Borrower, Agent and Lenders 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, provided that account numbers shall be redacted for security purposes if and when filed publicly by Borrower.

“Advance” 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, provided that account numbers shall 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 with power to vote 20% or more of the outstanding voting securities of another Person, or (c) any Person 20% or more of whose outstanding voting securities are directly or indirectly owned, controlled or held by another Person with power to vote such securities. As used in the definition of “Affiliate,” the term “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the

management and policies of a Person, whether through ownership of voting securities, by contract or otherwise.

“Agreement” means this Loan and Security Agreement, as amended, restated, supplemented or otherwise modified from time to time.

“Amortization Date” means January 1, 2025; provided however, (x) if the First Interest Only Extension Conditions are satisfied, then July 1, 2025, and (y) if the Second Interest Only Extension Conditions are satisfied, then January 1, 2026.

“Anti-Corruption Laws” means all laws, rules, and regulations of any jurisdiction applicable to Borrower or any of their respective 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.

“Approved Fund” is any (a) Person, investment company, fund, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business and that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender, or (iii) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender, or (b) any Person (other than a natural person) which temporarily warehouses loans, or provides financing or securitizations, in each case, for any Lender or any entity described in the preceding clause (a).

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

“Bank Services Agreement” has the meaning specified in the definition of Bank Services.

“Bank Services Cap” means One Million Five Hundred Thousand Dollars (\$1,500,000.00).

“Bankruptcy Code” means the federal bankruptcy law of the United States as from time to time in effect, currently as Title 11 of the United States Code. Section references to current sections of the Bankruptcy Code shall refer to comparable sections of any revised version thereof if section numbering is changed.

“Blocked Person” means any Person: (a) listed in the annex to, or 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.

“Board” means, with respect to any Person that is a corporation, its board of directors, with respect to any Person that is a limited liability company, its board of managers, board of members or similar governing body, and with respect to any other Person that is a legal entity, such Person’s governing body in accordance with its Organizational Documents.

“Borrower Products” means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold or that are under clinical investigation or development by Borrower or any of its Subsidiaries or which Borrower or any of its Subsidiaries intends to sell, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since formation.

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

“Cash” means all cash, cash equivalents (which, for the avoidance of doubt, shall include Permitted Investments permitted pursuant to clause (b) of such definition) and liquid funds.

“Cash Prime Rate” means the lesser of (a) the Prime Rate and (b) five and one-half percent (5.50%).

“CFC” means a controlled foreign corporation within the meaning of Section 957(a) of the Code.

“Change in Control” means any (x) reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower in which the holders of Borrower’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 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 Borrower is the surviving entity or (y) “change of control”, “fundamental change,” “make-whole fundamental change” or any comparable term under and as defined in any indenture governing any Permitted Convertible Debt has occurred.

“Charter” means, with respect to any Person, such Person’s incorporation, formation or equivalent documents, as in effect from time to time.

“Closing Date” means the date of this Agreement.

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

“Collateral Claim” means any and all present and future “claims” (used in its broadest sense, as contemplated by and defined in Section 101(5) of the Bankruptcy Code, but without regard to whether such claim would be disallowed under the Bankruptcy Code) of a Lender now or hereafter arising or existing under or relating to this Agreement and related Loan Documents, whether joint, several, or joint and several, whether fixed or indeterminate, due or not yet due, contingent or non-contingent, matured or unmatured, liquidated or unliquidated, or disputed or undisputed, whether under a guaranty or a letter of credit, and whether arising under contract, in tort, by law, or otherwise, any interest or fees thereon (including interest or fees that accrue after the filing of a petition by or against Borrower under the Bankruptcy Code, irrespective of whether allowable under the Bankruptcy Code), any costs of Enforcement Actions, including reasonable attorneys’ fees and costs, and any prepayment or termination premiums.

“Compliance Certificate” means a certificate in the form attached hereto as Exhibit D

“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, without duplication of the primary obligation, 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. For the avoidance of doubt, no Permitted Bond Hedge Transaction, Permitted Warrant Transaction, nor any direct or indirect liability, contingent or otherwise, with respect to any Permitted Transfers, ID Transactions, collaboration agreement, business development agreement or similar transaction, will be considered a Contingent Obligation of Borrower.

“Copyright License” means any written agreement granting any right to use any Copyright or Copyright registration, now owned 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.

“Current Company IP” means each pending, registered, issued or in-licensed Intellectual Property that, individually or taken together with any other such Intellectual Property, is material to the business of Borrower and its Subsidiaries, taken as a whole, relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products, and is owned or co-owned by or exclusively or non-exclusively licensed to the Borrower or any of its Subsidiaries.

“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 organized under the laws of the United States of America, any State thereof, the District of Columbia, or any other jurisdiction within the United States of America.

“Due Diligence Fee” means \$35,000, which fee has been paid to Agent prior to the Closing Date, and shall be deemed fully earned on such date regardless of the early termination of this Agreement.

“Enforcement Action” means, with respect to any Lender and with respect to any Collateral Claim of such Lender or any item of Collateral in which such Lender has or claims a security interest lien or right of offset, any action, whether judicial or nonjudicial, to repossess, collect, accelerate, offset, recoup, give notification to third parties with respect to, sell, dispose of, foreclose upon, give notice of sale, disposition, or foreclosure with respect to, or obtain equitable or injunctive relief with respect to, such Collateral Claim

or Collateral. The filing, or the joining in the filing, by any Lender of an involuntary bankruptcy or insolvency proceeding against Borrower also is an Enforcement Action.

“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.

“Excluded Account” means any of the following accounts which are designated as such in writing to Agent as of the Closing Date or, with respect to any account opened after the Closing Date, in the next Compliance Certificate delivered after such account is opened: (i) accounts used exclusively to maintain cash collateral subject to a Permitted Lien, (ii) any payroll or benefits account, provided that the aggregate balance of all such accounts shall not exceed the amount of all payroll or related benefit payments required to be made in the two next payroll periods, (iii) any zero balance account, (iv) accounts funded on behalf of employees for the repurchase of stock, and (v) any other deposit accounts, so long as the aggregate amount in all such deposit accounts do not exceed \$500,000 on any day.

“Excluded Subsidiaries” means all Foreign Subsidiaries and Foreign Subsidiary Holding Companies; provided that in each of the foregoing cases, the Excluded Subsidiary Condition is satisfied with respect to such Subsidiary at all times, and in each case as long as no Excluded Subsidiary owns any Intellectual Property; provided, further, that, for the avoidance of doubt, an Excluded Subsidiary may license Intellectual Property on a non-exclusive basis.

“Excluded Subsidiary Condition” means (a) the aggregate revenues (under GAAP) of all Excluded Subsidiaries does not exceed seven and one-half percent (7.5%) of the consolidated revenues (under GAAP) of Borrower and its Subsidiaries; and (b) value of the total assets of all Excluded Subsidiaries does not exceed seven and one-half percent (7.5%) of the consolidated total assets of Borrower and its Subsidiaries.

“Existing Indebtedness” means the Indebtedness existing on the Closing Date which is disclosed in Schedule 1A.

“FDA” means the U.S. Food and Drug Administration or any successor thereto.

“FDA Laws” means all applicable statutes, rules, regulations, and orders and Requirements of Law administered, implemented, enforced or issued by FDA.

“Federal Health Care Program Laws” means collectively, federal Medicare or federal or state Medicaid statutes, the exclusion laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), all federal and state fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act of 1863 (31 U.S.C. § 3729 et seq.), criminal false claims statutes (e.g., 18 U.S.C. §§ 287 and 1001), the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. § 3801 et seq.), HIPAA, or related regulations or other Requirements of Law applicable to Borrower that directly or indirectly govern the health care industry, programs of governmental authorities related to healthcare, health care professionals or other health care participants, or relationships among health care providers, suppliers, distributors, manufacturers and patients.

“First Interest Only Extension Conditions” shall mean satisfaction of each of the following events: (a) no default or Event of Default shall have occurred and be continuing; and (b) either of Performance Milestone I or Performance Milestone II has been achieved on or prior to December 15, 2024.

“Foreign Subsidiary” means a Subsidiary other than a Domestic Subsidiary.

“Foreign Subsidiary Holding Company” means any Domestic Subsidiary that owns (directly or indirectly) no material assets other than Equity Interests (or Equity Interests and debt interests) of one or more (a) CFCs or (b) other Foreign Subsidiary Holding Companies.

“GAAP” means generally accepted accounting principles in the United States of America, as in effect from time to time.

“Guarantor” means any subsidiary of Borrower that enters into a Guaranty.

“Guaranty” means a guaranty with respect to the Secured Obligations, in form and substance satisfactory to Agent.

“ID Transactions” means any new acquisition or in-licensing transactions related to infectious diseases.

“Indebtedness” means (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), 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, (d) equity securities of any Person subject to repurchase or redemption other than at the sole option of such Person, (e) “earnouts” (to the extent treated as liabilities on the balance sheet in accordance with GAAP), purchase price adjustments, profit sharing arrangements, deferred purchase money amounts and similar payment obligations or continuing obligations of any nature arising out of purchase and sale contracts, (f) non-contingent obligations to reimburse any bank or Person in respect of amounts paid under a letter of credit, banker’s acceptance or similar instrument, and (g) all Contingent Obligations. For the avoidance of doubt, no Permitted Bond Hedge Transaction or Permitted Warrant Transaction will be considered Indebtedness of Borrower.

“Initial Facility Charge” means a charge of \$150,000.

“Intellectual Property” means all of Borrower’s Copyrights; Trademarks; Patents; Licenses; trade secrets 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.

“Investment” means any beneficial ownership (including stock, partnership interests, limited liability company interests or other securities) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of, or the right to use, develop or sell (in each case, including through licensing), any product that would constitute a Borrower Product upon acquisition.

“IRS” means the United States Internal Revenue Service.

“Joinder Agreement” means for each Subsidiary (other than Excluded Subsidiaries), a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

“License” means any Copyright License, Patent License, Trademark License or other Intellectual Property license of rights or interests.

“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, the promissory notes (if any), the ACH Authorization, the Account Control Agreements, any Joinder Agreements, all UCC Financing Statements, any Bank Services Agreement, the Guaranty (if any) 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.

“Loan Party” means Borrower or any Guarantor.

“Market Capitalization” means, as of any date of determination, the product of (a) the number of outstanding shares of Gritstone bio, Inc.’s common Equity Interests publicly disclosed in the most recent filing of Gritstone bio, Inc. with the United States Securities Exchange Commission as outstanding as of such date of determination and (b) the closing price of Gritstone bio, Inc.’s common Equity Interests (as quoted on Bloomberg L.P.’s page or any successor page thereto of Bloomberg L.P. or if such page is not available, any other commercially available source).

“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 Lenders 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.

“Material Agreement” means any license, agreement or other contractual arrangement, the termination of which could be reasonably expected to result in a Material Adverse Effect, individually or in the aggregate.

“Material Regulatory Liabilities” means (i) any liabilities arising from the violation of applicable Public Health Laws, Federal Health Care Program Laws, and other applicable comparable Requirements of Law, or from any requirements imposed relative to any Registrations (including costs of actions required under applicable Requirements of Law, including FDA Laws and Federal Health Care Program Laws, or necessary to remedy any violation of any terms or conditions applicable to any Registrations), including, but not limited to, withdrawal of approval, recall, revocation, suspension, import detention and seizure of any Borrower Product, and (ii) any loss of recurring annual revenues as a result of any loss, suspension or limitation of any Registrations, which, in the case of the foregoing clauses (i) and (ii), could reasonably be expected to result in a Material Adverse Effect.

“Maximum Term Loan Amount” means \$80,000,000.

“Non-Core Intellectual Property” means any Intellectual Property not material to the Borrower’s oncology program. For the avoidance of doubt, Intellectual Property related to the Borrower’s infectious disease programs or fields shall be considered Non-Core Intellectual Property.

“Non-Disclosure Agreement” means that certain Non-Disclosure Agreement/Confidentiality Agreement by and between Borrower and Agent dated as of March 29, 2022.

“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.

“Organizational Documents” means with respect to any Person, such Person’s Charter, and (a) if such Person is a corporation, its bylaws, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

“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.

“Performance Milestone I” means Borrower shall have reported Phase I data that is positive (so as to enable the advancement described in this definition) from either the CORAL-NIH (n=150) or the CORAL-CEPI (n=320) clinical trials supportive of continuing or advancing the program into more advanced clinical studies (as determined by Borrower, provided that any information related to this definition shall be presented to Lenders for Lenders’ reasonable verification).

“Performance Milestone II” means (a) Borrower shall have reported preliminary data that is positive (so as to enable the advancement described in this definition) from the Phase 2 SLATE clinical trial (GO-005), which along with an acceptable safety profile would be supportive of continuing or advancing the program in additional Phase 2 or more advanced clinical studies (as determined by Borrower, provided that any information related to this definition shall be presented to Lenders for Lenders’ reasonable verification) and (b) there is at least one active infectious disease clinical trial utilizing Borrower’s vaccine platform, provided that any information related to this definition shall be presented to Lenders for Lenders’ reasonable verification.

“Performance Milestone III” shall mean satisfaction of each of the following events: (a) either of Performance Milestone I or Performance Milestone II has been achieved and (b) either (i) Gilead Sciences, Inc. has exercised its option to advance the HIV program or (ii) Borrower has entered into a partnering agreement for an additional infectious disease program at terms deemed commercially reasonable by the Lenders and providing upfront net cash proceeds of at least fifty million dollars (\$50,000,000), in each case under this clause (b), provided that any information related to this definition shall be presented to Lenders for Lenders’ reasonable verification.

“Performance Milestone IV” shall mean satisfaction of each of the following events: (a) Performance Milestone III has been achieved and (b) Borrower has reported data that is positive (so as to enable the advancement described in this definition) from the Phase 2 portion of the Phase 2/3 GRANITE-CRC-1L trial (GO-010), which along with an acceptable safety profile and supporting secondary endpoint data would be supportive of advancing the trial into a pivotal Phase 3 or registrational trial (as determined by Borrower, provided that any information related to this definition shall be presented to Lenders for Lenders’ reasonable verification).

“Performance Milestone IV Date” means the date on which Borrower achieves Performance Milestone IV.

“Permitted Acquisition” means any acquisition (including without limitation by way of merger or in-licensing arrangement) by Borrower of all or substantially all of the assets of another Person, or of a division or line of business of another Person, or capital stock of another Person, or any product that would constitute a Borrower Product upon acquisition, which is conducted in accordance with the following requirements:

(a) such acquisition is of a business or Person engaged in a line of business substantially related to that of Borrower or its Subsidiaries;

(b) if such acquisition is structured as a stock acquisition, then the Person so acquired shall either (i) become a wholly-owned Subsidiary of Borrower or of a Subsidiary and Borrower shall comply, or cause such Subsidiary to comply, with Section 7.13 hereof or (ii) such Person shall be merged with and into Borrower (with Borrower being the surviving entity);

(c) if such acquisition is structured as the acquisition of assets, such assets shall be acquired by Borrower, and shall be free and clear of Liens other than Permitted Liens;

(d) Borrower shall have delivered to Lenders not less than seven (7) nor more than twenty (20) days prior to the closing date of such acquisition, notice of such acquisition together with pro forma projected financial information, copies of all material documents relating to such acquisition, and historical financial statements for such acquired entity, division or line of business (to the extent applicable), in each case in form reasonably satisfactory to Lenders and demonstrating compliance with the covenants set forth in Section 7.20 hereof on a pro forma basis as if the acquisition occurred on the first day of the most recent measurement period;

(e) both immediately before and after such acquisition no default or Event of Default shall have occurred and be continuing; and

(f) solely with respect to any such acquisition of assets, businesses or business or ownership interests or shares, or any Person so acquired, of another Person or in-licensing of assets of another Person, the sum of the purchase price of such proposed new acquisition or in-licensing, computed on the basis of total consideration actually paid by Borrower with respect thereto, including any contingent or deferred acquisition consideration, and including the amount of Permitted Indebtedness assumed or to which such assets are subject, shall not be greater than \$20,000,000 in cash for all such acquisitions or in-licensing transactions during any fiscal year. For the avoidance of doubt, this clause (f) shall not apply to any stock acquisitions.

“Permitted Bond Hedge Transaction” means any call or capped call option (or substantively equivalent derivative transaction) relating to Borrower’s common stock (or other securities or property following a merger event or other change of the common stock of Borrower) purchased by Borrower in connection with the issuance of any Permitted Convertible Debt.

“Permitted Convertible Debt” means Indebtedness that is convertible into a fixed number (subject to customary anti-dilution adjustments, “make-whole” increases and other customary changes thereto) of shares of common stock of Borrower (or other securities or property following a merger event or other change of the common stock of Borrower), cash or any combination thereof (with the amount of such cash or such combination determined by reference to the market price of such common stock or such other securities); provided that such Indebtedness shall (a) not require any scheduled amortization or otherwise

required payment of principal prior to, or have a scheduled maturity date, earlier than, one hundred eighty (180) days after the Term Loan Maturity Date, (b) be unsecured or subordinated to the Secured Obligations pursuant to terms satisfactory to the Agent in its sole discretion, (c) not be guaranteed by any Subsidiary of Borrower that is not also a Loan Party, and (d) shall be Indebtedness of Gritstone bio, Inc. and not any Subsidiary thereof.

“Permitted Indebtedness” means:

(a) Indebtedness of Borrower in favor of any Lender or Agent arising under this Agreement or any other Loan Document (including Bank Services);

(b) Existing Indebtedness;

(c) Indebtedness of up to \$500,000 outstanding at any time secured by a Lien described in clause (g) of the defined term “Permitted Liens,” provided that such Indebtedness does not exceed the cost of the Equipment or software or other intellectual property financed with such Indebtedness;

(d) (i) Indebtedness to trade creditors incurred in the ordinary course of business and (ii) Indebtedness incurred in the ordinary course of business with corporate credit cards in an aggregate amount not to exceed \$2,000,000 outstanding at any time;

(e) Indebtedness that also constitutes a Permitted Investment or is secured by a Permitted Lien;

(f) Subordinated Indebtedness;

(g) reimbursement obligations in connection with (i) letters of credit disclosed in the perfection certificate delivered by Borrower to Agent on the Closing Date that are secured by Cash and issued on behalf of Borrower or a Subsidiary and (ii) such other letters of credit that are secured by Cash and issued on behalf of Borrower or a Subsidiary in an amount not to exceed \$2,000,000 at any time outstanding;

(h) intercompany Indebtedness as long as each of the Subsidiary obligor and the Subsidiary obligee under such Indebtedness is a Subsidiary that has executed a Joinder Agreement, or other intercompany Indebtedness resulting from a Permitted Investment in accordance with clause (j) of the defined term “Permitted Investments”;

(i) Permitted Convertible Debt in an aggregate principal amount not to exceed \$300,000,000 at any one time outstanding;

(j) other unsecured Indebtedness in an amount not to exceed \$2,000,000 at any time outstanding; and

(k) 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 the applicable Subsidiary, as the case may be, and subject to any limitations on aggregate amount of such Indebtedness; and

(l) Indebtedness with respect to a Permitted Royalty Transaction that (a) is subordinated to the Secured Obligations pursuant to a subordination or intercreditor agreement on terms and conditions satisfactory to Agent, (b) is made available pursuant to a royalty agreement on terms and

conditions satisfactory to Agent and (c) does not have a scheduled maturity date earlier than one hundred eighty (180) days after the Term Loan Maturity Date.

“Permitted Investment” means:

- (a) Investments existing on the Closing Date which are disclosed in Schedule 1B;
- (b) (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within two years from the date of acquisition thereof currently having a rating of at least A-1 or P-1 from either Standard & Poor's Corporation or Moody's Investors Services, (ii) commercial paper maturing no more than one year from the date of creation thereof and currently having a rating of at least A-1 or P-1 from either Standard & Poor's Corporation or Moody's Investors Services, (iii) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein, (iv) money market accounts, (v) corporate bonds maturing no more than two years from the date of acquisition and currently having a rating of A3- or A- from either Moody's or Standard and Poor's, and (vi) Investments pursuant to the investment policy that has been provided to the Agent prior to the Closing Date or any investment policy that has been approved by the Agent;
- (c) repurchases of stock of Borrower from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed \$500,000 in any fiscal year, provided that no Event of Default has occurred, is continuing or could exist after giving effect to the repurchases;
- (d) Investments accepted in connection with Permitted Transfers;
- (e) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;
- (f) 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 clause (f) shall not apply to Investments of any Loan Party in any Subsidiary of a Loan Party;
- (g) 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;
- (h) Investments consisting of travel advances in the ordinary course of business;
- (i) Investments in newly-formed Domestic Subsidiaries, provided that each such Domestic Subsidiary enters into a Joinder Agreement promptly after its formation and executes such other documents as shall be reasonably requested by Agent;
- (j) Investments in Foreign Subsidiaries not to exceed \$500,000 per fiscal year;
- (k) joint ventures or strategic alliances in the ordinary course of business consisting of the licensing of technology, the development of technology or the providing of technical support as permitted hereunder, provided that cash Investments (if any) by Borrower or the applicable Subsidiary do not exceed \$500,000 in the aggregate in any fiscal year;

(l) Investments constituting Permitted Acquisitions;

(m) Borrower's entry into (including payments of premiums in connection therewith), and the performance of obligations under any Permitted Bond Hedge Transactions and Permitted Warrant Transactions in accordance with their terms; and

(n) additional Investments that do not exceed \$500,000 in the aggregate.

"Permitted Liens" means:

- (a) Liens in favor of Agent;
- (b) Liens existing on the Closing Date which are disclosed in Schedule 1C;
- (c) Liens for taxes, fees, assessments or other governmental charges or levies, either not yet delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP;
- (d) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of business and imposed without action of such parties; provided, that the payment thereof is not yet required;
- (e) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder;
- (f) 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;
- (g) Liens on Equipment or software or other intellectual property constituting purchase money Liens and Liens in connection with capital leases securing Indebtedness permitted in clause (c) of "Permitted Indebtedness";
- (h) Liens incurred in connection with Subordinated Indebtedness;
- (i) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor;
- (j) 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;
- (k) 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);

(l) statutory and common law 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 or securities intermediaries to cover fees, similar expenses and charges;

(m) easements, servitudes, 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;

(n) licenses and other arrangements for the use of Intellectual Property permitted hereunder;

(o) (i) Liens on Cash securing obligations permitted under clause (g)(ii) of the definition of Permitted Indebtedness and (ii) security deposits in connection with real property leases, the combination of (i) and (ii) in an aggregate amount not to exceed \$2,000,000 at any time;

(p) Liens incurred in connection with the extension, renewal or refinancing of the Indebtedness secured by Liens of the type described in clause (b) 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; and

(q) Liens solely on the royalty interests purchased pursuant to a Permitted Royalty Transaction and proceeds thereon; provided that no Liens shall be granted with respect to any Intellectual Property of Borrower or its Subsidiaries.

“Permitted Royalty Transaction” means any synthetic royalty participations (and not royalty purchase or buyouts) whereby Borrower receives upfront unrestricted (including, not subject to any redemption, clawback, escrow or similar encumbrance or restriction) net cash proceeds of no less than Fifty Million Dollars (\$50,000,000) in exchange for rights to participation payments or royalties based on net sales in an amount not to exceed ten percent (10%) of net sales, on terms satisfactory to Agent.

“Permitted Transfers” means:

(a) sales of Inventory in the ordinary course of business;

(b) licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and on an arm’s length basis, that would not result in a legal transfer of title of the licensed property that may be either (x) exclusive as to specific geographic regions or territories outside of the United States of America or (y) exclusive globally with respect to (I) Non-Core Intellectual Property or (II) one or more pathogens for the infectious disease programs or fields of Borrower;

(c) licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and on an arm’s length basis, including in connection with business development transactions, co-development, co-commercialization, or co-promotion transactions, profit-sharing transactions, collaborations, licensing, partnering or similar transactions with established pharmaceutical companies and that are entered into with commercially reasonable terms, for territories including the United States of America;

(d) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business;

- (e) use of Cash in the ordinary course of business or as otherwise permitted herein;
- (f) sale of stock or other shares in the ordinary course of business;
- (g) transfers constituting the making of Permitted Investments, or the granting of Permitted Liens;
- (h) any sale or series of related sales of assets related to the Borrower's infectious disease program, so long as such sale or related series of sales yields upfront net cash proceeds of at least \$100,000,000, either as upfront milestone payment or proceeds resulting from the sale of Borrower's equity as a part of the transaction, which such net cash proceeds shall be held in accounts subject to an Account Control Agreement in favor of Agent; and
- (i) other transfers of assets having a fair market value of not more than \$500,000 in the aggregate in any fiscal year.

"Permitted Warrant Transaction" means any call option, warrant or right to purchase (or substantively equivalent derivative transaction) relating to Borrower's common stock (or other securities or property following a merger event or other change of the common stock of Borrower) and/or cash (in an amount determined by reference to the price of such common stock) sold by Borrower substantially concurrently with any purchase by Borrower of a related Permitted Bond Hedge Transaction.

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

"Prime Rate" means the rate of interest quoted in the print edition of The Wall Street Journal as the prime rate, as in effect from time to time.

"Public Health Laws" means all Requirements of Law relating to the procurement, development, clinical and non-clinical evaluation, product approval or licensure, manufacture, production, analysis, distribution, dispensing, importation, exportation, use, handling, quality, sale, labeling, promotion, clinical trial registration or post market requirements of any drug product (including, without limitation, any ingredient or component of the foregoing products) subject to regulation under the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.) and the Public Health Service Act (42 U.S.C. § 282(j)), including without limitation all applicable regulations promulgated by the FDA at Title 21 of the Code of Federal Regulations and all applicable regulations promulgated by the National Institutes of Health ("NIH") and codified at Title 42, Part 11 of the Code of Federal Regulations.

"Qualified Cash" means an amount equal to (a) the amount of Borrower's Cash held in accounts subject to an Account Control Agreement in favor of Agent, minus (b) the Qualified Cash A/P Amount.

"Qualified Cash A/P Amount" means the amount of Borrower's accounts payable under GAAP not paid after the 150th day following the invoice for such account payable, so long as such invoice is not in dispute in the ordinary course of business and subject to any reserves required under GAAP.

"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.

"Redemption Conditions" means, with respect to any redemption by Borrower of any Permitted Convertible Debt, satisfaction of each of the following events: (a) no default or Event of Default shall exist

or result therefrom, and (b) both immediately before and at all times after such redemption, Borrower's Qualified Cash shall be no less than 150% of the outstanding principal amount of the Term Loan Advances.

"Registrations" shall mean authorizations, approvals, licenses, permits, certificates, registrations, listings, certificates, or exemptions of or issued by any governmental authority that are required for the research, development, manufacture, commercialization, distribution, marketing, storage, transportation, pricing, governmental authority reimbursement, use and sale of Borrower Products.

"Regulatory Action" means an administrative or regulatory enforcement action, proceeding or investigation, warning letter, untitled letter, Form 483 or similar inspectional observations, other written notice of violation letter, recall, seizure, "Section 305 notice" or other similar written communication, or consent decree, issued or required by the FDA or the NIH under the Public Health Laws or by a comparable governmental authority under similar Requirements of Law in any other regulatory jurisdiction.

"Required Lenders" means (a) for so long as all of the Persons that are Lenders on the Closing Date (each, an "Original Lender") have not assigned or transferred any of their interests in the Term Loan Advances or Term Commitments, Lenders holding one hundred percent (100%) of the aggregate unpaid principal amount of the Term Loan Advances and Term Commitments then outstanding and (b) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan Advances or Term Commitments, the Lenders holding more than 50% of the sum of the aggregate unpaid principal amount of the Term Loan Advances and the Term Commitments then outstanding and, in respect of this clause (b), (i) each Original Lender that has not assigned or transferred any portion of the Term Loan Advances or Term Commitments, and (ii) each assignee or transferee of an Original Lender's interest in the Term Loan Advances or the Term Commitments, but only to the extent that such assignee is an Affiliate or Approved Fund of such Original Lender.

"Requirements of Law" means, with respect to any Person, collectively, the common law and all federal, state, provincial, local, foreign, multinational or international laws, statutes, codes, treaties, standards, rules and regulations, ordinances, orders, judgments, writs, injunctions, decrees (including administrative or judicial precedents or authorities), in each case that are applicable to and binding upon such Person or any of its property or to which such Person or any of its property is subject.

"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.

"SBA Funding Date" means the Closing Date (such date being the date on which a Lender which is an SBIC funds any portion of the Loan, which such date can only occur upon the confirmation by Borrower in its sole discretion that on such date it meets the requirements under Addendum 2).

“Second Interest Only Extension Conditions” shall mean satisfaction of each of the following events: (a) no default or Event of Default shall have occurred and be continuing; (b) the First Interest Only Extension Conditions have been satisfied, and (c) either of Performance Milestone III or Performance Milestone IV has been achieved on or prior to June 15, 2025.

“Secured Obligations” means each Borrower’s obligations under this Agreement and any Loan Document, including, without limitation, (a) any obligation to pay any amount now owing or later arising and (b) all obligations relating to Bank Services, if any.

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

“Subsequent Financing” means the closing of any Borrower financing which becomes effective after the Closing Date that is broadly marketed to multiple investors but excluding, for the avoidance of doubt, any Borrower financing under the Borrower’s “at the market” or similar facilities.

“Subsidiary” means an entity, whether a corporation, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls 50% or more of the outstanding voting securities, directly or indirectly. If not otherwise specified, a Subsidiary shall mean a direct or indirect Subsidiary of Borrower, including each entity listed on Schedule 5.14 hereto.

“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 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(a).

“Term Loan Advance” means an Advance pursuant to Section 2.1(a)

“Term Loan Cash Interest Rate” means, for any day, a per annum rate of interest equal to the greater of (i) (x) the Cash Prime Rate *plus* (y) 3.15%, and (ii) 7.15%.

“Term Loan PIK Interest Rate” means, for any day, a per annum rate of interest equal to 2.00%.

“Term Loan Maturity Date” means July 19, 2027; provided that if such day is not a Business Day, the Term Loan Maturity Date shall be the immediately preceding Business Day.

“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.

“Tranche II” means the advances pursuant to Section 2.1(a)(ii).

“Tranche II Facility Charge” means 0.50% of the principal amount of any Advance pursuant to Tranche II, which is payable to Lenders in accordance with Section 4.2(d).

“Tranche III” means the advances pursuant to Section 2.1(a)(iii).

“Tranche III Facility Charge” means 0.50% of the principal amount of any Advance pursuant to Tranche III, which is payable to Lenders in accordance with Section 4.2(e).

“Tranche IV” means the advances pursuant to Section 2.1(a)(iv).

“Tranche IV Facility Charge” means 0.50% of the principal amount of any Advance pursuant to Tranche IV, which is payable to Lenders in accordance with Section 4.2(f).

“Tranche V” means the advances pursuant to Section 2.1(a)(v).

“Tranche V Facility Charge” means 0.50% of the principal amount of any Advance pursuant to Tranche V, which is payable to Lenders in accordance with Section 4.2(g).

“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.

“U.S. Person” means any Person that is a “United States person” as defined in Section 7701(a)(30) of the Code.

1.2 Certain Additional Defined Terms. The following terms are defined in the Sections or subsections referenced opposite such terms:

Defined Term	Section
“Agent”	Preamble
“Assignee”	11.14
“Borrower”	Preamble
“Claims”	11.11
“Collateral”	3.1
“Confidential Information”	11.13
“End of Term Charge”	2.5
“Event of Default”	9
“Financial Statements”	7.1
“Indemnified Person”	6.3
“Lenders”	Preamble
“Liabilities”	6.3
“Maximum Rate”	2.2
“Open Source License”	5.10(p)
“Participant Register”	11.8
“Prepayment Charge”	2.4

Defined Term	Section
“Publicity Materials”	11.19
“Register”	11.7
“Rights to Payment”	3.1
“SBA”	7.16
“SBIC”	7.16
“SBIC Act”	7.16
“Specified Disputes”	5.10(g)
“Third Party IP”	5.10(i)

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. For all purposes under the Loan Documents, in connection with any division or plan of division under Delaware law (or any comparable event under a different jurisdiction’s laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its Equity Interests at such time.

Notwithstanding anything to the contrary in this Agreement or any other Loan Document, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made without giving effect to any treatment of Indebtedness in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any such Indebtedness in a reduced or bifurcated manner as described therein, and such Indebtedness shall at all times be valued at the full stated principal amount thereof. For the avoidance of doubt, and without limitation of the foregoing, Permitted Convertible Debt shall at all times be valued at the full stated principal amount thereof and shall not include any reduction or appreciation in value of the shares deliverable upon conversion thereof.

SECTION 2

THE LOAN

2.1 Term Loan Advances.

(a) Term Commitment.

(i) *Tranche I.* Subject to the terms and conditions of this Agreement, (A) on the Closing Date, Lenders shall severally (and not jointly) make, and Borrower agrees to draw, a Term Loan Advance of \$15,000,000 and (B) on or prior to March 15, 2023, Borrower may request, and the Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of \$5,000,000 (or if less than \$5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(i)) in an aggregate principal amount of up to \$15,000,000.

(ii) *Tranche II.* Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone I, on or prior to December 15, 2023, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of \$5,000,000 (or if less than \$5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(ii)) in an aggregate principal amount up to \$10,000,000.

(iii) *Tranche III.* Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone II, on or prior to December 15, 2023, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of \$5,000,000 (or if less than \$5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(iii)) in an aggregate principal amount up to \$10,000,000.

(iv) *Tranche IV.* Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone III, on or prior to June 15, 2024, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of \$5,000,000 (or if less than \$5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(iv)) in an aggregate principal amount up to \$10,000,000.

(v) *Tranche V.* Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone IV, on or prior to June 15, 2024, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of \$5,000,000 (or if less than \$5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(v)) in an aggregate principal amount up to \$20,000,000.

The aggregate outstanding Term Loan Advances shall not exceed the Maximum Term Loan Amount plus, for the avoidance of doubt, any amount equal to the Term Loan PIK Interest added to principal pursuant to Section 2.1(c)(ii). Each Term Loan Advance of each Lender shall not exceed its respective Term Commitment plus, for the avoidance of doubt, any amount equal to the Term Loan PIK Interest added to principal pursuant to Section 2.1(c)(ii).

(b) Advance Request. To obtain a Term Loan Advance, Borrower shall complete, sign and deliver an Advance Request to Agent at least five (5) Business Days before the Advance Date, other than the Term Loan Advance to be made on the Closing Date, which shall be at least one (1) Business Day before the Advance Date. Lenders shall fund the Term Loan Advance in the manner requested by the Advance Request provided that each of the conditions precedent to such Term Loan Advance is satisfied as of the requested Advance Date.

(c) Interest.

(i) Term Loan Cash Interest Rate. In addition to interest accrued pursuant to the Term Loan PIK Interest Rate, the principal balance (including, for the avoidance of doubt, any payment-in-kind interest added to principal pursuant to Section 2.1(c)(ii)) of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan Cash 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 Cash Interest Rate will float and change on the day the Prime Rate changes from time to time.

(ii) Term Loan PIK Interest Rate. In addition to interest accrued pursuant to the Term Loan Cash Interest Rate, the principal balance of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan PIK Interest Rate based on a year consisting of 360

days, with interest computed daily based on the actual number of days elapsed, which amount shall be added to the outstanding principal balance so as to increase the outstanding principal balance of such Term Loan Advance on each payment date for such Advance, which principal amount shall accrue interest payable as provided in Section 2.1(c)(i) and which accrued and unpaid amount shall be payable when the principal amount of the Advance is payable in accordance with Section 2.1(d).

(d) Payment. Borrower shall pay interest on each Term Loan Advance on the first Business Day of each month, beginning the month after the Advance Date continuing until the Amortization Date. Borrower shall repay the aggregate principal balance of the Term Loan Advances 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 and any obligations under Bank Services Agreements that are cash collateralized in accordance with Section 3.3 of this Agreement) are repaid, provided that if the Term Loan Cash Interest Rate is adjusted in accordance with its terms, or the Amortization Date is extended, the amount of each subsequent monthly installment shall be recalculated. The entire principal balance of the Term Loan Advances and all accrued but unpaid interest hereunder, shall be due and payable on the Term Loan Maturity Date. Except as otherwise provided in this Agreement, Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. If a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day. Lenders 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 Lenders under each Term Loan Advance and (ii) out-of-pocket legal fees and costs incurred by Agent or Lenders in connection with Section 11.12 of this Agreement; provided that, with respect to clause (i) above, in the event that Lenders or Agent informs Borrower that Lenders 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 Lenders 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 Lenders or Agent informs Borrower that Lenders 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 Lenders, 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 Lenders or Agent notifies Borrower thereof; provided, further, that, with respect to clause (ii) above, in the event that Lenders or Agent informs Borrower that Lenders will not initiate a debit entry to Borrower's account for specified out-of-pocket legal fees and costs incurred by Agent or Lenders, Borrower shall pay to Lenders such amount in full in immediately available funds within three (3) Business Days.

2.2 Maximum Interest. Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (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 Lenders 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 Lenders' 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 a failure of any ACH debit 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, an amount equal to four percent (4%) 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%) per annum. In the event any interest is not paid when due hereunder, 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, Borrower may at any time prepay all or a portion of the outstanding Advances by paying the entire principal balance (or such portion thereof), all accrued and unpaid interest thereon, all unpaid Lender's fees and expenses accrued to the date of the repayment (including, without limitation, the portion of the End of Term Charge applicable to the aggregate original principal amount of the Term Loan Advances being prepaid in accordance with Section 2.5(a)), together with a prepayment charge equal to the following percentage of the outstanding principal amount of such Advance amounts being so prepaid: with respect to each Advance (which Advance amount shall include, for the avoidance of doubt, any principal that has been added to the principal balance of such Advance pursuant to Section 2.1(c)(ii)) (a) if the principal amount of such Advance amounts are prepaid on or prior to the date which is twelve (12) months following the Closing Date, two and one-half percent (2.5%); (b) if the principal amount of such Advance amounts are prepaid after the date which is twelve (12) months following the Closing Date but on or prior to the date which is twenty-four (24) months following the Closing Date, one and one-half percent (1.50%); if the principal amount of such Advance amounts are prepaid after the date which is twenty-four (24) months following the Closing date but on or prior to the date which is thirty-six (36) months following the Closing Date, one percent (1.00%); and (c) after the date which is thirty-six (36) months following the Closing Date through the day prior to the Term Loan Maturity Date, zero percent (0%) of the principal amount of the Advance being prepaid for any prepayment of an Advance on or prior to the Amortization Date (a "Prepayment Charge"). Borrower agrees that the Prepayment Charge is a reasonable calculation of Lenders' lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the 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, Lenders agree to waive the Prepayment Charge if such Lender or any Affiliate thereof which is controlled by such Lender (in their sole and absolute discretion) agree in writing to refinance the Advances prior to the Term Loan Maturity Date. Any amounts paid under this Section shall be applied by Agent to the then unpaid amount of any Secured Obligations (including principal and interest) pro rata to all scheduled amounts owed. For the avoidance of doubt, if a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day.

2.5 End of Term Charge.

(a) On any date that Borrower partially prepays the outstanding Secured Obligations pursuant to Section 2.4, Borrower shall pay Lenders a charge of 5.75% of the aggregate original principal amount of such Term Loan Advances being prepaid.

(b) 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, any obligations under Bank Services Agreements that are cash collateralized in accordance with Section 3.3 of this Agreement 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 Lenders a charge (x) of 5.75% of the aggregate original principal amount of the Term Loan Advances

made hereunder, *minus* (y) the aggregate amount of payments made pursuant to Section 2.5(a) (the “End of Term Charge”).

(c) Notwithstanding the required payment date of such End of Term Charge, the applicable pro rata portion of the End of Term Charge calculated pursuant to Section 2.5 shall be deemed earned by Lenders as of each date that an applicable Term Loan Advance is made. For the avoidance of doubt, if a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day.

2.6 Pro Rata Treatment. Each payment (including prepayment) on account of any fee and any reduction of the Term Loan Advances shall be made pro rata according to the Term Commitments of the relevant Lenders. Except with respect to any payment received by SVB with respect to obligations of Borrower in connection with Bank Services and except as otherwise provided in this Agreement, all of the rights, interests and obligations of each Lender under this Agreement and related Loan Documents, including security interests in the Collateral under this Agreement, shall be shared by the Lenders in the ratio of (a) the aggregate outstanding principal amount of such Lender’s Term Loan Advances to Borrower under this Agreement to (b) the aggregate outstanding principal amount of all Term Loan Advances to Borrower under this Agreement. Each Lender shall promptly remit to the other Lender such sums as may be necessary to ensure the ratable repayment of each Lender’s portion of any Term Loan Advance. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lender also received its scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to the other Lender such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Agent. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation “ratably,” “proportionally” or in similar terms shall refer to this ratio. The provisions hereof shall apply irrespective of the time or order of attachment or perfection of security interests, or the time or order of filing or recording of financing statements.

2.7 Taxes; Increased Costs. Borrower, Agent and Lenders each hereby agree to the terms and conditions set forth on Addendum 1 attached hereto.

2.8 Treatment of Prepayment Charge and End of Term Charge. Borrower agrees that any Prepayment Charge and any End of Term Charge payable prior to the Term Loan Maturity Date shall be presumed to be the liquidated damages sustained by each Lender as the result of the early termination, and Borrower agrees that it is reasonable under the circumstances currently existing and existing as of the Closing Date. The Prepayment Charge and the End of Term Charge shall also be payable in the event the Secured Obligations (and/or this Agreement) are satisfied or released by foreclosure (whether by power of judicial proceeding), deed in lieu of foreclosure, or by any other means. Each Loan Party expressly waives (to the fullest extent it may lawfully do so) the provisions of any present or future statute or law that prohibits or may prohibit the collection of the foregoing Prepayment Charge and End of Term Charge in connection with any such acceleration. Borrower agrees (to the fullest extent that each may lawfully do so): (a) each of the Prepayment Charge and the End of Term Charge is reasonable and is the product of an arm’s length transaction between sophisticated business people, ably represented by counsel; (b) each of the Prepayment Charge and the End of Term Charge shall be payable notwithstanding the then prevailing market rates at the time payment is made; (c) there has been a course of conduct between Lenders and Borrower giving specific consideration in this transaction for such agreement to pay the Prepayment Charge and the End of Term Charge as a charge (and not interest) in the event of prepayment or acceleration; and (d) Borrower shall be estopped from claiming differently than as agreed to in this paragraph. Borrower expressly acknowledges that its agreement to pay each of the Prepayment Charge and the End of Term Charge to Lenders as herein described was on the Closing Date and continues to be a material inducement to Lenders to provide the Term Loan Advances.

SECTION 3

SECURITY INTEREST

3.1 Grant of Security Interest. 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 existing 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; 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; 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"). 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 Excluded Collateral. Notwithstanding the broad grant of the security interest set forth in Section 3.1, above, the Collateral shall not include (a) more than 65% of the presently existing and hereafter arising issued and outstanding Equity Interests owned by Borrower of any Foreign Subsidiary or Foreign Subsidiary Holding Company which Equity Interests entitle the holder thereof to vote for directors or any other matter, (b) nonassignable licenses or contracts, including without limitation any licenses described in clause (b) of the defined term "Permitted Transfers," which by their terms require the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections 9406, 9407 and 9408 of the UCC), provided, further, that upon the termination of such prohibition or such consent being provided with respect to any license or contract, such license or contract shall automatically be included in the Collateral, (c) property for which the granting of a security interest therein is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically be included in the Collateral; (d) any Excluded Accounts; (e) any cash collateral deposit subject to a Permitted Lien hereunder, if the grant of a security interest with respect to such property pursuant to this Agreement would be prohibited by the agreement creating such Permitted Lien or would otherwise constitute a default thereunder or create a right of termination a party thereto (other than Borrower), provided that upon the termination and release of such cash collateral, such property shall automatically be included in the Collateral; (f) any lease, license or other agreement and any property subject thereto on the Closing Date or on the date of the acquisition of such property (other than any property acquired by a Loan Party subject to any such contract or other agreement to the extent such contract or other agreement was incurred in contemplation of such acquisition) to the extent that a grant of a security interest therein to secure the Secured Obligations would violate or invalidate such lease, license, contract or agreement or create a right of termination in favor of any other party thereto (other than the Borrower, any other Loan Party or any Subsidiary) (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Article 9 of the UCC); (g) any assets as to which the Agent in its reasonable discretion shall determine that the costs and burdens of obtaining or perfecting a security interest therein substantially outweigh the benefit to the Lenders of the security afforded thereby (including, without limitation, vehicles or other assets subject to a

certificate of title); and (h) any other assets as may be agreed by the Agent in writing in its sole discretion to be excluded from Collateral.

3.3 The security interest granted in Section 3.1 of this Agreement shall continue until the Secured Obligations (other than contingent indemnification or reimbursement obligations that are not yet due and payable) have been paid in full and Lender has no further commitment or obligation hereunder or under the other Loan Documents to make any further Advances, and shall thereupon terminate upon Borrower providing cash collateral acceptable to SVB in its reasonable discretion (and executing, delivering and filing, alone or with SVB, any financing statements, security agreements, collateral assignments, notices, control agreements or other documents to perfect SVB's security interest in such cash collateral) for Secured Obligations constituting Bank Services, if any, and Lender and Agent shall, at Borrower's expense, take all actions reasonably requested by Borrower to evidence such termination. In the event there are Bank Services that are Secured Obligations consisting of outstanding Letters of Credit, Borrower shall provide to SVB cash collateral (and execute, deliver and file, alone or with SVB, any financing statements, security agreements, collateral assignments, notices, control agreements or other documents to perfect SVB's security interest in such cash collateral) in an amount equal to at least one hundred three percent (103.0%) plus all interest, fees, and costs due or to become due in connection therewith (as estimated by SVB in its good faith business judgment), to secure all of the Secured Obligations relating to such Letters of Credit.

3.4 Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with SVB. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes SVB thereunder shall be deemed to be Secured Obligations hereunder and that it is the intent of Borrower and SVB to have all such Secured Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Addendum 5 and Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Agent's Lien in this Agreement), and by any and all other security agreements, mortgages, or other collateral granted to Agent by Borrower as security for the Secured Obligations, now or in the future.

SECTION 4

CONDITIONS PRECEDENT TO LOAN

The obligations of Lenders 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) Subject to Section 4.4, duly executed copies of the Loan Documents, Account Control Agreements with respect to each Deposit Account (other than any Excluded Accounts) maintained by Borrower and any of its Subsidiaries (other than any Excluded Subsidiaries) 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) a legal opinion of Borrower's counsel in form and substance reasonably acceptable to Agent;

(c) a copy of resolutions of Borrower's Board evidencing approval of the Loan and other transactions evidenced by the Loan Documents, certified by an officer of Borrower;

(d) copies of the Charter of Borrower, certified by the Secretary of State of the applicable jurisdiction of organization and the other Organizational Documents, as amended through the Closing Date, of Borrower, certified by an officer of Borrower;

(e) certificates of good standing for Borrower from the applicable jurisdiction of organization and similar certificates from all other jurisdiction in which Borrower does business and where the failure to be qualified could have a Material Adverse Effect;

(f) payment of the Due Diligence Fee, Initial Facility Charge and reimbursement of Agent's and Lenders' current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance;

(g) subject to Section 4.4, all certificates of insurance, endorsements, and copies of each insurance policy required pursuant to Section 6.2;

(h) subject to Section 4.4, duly executed landlord's consent(s) in favor of Agent for Borrower's headquarters location and each other leased location of Borrower at which Collateral with a value in excess of \$250,000 is located;

(i) subject to Section 4.4, duly executed bailee's waiver(s) in favor of Agent for each location (other than Borrower's headquarters location) where Borrower maintains property with a third party and at which Collateral with a value in excess of \$250,000 is located; and

(j) evidence reasonably acceptable to Agent that Borrower has established at least one operating Deposit Account with SVB; and

(k) 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), duly executed by Borrower's Chief Executive Officer, Chief Financial Officer or Chief Accounting Officer, and (ii) any other documents Agent may reasonably request in its good faith business discretion.

(b) The representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the applicable 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) With respect to any Advance pursuant to Tranche II, Borrower shall have paid the Tranche II Facility Charge.

(e) With respect to any Advance pursuant to Tranche III, Borrower shall have paid the Tranche III Facility Charge.

(f) With respect to any Advance pursuant to Tranche IV, Borrower shall have paid the Tranche IV Facility Charge.

(g) With respect to any Advance pursuant to Tranche V, Borrower shall have paid the Tranche V Facility Charge.

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 subsections (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, (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.

4.4 Post-Closing Obligations.

(a) Upon the date that is thirty (30) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall deliver all endorsements with respect to, and copies of, each insurance policy required pursuant to Section 6.2;

(b) Upon the date that is sixty (60) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall use commercially reasonable efforts to deliver duly executed landlord's consent(s) in favor of Agent for Borrower's headquarters location and each other leased location of Borrower at which Collateral with a value in excess of \$250,000 is located;

(c) Upon the date that is sixty (60) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall use commercially reasonable efforts to deliver duly executed bailee's waiver(s) in favor of Agent for each location (other than Borrower's headquarters location) where Borrower maintains property with a third party and at which Collateral with a value in excess of \$250,000 is located; and

(d) Upon the date that is five (5) Business Days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall deliver an Account Control Agreement in respect of the securities account or deposit account of Borrower set forth in the perfection certificate delivered by Borrower to Agent on the Closing Date and maintained at U.S. Bank National Association and JPMorgan Chase Bank, N.A., as applicable (other than such accounts which are Excluded Accounts), in form and substance reasonably satisfactory to Agent; provided, however, that the proceeds of the Term Loan Advances shall not be transferred to the aforementioned accounts prior to the delivery of the Account Control Agreements required pursuant to this Section 4.4(d).

SECTION 5

REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants that:

5.1 Organizational Status. Borrower is duly organized, legally existing and in good standing under the laws of its jurisdiction of incorporation, 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), locations, place of formation, tax identification number,

organizational identification number and other information are correctly set forth in Exhibit B, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Agent after the Closing Date in accordance with this Agreement.

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 to which it is a party, (i) have been duly authorized by all necessary action in accordance with Borrower's Organizational Documents and applicable law, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens, (iii) do not violate (A) any provisions of Borrower's Organizational Documents, or (B) any law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject in any material respect, and (iv) 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 Material Adverse Effect has occurred and is continuing, and Borrower is not aware of any event or circumstance that is likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 Actions Before Governmental Authorities. 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.

(a) Neither Borrower nor any of its Subsidiaries is in violation of any 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 under (i) any provision of any agreement or instrument evidencing material Indebtedness in any material respect, or (ii) any other agreement to which it is a party or by which it is bound that is reasonably expected to result in a Material Adverse Effect.

(b) 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 have 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.

(c) None of Borrower, any of its Subsidiaries, or, to the knowledge of Borrower, 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, 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 shall 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 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, or shall contain, any material misstatement of fact or, when taken together with all other such information or documents, omitted, omits or shall omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or shall 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 (it being understood that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts, that such projections are subject to significant uncertainties and contingencies, many of which are beyond the control of Borrower, that no assurance is given that any particular projections will be realized, and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.8 Tax Matters. Except as set forth on Schedule 5.8, (a) Borrower and its Subsidiaries have filed all federal and state income Tax returns and other material Tax returns that they are required to file, (b) Borrower and its Subsidiaries have duly paid all federal and state income Taxes and other material Taxes or installments thereof that they are required to pay, except Taxes being contested in good faith by appropriate proceedings and for which Borrower and its Subsidiaries maintain adequate reserves in accordance with GAAP, and (c) to the best of Borrower's knowledge, no proposed or pending Tax assessments, deficiencies, audits or other proceedings with respect to Borrower or any Subsidiary have had, or could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property material to Borrower's business. Except as described on Schedule 5.9 and as may be updated by Borrower in a written notice provided from time to time after the Closing Date, (i) each of the material Copyrights, Trademarks and Patents (other than patent applications) is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) except as set forth in the most recently delivered Compliance Certificate in accordance with Section 7.1(d), no claim has been made to Borrower in writing that any material part of the Intellectual Property violates the rights of any third party. Exhibit C (and as may be updated by Borrower in a written

notice provided from time to time after the Closing Date) is a true, correct and complete list of each of Borrower's registered Patents and filed Patent applications, registered Trademarks, registered Copyrights, and Material Agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses, licenses that are commercially available to the public, open source licenses, licenses disclosed in writing to Agent as required under this Agreement and immaterial Intellectual Property licensed to Borrower in the ordinary course of business), 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.

(a) A true, correct and complete list of Current Company IP, including its name/title, current owner or co-owners (including ownership interest), registration, patent or application number, and registration or application date, issued or filed in the United States, is set forth on Schedule 5.10(a). Except as set forth on Schedule 5.10(a), (i) (A) each item of owned Current Company IP is valid, subsisting and (other than with respect to Patent applications) enforceable and no such item of Current Company IP has lapsed, expired, been cancelled or invalidated or become abandoned or unenforceable, and (B) no written notice has been received challenging the inventorship or ownership, or relating to any lapse, expiration, invalidation, abandonment or unenforceability, of any such item of Current Company IP, and (ii) (A) each such item of Current Company IP which is licensed from another Person is valid, subsisting and enforceable and no such item of Current Company IP has lapsed, expired, been cancelled or invalidated, or become abandoned or unenforceable, and (B) no written notice has been received challenging the inventorship or ownership, or relating to any lapse, expiration, invalidation, abandonment or unenforceability, of any such item of Current Company IP. To the knowledge of Borrower, there are no published patents, patent applications, articles or prior art references that would reasonably be expected to be infringed by the exploitation of the Borrower Products. Except as set forth on Schedule 5.10(a), (x) each Person who has or has had any rights in or to owned Current Company IP or any trade secrets owned by the Borrower or any of its Subsidiaries, including each inventor named on the Patents within such owned Current Company IP filed by the Borrower or any of its Subsidiaries, has executed an agreement assigning his, her or its entire right, title and interest in and to such owned Current Company IP and such trade secrets, and the inventions, improvements, ideas, discoveries, writings, works of authorship, information and other intellectual property embodied, described or claimed therein, to the stated owner thereof, and (y) no such Person has any contractual or other obligation that would preclude or conflict with such assignment or the exploitation of the Borrower Products or entitle such Person to ongoing payments.

(b) [reserved].

(c) There are no maintenance, annuity or renewal fees that are currently overdue beyond their allotted grace period for any of the Current Company IP, nor have any applications or registrations therefor lapsed or become abandoned, been cancelled or expired.

(d) There are no unpaid fees or royalties under any Material Agreements that have become due, or are expected to become overdue. Each Material Agreement is in full force and effect and is legal, valid, binding, and enforceable in accordance with its respective terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or limiting creditors' rights generally or by equitable principles relating to enforceability. Except as set forth on Schedule 5.10(d), neither Borrower nor any of its Subsidiaries, as applicable, is in breach of or default in any manner that could reasonably be expected to materially affect the Borrower Products under any Material Agreement to

which it is a party or may otherwise be bound, and no circumstances or grounds exist that would give rise to a claim of breach or right of rescission, termination, non-renewal, revision or amendment of any of the Material Agreements, including the execution, delivery and performance of this Agreement and the other Loan Documents.

(e) No payments by the Borrower or any of its Subsidiaries are due to any other Person in respect of the Current Company IP, other than pursuant to the Material Agreements and those fees payable to patent offices in connection with the prosecution and maintenance of the Current Company IP, any applicable taxes and associated attorney fees.

(f) Neither the Borrower nor any of its Subsidiaries has undertaken or omitted to undertake any acts, and no circumstance or grounds exist that would invalidate or reduce, in whole or in part, the enforceability or scope of (i) the Current Company IP in any manner that could reasonably be expected to materially adversely affect the Borrower Products, or (ii) except as set forth on Schedule 5.10(f), the Borrower's or Subsidiary's entitlement to own or license and exploit such Current Company IP.

(g) Except as described on Schedule 5.9 or in the most recently delivered Compliance Certificate in accordance with Section 7.1(d), there is no requested, filed pending, decided or settled opposition, interference proceeding, reissue proceeding, reexamination proceeding, inter-partes review proceeding, post-grant review proceeding, cancellation proceeding, injunction, litigation, paragraph IV patent certification or lawsuit under the Hatch-Waxman Act, hearing, investigation, complaint, arbitration, mediation, demand, International Trade Commission investigation, decree, or any other dispute, disagreement, or claim, in each case alleged in writing to Borrower or any of its Subsidiaries (collectively referred to hereinafter as "Specified Disputes"), nor to the knowledge of Borrower, has any such Specified Dispute been threatened in writing, in each case challenging the legality, validity, enforceability or ownership of any Current Company IP, in each case that would have a material adverse effect on the Borrower Products.

(h) In each case where an issued U.S. Patent within the Current Company IP is owned or co-owned by the Borrower or any of its Subsidiaries by assignment, the assignment has been duly recorded with the U.S. Patent and Trademark Office.

(i) Except as set forth on Schedule 5.10(i) there are no pending or, to the knowledge of Borrower, threatened claims in writing against Borrower or any of its Subsidiaries alleging that any research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products in the United States infringes or violates (or in the past infringed or violated) the rights of any third parties in or to any Intellectual Property ("Third Party IP") or constitutes a misappropriation of (or in the past constituted a misappropriation of) any Third Party IP.

(j) [reserved].

(k) Except as set forth on Schedule 5.10(k), to the knowledge of the Borrower, there are no settlements, covenants not to sue, consents, judgments, orders or similar obligations which: (i) restrict the rights of the Borrower or any of its Subsidiaries to use any Intellectual Property relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products (in order to accommodate any Third Party IP or otherwise), or (ii) permit any third parties to use any Current Company IP.

(l) Except as set forth on Schedule 5.10(l), to the knowledge of Borrower (i) there is no, nor has there been any, infringement or violation by any Person of any of the Current Company IP or

the rights therein, and (ii) there is no, nor has there been any, misappropriation by any Person of any of the Current Company IP or the subject matter thereof.

(m) The Borrower and each of its Subsidiaries has taken all commercially reasonable measures customary in the biopharmaceutical industry to protect the confidentiality and value of all trade secrets owned by the Borrower or any of its Subsidiaries or used or held for use by the Borrower or any of its Subsidiaries, in each case relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products.

(n) [reserved].

(o) Except as described on Schedule 5.10(o), 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, and in the case of Licenses, except for restrictions that are unenforceable under Division 9 of the UCC or restrictions that are permitted hereunder, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property owned by Borrower and necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower, without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, and 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 that are material to Borrower's business except customary covenants in license agreements, joint venture or strategic alliances (to the extent such joint ventures or strategic alliances are Permitted Investments) and equipment leases where Borrower is the licensee or lessee.

(p) No material software or other material materials used by Borrower or any of its Subsidiaries (or used in any Borrower Products or any Subsidiaries' products) are subject to an open-source or similar license (including but not limited to the General Public License, Lesser General Public License, Mozilla Public License, or Affero License) (collectively, "Open Source Licenses") in a manner that would cause such software or other materials to have to be (i) distributed to third parties at no charge or a minimal charge (royalty-free basis); (ii) licensed to third parties to modify, make derivative works based on, decompile, disassemble, or reverse engineer; or (iii) used in a manner that does could require disclosure or distribution in source code form.

5.11 Borrower Products. Except as set forth on Schedule 5.11, no material 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 manner Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof. 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 Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. 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 licensed Intellectual Property of the owner thereof). To Borrower's knowledge, neither Borrower's use of its material Intellectual Property nor

the production and sale of Borrower Products materially infringes the Intellectual Property or other rights of others, except as described on Schedule 5.9.

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 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. Other than loans constituting Permitted Investments, 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 Subsidiaries. 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.

SECTION 6

INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance covering Borrower and each of its Subsidiaries, 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 shall maintain a minimum of \$2,000,000 of commercial general liability insurance for each occurrence. Borrower maintains and shall continue to maintain a minimum of \$2,000,000 of directors' and officers' insurance for each occurrence and \$5,000,000 in the aggregate. So long as there are any Secured Obligations outstanding, Borrower shall maintain insurance upon the business and assets of Borrower and its Subsidiaries, insuring against broad form property of physical loss or damage, 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. If Borrower fails to obtain the insurance called for by this Section 6.1 or fails to pay any premium thereon or fails to pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Agent may obtain such insurance or make such payment, and all amounts so paid by Agent are immediately due and payable, bearing interest at the then highest rate applicable to the Secured Obligations, and secured by the Collateral. Agent will make reasonable efforts to provide Borrower with notice of Agent obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Agent are deemed an agreement to make similar payments in the future or Agent's waiver of any Event of Default.

6.2 Certificates. Borrower shall deliver to Agent certificates of insurance that evidence compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall reflect Agent (shown as "Hercules Capital, Inc., as Agent, and its successors and/or assigns") as an additional insured for commercial general liability, and a lenders loss payable 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 shall 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. Upon Agent's reasonable request, Borrower shall provide Agent with copies of each insurance policy, and upon entering or amending any insurance policy required hereunder, Borrower shall provide Agent with copies of such policies and shall promptly deliver to Agent updated insurance certificates with respect to such policies.

6.3 Indemnity. Borrower agrees to indemnify and hold Agent, Lenders 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, reasonable and documented expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable and documented 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 solely from any Indemnified Person's gross negligence or willful misconduct. 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. 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, the Loan Agreement, in each case subject to the applicable statute of limitations.

SECTION 7 **COVENANTS**

Borrower agrees as follows:

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

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited monthly financial statements as of the end of such month (prepared on a consolidated basis), including balance sheet and related statements of income and cash flows, provided, that such unaudited monthly financial statements are not required to have been prepared in accordance with GAAP;

(b) as soon as practicable (and in any event within 45 days) after the end of each calendar quarter, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated basis), including balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that could reasonably be expected to have a Material Adverse Effect, certified by Borrower's Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer or another authorized executive of Borrower to the effect that they have been prepared in accordance with GAAP, (i) except for the absence of footnotes, and (ii) subject to normal year-end adjustments;

(c) as soon as practicable (and in any event within 90 days or as otherwise permitted by the SEC) after the end of each fiscal year, unqualified (other than a going concern qualification) audited

financial statements as of the end of such year (prepared on a consolidated and consolidating 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, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Agent, accompanied by any management report from such accountants; it being agreed that Ernst & Young is reasonably acceptable to the Agent;

(d) as soon as practicable (and in any event within thirty (30) days) after the end of each month, a Compliance Certificate in the form of Exhibit E;

(e) 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 and accounts payable;

(f) [reserved];

(g) financial and business projections promptly following their approval by Borrower's Board, and in any event, sixty (60) days after the end of Borrower's fiscal year, as well as budgets, operating plans and other financial information reasonably requested by Agent;

(h) insurance renewal statements, annually or otherwise promptly upon renewal of insurance policies required to be maintained in accordance with Section 6.1, and

(i) prompt (but in any event no more than 3 Business Days) notice if Borrower or any Subsidiary has knowledge that Borrower, or any Subsidiary or controlled 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 (a) accounting policies or reporting practices (other than as permitted under GAAP or pursuant to applicable securities laws or regulations of the Securities and Exchange Commission), or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on December 31.

The executed Compliance Certificate, all Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) above shall be sent via e-mail to financialstatements@htgc.com with a copy to legal@htgc.com, cbarnes@htgc.com, bgironda@htgc.com; hbhalla@htgc.com, psletteland@svb.com and rmay@svb.com, 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: (650) 473-9194, attention Account Manager: Gritstone bio, Inc.

Notwithstanding the foregoing, documents required to be delivered hereunder (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 makes such documents or materials publicly available.

7.2 Management Rights. Borrower shall permit any representative that Agent or Lenders authorizes, including its attorneys and accountants, upon prior written notice of at least five (5) Business Days, 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 per fiscal year. 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

at reasonable times and upon prior written notice of at least five (5) Business Days. In addition, Agent or Lenders 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 Lenders 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 Lenders with respect to any business issues shall not be deemed to give Agent or any Lender, nor be deemed an exercise by Agent or any Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall, and shall cause each other Loan Party to, from time to time execute, deliver and file, alone or with Agent, any financing statements, security agreements, collateral assignments, notices, control agreements, promissory notes or other documents to perfect or give the highest priority to Agent's Lien on the Collateral or otherwise evidence Agent's rights herein, in each case as reasonably requested by Agent. 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 or pursuant to applicable Loan Documents. 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), 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 good faith and in its reasonable commercial discretion, in each case subject to the terms of this Agreement, protect and defend its 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, and shall not permit any Subsidiary to do so, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except (a) for the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion, (b) for purchase money Indebtedness pursuant to its then applicable payment schedule or with other purchase money Indebtedness permitted hereunder, (c) for prepayment (i) by any Loan Party or Subsidiary of intercompany Indebtedness owed to Borrower, or (ii) by any Subsidiary that is not a Loan Party of intercompany Indebtedness owed by such Subsidiary to another Subsidiary that is not a Loan Party, or (d) as may be permitted under any Subordination Agreement, (e) as otherwise permitted hereunder or approved in writing by Agent, (f) Permitted Indebtedness with the proceeds of other Permitted Indebtedness and (g) Indebtedness owed under corporate credit cards constituting "Permitted Indebtedness" and prepaid in the ordinary course of business.

Notwithstanding anything to the contrary in the foregoing, the issuance of, performance of obligations under (including any payments of interest), and conversion, exercise, repurchase, redemption (including, for the avoidance of doubt, a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock), settlement or early termination or cancellation of (whether in whole or in part and including by netting or set-off) (in each case, whether in cash, common stock of Borrower or, following a merger event or other change of the common stock of Borrower, other securities or property), or the satisfaction of any condition that would permit or require any of the foregoing, any Permitted Convertible Debt shall not constitute a prepayment of Indebtedness by Borrower for the purposes of this Section 7.4 provided that principal payments in cash (other than cash in lieu of fractional shares) shall only be allowed with respect to any repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock if the Redemption Conditions are satisfied in respect of such redemption and at all times after such redemption.

7.5 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other property and assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from Liens whatsoever (except for Permitted Liens), and shall give Agent prompt written notice of any legal process that is reasonably likely to result in damages, expenses or liabilities in excess of \$1,000,000 affecting the Collateral, the Intellectual Property, such other property or assets, or any Liens thereon, provided, however, that the Collateral and such other property and 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 Lenders not to encumber its property other than in connection with Permitted Liens. Borrower shall not enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of Borrower to create, incur, assume or suffer to exist any Lien upon any of its 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, (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 assets financed thereby) and (c) customary restrictions on the assignment of leases, licenses and other agreements. Borrower shall cause each of its Subsidiaries to protect and defend such Subsidiary's title to its assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause each of its Subsidiaries at all times to keep such Subsidiary's property and assets free and clear from 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 that is reasonably likely to result in damages, expenses or liabilities in excess of \$500,000.

7.6 Investments. Borrower shall not, directly or indirectly acquire or own, or make any Investment in or to any Person, nor permit any of its Subsidiaries so to do, other than Permitted Investments.

Notwithstanding the foregoing, and for the avoidance of doubt, this Section 7.6 shall not prohibit (i) the conversion by holders of (including any cash payment upon conversion), or required payment of any principal or premium on (including, for the avoidance of doubt, in respect of a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock) or required payment of any interest with respect to, any Permitted Convertible Debt in each case, in accordance with the terms of the indenture governing such Permitted Convertible Debt provided that principal payments in cash (other than cash in lieu of fractional shares) shall be allowed with respect to any repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock only if the Redemption Conditions are satisfied in respect of such redemption and at all times after such redemption, (ii) the entry into (including the payment of premiums in connection therewith) or any required payment with respect to, or required early unwind or settlement of, any Permitted Bond Hedge Transaction or Permitted Warrant Transaction, in each case, in accordance with the terms of the agreement governing such Permitted Bond Hedge Transaction or Permitted Warrant Transaction, or (iii) the withholding of shares of common stock upon the vesting of performance stock units and restricted stock units issued to the Borrower's employees under the Borrower's equity incentive plan upon vesting of such stock units.

Notwithstanding the foregoing, Borrower may repurchase, exchange or induce the conversion of Permitted Convertible Debt by delivery of shares of Borrower's common stock and/or a different series of Permitted Convertible Debt and/or by payment of cash (in an amount that does not exceed the proceeds received by Borrower from the substantially concurrent issuance of shares of Borrower's common stock and/or Permitted Convertible Debt plus the net cash proceeds, if any, received by Borrower pursuant to the related exercise or early unwind or termination of the related Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, pursuant to the immediately following proviso); provided that, for the avoidance of doubt, substantially concurrently with, or a commercially reasonable period of time before or after, the related settlement date for the Permitted Convertible Debt that are so repurchased, exchanged

or converted, Borrower may exercise or unwind or terminate early (whether in cash, shares or any combination thereof) the portion of the Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, corresponding to such Permitted Convertible Debt that are so repurchased, exchanged or converted.

7.7 Distributions. Borrower shall not, nor shall it permit any Subsidiary to, (a) repurchase or redeem any class of stock or other Equity Interest other than the repurchases described in clause (c) of the defined term “Permitted Investments”; (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 of Borrower may pay dividends or make distributions to Borrower or a Subsidiary of Borrower; (c) lend money to any employees, officers or directors or guarantee the payment of any such loans granted by a third party in excess of \$500,000 in the aggregate; or (d) waive, release or forgive any Indebtedness owed by any employees, officers or directors in excess of \$500,000 in the aggregate.

Notwithstanding the foregoing, and for the avoidance of doubt, this Section 7.7 shall not prohibit (i) the conversion by holders of (including any cash payment upon conversion), or required payment of any principal or premium on (including, for the avoidance of doubt, in respect of a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower’s common stock) or required payment of any interest with respect to, any Permitted Convertible Debt in each case, in accordance with the terms of the indenture governing such Permitted Convertible Debt, (ii) the entry into (including the payment of premiums in connection therewith) or any required payment with respect to, or required early unwind or settlement of, any Permitted Bond Hedge Transaction or Permitted Warrant Transaction, in each case, in accordance with the terms of the agreement governing such Permitted Bond Hedge Transaction or Permitted Warrant Transaction, or (iii) the withholding of shares of common stock upon the vesting of restricted stock units and performance stock units issued to the Borrower’s employees under the Borrower’s equity incentive plan upon vesting of such stock units and any related cash payments required to be paid to such employees and or any governmental authority on account of Taxes related thereto, in each case in the ordinary course of business of the Borrower.

Notwithstanding the foregoing, Borrower may repurchase, exchange or induce the conversion of Permitted Convertible Debt by delivery of shares of Borrower’s common stock and/or a different series of Permitted Convertible Debt and/or by payment of cash (in an amount that does not exceed the proceeds received by Borrower from the substantially concurrent issuance of shares of Borrower’s common stock and/or Refinancing Convertible Notes plus the net cash proceeds, if any, received by Borrower pursuant to the related exercise or early unwind or termination of the related Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, pursuant to the immediately following proviso); provided that, for the avoidance of doubt, substantially concurrently with, or a commercially reasonable period of time before or after, the related settlement date for the Permitted Convertible Debt that are so repurchased, exchanged or converted, Borrower may exercise or unwind or terminate early (whether in cash, shares or any combination thereof) the portion of the Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, corresponding to such Permitted Convertible Debt that are so repurchased, exchanged or converted.

7.8 Transfers. Except for Permitted Transfers, Borrower shall not, and shall not permit 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.

7.9 Mergers or Acquisitions. Borrower shall not merge or consolidate, nor 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 Loan Party into another Subsidiary or into a Loan Party,

or (b) a Loan Party into another Loan Party (provided that Borrower shall be the surviving entity in any transaction involving Borrower), or acquire, or permit any of its Subsidiaries to acquire, in each case including for the avoidance of doubt through a merger, purchase, in-licensing arrangement or any similar transaction, all or substantially all of the capital stock or property of another Person, provided, however, that Borrower shall be permitted to enter into Permitted Acquisitions.

7.10 Taxes. Borrower shall, and shall cause each of its Subsidiaries to, pay when due all material Taxes of any nature whatsoever now or hereafter imposed or assessed against Borrower or such Subsidiary or the Collateral or upon Borrower's (or such Subsidiary's) ownership, possession, use, operation or disposition thereof or upon Borrower's (or such Subsidiary's) rents, receipts or earnings arising therefrom. Borrower shall, and shall cause each of its Subsidiaries to file on or before the due date therefor (taking into account proper extensions) all federal and state income Tax returns and other material Tax returns required to be filed, which Tax returns shall be accurate in all material respects. Notwithstanding the foregoing, Borrower and its Subsidiaries may contest, in good faith and by appropriate proceedings diligently conducted, Taxes for which Borrower and its Subsidiaries maintain adequate reserves in accordance with GAAP.

7.11 Certain Changes. Neither Borrower nor any Subsidiary shall change its jurisdiction of organization, organizational form or legal name 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 Subsidiary shall relocate any item of Collateral (other than (x) sales of Inventory in the ordinary course of business, (y) relocations of Equipment within the United States having an aggregate value of up to \$250,000 in any fiscal year, and (z) relocations of Collateral from a location described on Exhibit B to another location described on Exhibit B) 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 or landlord, it has used commercially reasonable efforts to deliver a bailee agreement or landlord letter, as applicable, in form and substance reasonably acceptable to Agent.

7.12 Deposit Accounts. Other than Excluded Accounts, neither Borrower nor any Subsidiary (other than an Excluded Subsidiary) shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Agent has an Account Control Agreement. Borrower shall endeavor to utilize, and shall cause each of its Subsidiaries to endeavor to utilize, SVB for any Bank Services or any other services ancillary or related thereto required by Borrower or its Subsidiaries. In addition to the foregoing, Borrower and any Subsidiary of Borrower shall maintain at least one operating Deposit Account with SVB.

7.13 Joinder of Subsidiaries; Limitation on Foreign Subsidiaries. Borrower shall notify Agent of each Subsidiary formed or acquired subsequent to the Closing Date and, within thirty (30) days of such formation or acquisition, shall cause any such Domestic Subsidiary (other than an Excluded Subsidiary) to execute and deliver to Agent a Joinder Agreement, or, if requested by Agent, a Guaranty and appropriate collateral security documents to secure the obligations pursuant to such Guaranty. Borrower shall not permit Foreign Subsidiaries to maintain Cash balances in excess of \$250,000 at any time.

7.14 Regulatory and Product Notices. The Borrower shall promptly (but in any event within five (5) Business Days) after the receipt or occurrence thereof notify Agent of:

(a) any written notice received by Borrower or its Subsidiaries from a governmental authority alleging potential or actual violations of any FDA Laws or Federal Health Care Program Laws by Borrower or its Subsidiaries;

(b) any written notice that the FDA (or international equivalent) is limiting, suspending or revoking any Registrations (including, but not limited to, the issuance of a clinical hold);

(c) any written notice that Borrower or its Subsidiaries has become subject to any Regulatory Action;

(d) the exclusion or debarment from any governmental healthcare program or debarment or disqualification by FDA (or international equivalent) of Borrower or its Subsidiaries;

(e) any written notice that any product of Borrower or its Subsidiaries has been seized, withdrawn, recalled, detained, or subject to a suspension of manufacturing, or the commencement of any proceedings in the United States or any other jurisdiction seeking the withdrawal, recall, suspension, import detention, or seizure of any Borrower Product are pending or threatened in writing against Borrower or its Subsidiaries; or

(f) narrowing or otherwise limiting the scope of marketing authorization or the labeling of the products of Borrower and its Subsidiaries under any such Registration;

except, in each case of (a) through (f) above, where such action would not reasonably be expected to have, either individually or in the aggregate, any Material Regulatory Liabilities.

7.15 Notification of Event of Default. Borrower shall notify Agent promptly, in any event within three (3) Business Days, of the occurrence of any Event of Default.

7.16 SBA Addendum. One or more affiliates of Agent have received a license from the U.S. Small Business Administration ("SBA") to extend loans as a small business investment company ("SBIC") pursuant to the Small Business Investment Act of 1958, as amended, and the associated regulations (collectively, the "SBIC Act"). Portions of the Loan to Borrower may be made by a Lender that is an SBIC. Addendum 2 to this Agreement outlines various responsibilities of Agent, each Lender and Borrower associated with a loan made by an SBIC, and such Addendum 2 is hereby incorporated in this Agreement.

7.17 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 business purposes. The proceeds of the Loans shall not be used in violation of Anti-Corruption Laws or applicable Sanctions.

7.18 Material Agreement. Borrower shall give prompt written notice to Agent of entering into a Material Agreement or materially amending or terminating a Material Agreement.

7.19 Compliance with Laws.

(a) Borrower shall maintain, and shall cause each of its Subsidiaries to maintain compliance in all material respects with all applicable laws, rules or regulations, and shall, or cause its Subsidiaries to, obtain and maintain all required Registrations reasonably necessary in connection with the conduct of Borrower's business. Borrower shall not become an "investment company" or a company controlled by an "investment company," under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation X, T and U of the Federal Reserve Board of Governors).

(b) Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any controlled 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 any controlled 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.

(c) Borrower has implemented and shall maintain in effect policies and procedures designed to reasonably ensure compliance by Borrower and its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws and applicable Sanctions, and Borrower and its Subsidiaries and their respective officers and employees and to the knowledge Borrower, its directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects

(d) Neither Borrower nor its Subsidiaries nor any of their respective directors, officers or employees, or to the knowledge of Borrower, any agent for Borrower or any of its Subsidiaries that shall 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 shall violate Anti-Corruption Laws or applicable Sanctions.

7.20 Financial Covenants.

(a) Minimum Cash.

(i) Beginning on April 1, 2023, and at all times thereafter so long as Borrower's Market Capitalization is no greater than \$400,000,000, Borrower shall maintain Qualified Cash in an amount greater than or equal to the product of (x) the then-outstanding principal amount of the Term Loan Advances, *multiplied by* (y) (i) prior to the Performance Milestone IV Date, 0.55 and (ii) at all times after the Performance Milestone IV Date, 0.45.

(ii) If Borrower makes a redemption or any other cash payment in respect of Permitted Convertible Debt, subject to satisfaction of the Redemption Conditions, Borrower shall, at all times thereafter, maintain Qualified Cash in the amount required by the defined term "Redemption Conditions."

7.21 Intellectual Property. Borrower shall (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; and (iii) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Agent's written consent.

7.22 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) any equity investments in Borrower by existing investors of Borrower not constituting a Change of Control, or Subordinated Indebtedness, (b) any compensation, director indemnification or similar arrangements in the ordinary course of business of Borrower and as approved by Borrower's Board, (c) any intercompany arrangements entered into in the ordinary course of business and not prohibited hereunder, or (d) any transaction otherwise permitted under this Section 7.

SECTION 8

RIGHT TO INVEST

8.1 Right to Invest. Borrower shall use commercially reasonable efforts to provide the Lenders or their permitted assignees or nominees, designated as such in writing to Borrower, the opportunity, in their discretion, to participate in each Subsequent Financing in an amount of up to the lesser of (x) an amount equal to 5% of such Subsequent Financing and (y) \$5,000,000, in the aggregate for all Lenders and their permitted assignees or nominees, in such Subsequent Financing on substantially the same terms, conditions and pricing afforded to other investors participating in such Subsequent Financing. If the Lenders (or their permitted assignees or nominees) elect to participate in any Subsequent Financing, the Lenders (or their permitted assignees or nominees, as applicable) participating in such Subsequent Financing agree to become a party to the agreements executed by the other investors participating in such Subsequent Financing, including with respect to obligations of confidentiality or as may otherwise be required by the Securities Act of 1933, as amended, and the rules and regulations promulgated by the Securities and Exchange Commission thereunder. Borrower, or an investment bank or underwriter engaged on Borrower's behalf, shall provide the Lenders or their permitted assignees or nominees at least three (3) Business Days' written notice of any planned Subsequent Financing and the opportunity to exercise the right to invest under this Section 8.1 with respect to any such Subsequent Financing. This Section 8.1, and all rights and obligations hereunder, shall terminate upon the earliest to occur of (a) termination of this Agreement or (b) such time that the Lenders or their permitted assignees or nominees have purchased \$5,000,000 of Borrower's Equity Interests in the aggregate in Subsequent Financings.

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. A Loan Party fails to (a) pay principal or interest on any Loan on its due date or (b) make any payment when due on account of any other Secured Obligations within two (2) Business Days after the applicable due date; provided, however, that in each case 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 Lenders 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. A Loan Party 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 any Loan Party, Agent and Lenders, and (a) with respect to a default under any covenant under this Agreement other than the Sections specifically identified in clause (b) hereof, any other Loan Document or any other agreement between any Loan Party and Agent or Lenders, and such default continues for more than fifteen (15) Business Days after the earlier of the date on which (i) Agent or Lenders has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default (provided that, with respect to a default due to a failure to comply with Section 7.12 with respect to any new account, Borrower shall be deemed to have knowledge of the default as of the time such account is opened) or (b) with respect to a default under any of Sections 4.4, 6, 7.1, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16, 7.17, 7.20, 7.21 and 7.22, 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 purposes of this Section 9.3, the failure to achieve Performance Milestone I, Performance Milestone II, Performance Milestone III or Performance Milestone IV shall not in and of itself constitute a Material Adverse Effect under this Section 9.3; or

9.4 Representations. Any representation or warranty made by any Loan Party in any Loan Document, when taken as a whole, shall have been false or misleading in any material respect when made or when deemed made; or

9.5 Insolvency. Any Loan Party (i) (A) shall make an assignment for the benefit of creditors; or (B) shall be unable to pay its debts as they become due; or (C) shall file a voluntary petition in bankruptcy; or (D) 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 (E) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of any Loan Party or of all or any substantial part (i.e. 33-1/3% or more) of the assets or property of any Loan Party; or (F) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (G) any Loan Party or its directors or a majority of the holders of its Equity Interests shall take any action initiating any of the foregoing actions described in clauses (A) through (F); or (ii) either (A) forty-five (45) days shall have expired after the commencement of an involuntary action against any Loan Party 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 any Loan Party being stayed; or (B) 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 (C) any Loan Party shall file any answer admitting or not contesting the material allegations of a petition filed against such Loan Party in any such proceedings; or (D) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (E) forty-five (45) days shall have expired after the appointment, without the consent or acquiescence of any Loan Party, of any trustee, receiver or liquidator of such Loan Party or of all or any part of the properties of such Loan Party without such appointment being vacated; or

9.6 Attachments; Judgments. Any portion of any Loan Party's assets in aggregate value of \$500,000 or more, 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 \$750,000, or any Loan Party is enjoined or in any way prevented by court order from conducting any part of its business; or

9.7 Other Obligations.

(a) The occurrence of any default under any agreement or obligation of any Loan Party involving any Indebtedness in excess of \$750,000; or

(b) Any early payment is required or unwinding or termination occurs with respect to any Permitted Bond Hedge Transaction and Permitted Warrant Transaction, or any condition giving rise to the foregoing is met, in each case, with respect to which Borrower or its Affiliates is the "defaulting party" under the terms of such Permitted Bond Hedge Transaction or Permitted Warrant Transaction.

SECTION 10 **REMEDIES**

10.1 General. Upon and during the continuance of any one or more Events of Default, Agent, as directed by each Lender in accordance with Addendum 5 or, if such rights and remedies are not addressed in Addendum 5, as directed by 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 (including, without limitation, the Prepayment Charge and the End of Term Charge) shall automatically be accelerated and made due and payable, in each case without any further notice or act). Borrower hereby irrevocably appoints Agent as its lawful attorney-in-fact to: exercisable following the occurrence of an Event of Default, (i) sign Borrower's name on any invoice or bill of lading for any account or drafts against account debtors; (ii) demand, collect, sue, and give releases to any account debtor for monies due, settle and adjust disputes and claims about the accounts directly with account debtors, and compromise, prosecute, or defend any action, claim, case, or proceeding about any Collateral (including filing a claim or voting a claim in any bankruptcy case in Agent's or Borrower's name, as Agent may elect); (iii) make, settle, and adjust all claims under Borrower's insurance policies; (iv) pay, contest or settle any Lien, charge, encumbrance, security interest, or other claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; (v) transfer the Collateral into the name of Agent or a third party as the UCC permits; and (vi) receive, open and dispose of mail addressed to Borrower. Borrower hereby appoints Agent as its lawful attorney-in-fact to sign Borrower's name on any documents necessary to perfect or continue the perfection of Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Secured Obligations have been satisfied in full (and any obligations under Bank Services Agreements that constitute Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement) and the Loan Documents have been terminated. Agent's foregoing appointment as Borrower's attorney in fact, and all of Agent's rights and powers, coupled with an interest, are irrevocable until all Secured Obligations have been fully repaid and performed (and any obligations under Bank Services Agreements that constitute Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement) and the Loan Documents have been terminated. Agent may, and as directed by each Lender in accordance with Addendum 5 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 as directed by each Lender in accordance with Addendum 5 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:

- (a) First, to Agent, in an amount equal to the sum of all fees owing to Agent hereunder;
- (b) Second, to Agent and Lenders in an amount sufficient to pay in full Agent's and Lenders' reasonable and documented costs and professionals' and advisors' fees and expenses as described in Section 11.12;
- (c) Third, to Lenders, ratably, in an amount equal to the sum of all accrued interest owing to the Lenders on the Term Loan Advances hereunder;
- (d) Fourth, to Lenders, ratably, in an amount equal to the sum of the outstanding principal and premium, if any owing to Lenders from Borrower on the Term Loan Advances hereunder;

(e) Fifth, to Lenders and Agent, ratably (in proportion to all remaining Secured Obligations owing to each) in an amount equal to the sum of all other outstanding and unpaid Secured Obligations (including principal, interest, subject to increase in accordance with Section 2.3); and

(f) Finally, after the full and final payment in Cash of all of the Secured Obligations (other than inchoate obligations and any obligations under Bank Services Agreements constituting Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement), 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 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.

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

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 mail 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 Cristy Barnes
400 Hamilton Avenue, Suite 310

Palo Alto, CA 94301
email: legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com;
hballa@htgc.com
Telephone: 650-289-3060

(b) If to Lenders:

HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Cristy Barnes
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com;
hballa@htgc.com
Telephone: 650-289-3060

SILICON VALLEY BANK
505 Howard Street, Floor 3
San Francisco, California 94105
Attn: Peter Sletteland and Reilley May
Email: PSletteland@svb.com, rmay@svb.com

(c) If to Borrower:

Gritstone bio, Inc.
Attention: Celia Economides; Rahsaan Thompson
5959 Horton Street, Suite 300
Emeryville, CA 94608
email: celia@gritstone.com; rthompson@gritstone.com
Telephone: (510) 871-6100

with a copy to
Latham & Watkins LLP
Attention: Brian Cuneo
140 Scott Drive
Menlo Park, CA 94025
Email: Brian.cuneo@lw.com
Telephone: 650-463-3014

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 the proposal letter of Hercules and SVB dated May 28, 2022 and accepted by Borrower on May 28, 2022 and the Non-Disclosure Agreement).

(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 Loan Parties party to the relevant Loan Document may, or, with the written consent of the Required Lenders, Agent and Loan Parties 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 Loan Parties 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 Loan Parties 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 Loan Party 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 the applicable Loan Parties, Lenders, 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 Lenders by this Agreement are solely to protect their rights hereunder and under the other Loan Documents and their interest in the Collateral and shall not impose any duty upon Agent or Lenders to exercise any such powers. No omission or delay by Agent or Lenders at any time to enforce any right or remedy reserved to them, 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 Lenders is entitled, nor shall it in any way affect the right of Agent or Lenders 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, Lenders and Borrower, as applicable, and shall survive the execution and delivery of this Agreement. Sections 6.3, 11.8, 11.9, 11.10, 11.14, 11.15 and 11.17, shall survive the termination of this Agreement.

11.7 Successors and Assigns. 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). No Loan Party shall 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 Lenders may assign, transfer, or endorse its rights hereunder and under the other Loan Documents without prior notice to Borrower, and all of such rights shall inure to the benefit of Agent's and Lenders' successors and assigns; provided that as long as no Event of Default has occurred and is continuing, neither Agent nor any Lenders may assign, transfer or endorse its rights hereunder or under the Loan Documents to any party

that is a direct competitor of Borrower or a distressed debt or vulture fund (as reasonably determined by Agent), it being acknowledged that in all cases, any transfer to a controlled Affiliate of any Lenders or Agent shall be allowed. Notwithstanding the foregoing, (x) in connection with any assignment by a Lender as a result of a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Agent and Lenders may assign, transfer or indorse its rights hereunder and under the other Loan Documents to any Person or party and (y) in connection with a Lender's own financing or securitization transactions, the restrictions set forth herein shall not apply and Agent and Lenders may assign, transfer or indorse its rights hereunder and under the other Loan Documents to any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such assignee as Agent reasonably shall require. Agent, acting solely for this purpose as an agent of Borrower, shall maintain at one of its offices in the United States a register for the recordation of the names and addresses of Lender(s), Term Commitments of, and principal amounts (and stated interest) of the Loans owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and Borrower, Agent and 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 this Agreement. The Register shall be available for inspection by Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

11.8 Participations. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the Loans or other obligations under the Loan Documents (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any participant or any information relating to a participant's interest in any commitments, loans, its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan, letter of credit or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Agent (in its capacity as Agent) shall have no responsibility for maintaining a Participant Register. Borrower agrees that each participant shall be entitled to the benefits of the provisions in Addendum 1 attached hereto (subject to the requirements and limitations therein, including the requirements under Section 7 of Addendum 1 attached hereto (it being understood that the documentation required under Section 7 of Addendum 1 attached hereto shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to Section 11.7; provided that such participant shall not be entitled to receive any greater payment under Addendum 1 attached hereto, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent such entitlement to receive a greater payment results from a change in law that occurs after the participant acquired the applicable participation.

11.9 Governing Law. This Agreement and the other Loan Documents have been negotiated and delivered to Agent and Lenders in the State of California, and shall have been accepted by Agent and Lenders in the State of California. Payment to Agent and Lenders 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.

11.10 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 may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) 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. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

11.11 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 LENDERS 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, LENDERS OR THEIR RESPECTIVE ASSIGNEE OR BY AGENT, LENDERS OR THEIR RESPECTIVE ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Agent, Borrower or any Lenders; Claims that arise out of or are in any way connected to the relationship among Borrower, Agent and Lenders; 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.

11.12 Professional Fees. Borrower promises to pay Agent's and Lenders' reasonable documented out-of-pocket fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable and documented attorneys' fees, UCC searches, filing costs, and other miscellaneous expenses, provided that the Due Diligence Fee shall be applied in its entirety to the Lenders' non-legal transaction costs and due diligence expenses. In addition, Borrower promises to pay any and all reasonable documented out-of-pocket attorneys' and other professionals' fees and expenses incurred by Agent and Lenders 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 Lenders in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

11.13 Confidentiality. Agent and Lenders acknowledge that certain items of Collateral and information provided to Agent and Lenders by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (i) is marked as confidential by Borrower at the time of disclosure, or (ii) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Agent and Lenders 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 Lenders may disclose any such information: (a) to its Affiliates and its partners, lenders, directors, officers, employees, agents, advisors, accountants, counsel, representative and other professional advisors if Agent or Lenders in their reasonable 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 pursuant to similar terms; (b) if such information is generally available to the public or to the extent such information becomes publicly available other than as a result of a breach of this Section or becomes available to Agent or any Lender, or any of their respective Affiliates on a non-confidential basis from a source other than Borrower and not in violation of any confidentiality obligations known to the Agent or such Lender; (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 Lenders and any rating agency; (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 Lenders' counsel; (e) to comply with any legal requirement or law applicable to Agent or Lenders or demanded by any governmental authority; (f) to the extent reasonably necessary in connection with the exercise of, or preparing to exercise, or the enforcement of, or preparing to enforce, any right or remedy under any Loan Document, including Agent's sale, lease, or other disposition of Collateral after default, or any action or proceeding relating to any Loan Document; (g) to any participant or assignee of Agent or Lenders or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee is subject to confidentiality restrictions no less protective than the provisions of this Section 11.13; (h) otherwise to the extent consisting of general portfolio information that does not identify Borrower; (i) to any investor or potential investor (and each of their respective Affiliates or clients) in the Agent or Lender (or each of their respective Affiliates); provided that such investor, potential investor, Affiliate or client is subject to confidentiality obligations with respect to the Confidential Information; or (j) 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 Lenders' obligations under this Section 11.13 shall supersede all of their respective obligations under the Non-Disclosure Agreement.

11.14 Assignment of Rights. Borrower acknowledges and understands that Agent or Lenders 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”). 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, and subject to all obligations (including the obligations set forth under Section 7 of Addendum 1 attached hereto), of Agent and Lenders hereunder with respect to the interest so assigned; but with respect to any such interest not so transferred, Agent and Lenders shall retain all rights, powers and remedies hereby given. No such assignment by Agent or Lenders shall relieve Borrower of any of its obligations hereunder. Lenders agree that in the event of any transfer by it of any promissory notes, it shall endorse thereon a notation as to the portion of the principal of such promissory notes, 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.

11.15 Revival of Secured Obligations; Termination. Other than as set forth in Section 11.6, this Agreement and the other Loan Documents shall terminate on the payment in full in cash of the Secured Obligations (other than any obligations that specifically survive termination). Notwithstanding the preceding sentence, 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 Lenders. 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, Lenders or by any obligee of the Secured Obligations (other than obligations that survive termination), 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 and final payment to Agent or Lenders in cash.

11.16 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.

11.17 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, Lenders and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents shall be personal and solely among Agent, Lenders and the Loan Parties which are a party thereto.

11.18 Agency. Agent and each Lender hereby agree to the terms and conditions set forth on Addendum 3 attached hereto. Borrower acknowledges and agrees to the terms and conditions set forth on Addendum 3 attached hereto.

11.19 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, 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 11.13.

11.20 Multiple Borrowers. If another party is joined as a Borrower hereunder after the Closing Date, each Borrower hereby agrees to the terms and conditions set forth on Addendum 4 attached hereto.

11.21 Electronic Execution of Certain Other Documents. The words "execution," "execute," "signed," "signature," and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including without limitation assignments, assumptions, amendments, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the California Uniform Electronic Transaction Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

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IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

BORROWER:

GRITSTONE BIO, INC.

Signature:

DocuSigned by:

SFAU4896CC440A...

Print Name:

Andrew Allen

Title:

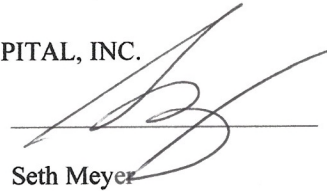
President and Chief Executive
Officer

IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

AGENT:

HERCULES CAPITAL, INC.

Signature:

A handwritten signature in black ink, appearing to be 'Seth Meyer', written over a horizontal line.

Print Name:

Seth Meyer

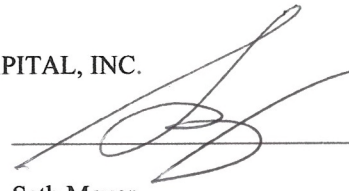
Title:

Chief Financial Officer

LENDERS:

HERCULES CAPITAL, INC.

Signature:

A handwritten signature in black ink, appearing to be 'Seth Meyer', written over a horizontal line.

Print Name:

Seth Meyer

Title:

Chief Financial Officer

IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

LENDER:

SILICON VALLEY BANK.

Signature:

DocuSigned by:

Peter A. Sletteland

E7A426F14025440...

Print Name:

Peter A. Sletteland

Title:

Vice President

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

Table of Addenda, Exhibits and Schedules

Addendum 1:	Taxes; Increased Costs
Addendum 2:	SBA Provisions
Addendum 3:	Agent and Lender Terms
Addendum 4:	Multiple Borrower Terms
Addendum 5:	Intercreditor Provisions
Exhibit A:	Advance Request Attachment to Advance Request
Exhibit B:	Name, Locations, and Other Information
Exhibit C:	Patents, Trademarks, Copyrights and Licenses
Exhibit D:	Deposit Accounts and Investment Accounts
Exhibit E:	Compliance Certificate
Exhibit F:	Joinder Agreement
Exhibit G:	ACH Debit Authorization Agreement
Exhibit H--1:	Form of U.S. Tax Compliance Certificate (For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)
Exhibit H--2:	Form of U.S. Tax Compliance Certificate (For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)
Exhibit H--3:	Form of U.S. Tax Compliance Certificate (For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)
Exhibit H--4:	Form of U.S. Tax Compliance Certificate (For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)
Schedule 1.1(a)	Commitments
Schedule 1A	Existing Indebtedness
Schedule 1B	Existing Investments
Schedule 1C	Existing Liens
Schedule 5.8	Tax Matters
Schedule 5.9	Intellectual Property Claims
Schedule 5.10(a)	Current Company IP
Schedule 5.10(d)	Matters Relating to current Material Agreements
Schedule 5.10(f)	Enforceability, Entitlement and Exploitation of Current Company IP
Schedule 5.10(i)	Claims of Infringement on Third Party IP By Current Company IP
Schedule 5.10(k)	Obligations Relating to Company IP
Schedule 5.10(l)	Third Party Infringements of Company IP
Schedule 5.10(o)	Intellectual Property
Schedule 5.11	Borrower Products
Schedule 5.14	Subsidiaries

ADDENDUM 1 to LOAN AND SECURITY AGREEMENT

TAXES; INCREASED COSTS

1. **Defined Terms.** For purposes of this Addendum 1:

- a. **“Connection Income Taxes”** means Other Connection Taxes that are imposed on or measured by net income (however denominated) or that are franchise Taxes or branch profits Taxes.
- b. **“Excluded Taxes”** means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes, (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan or Term Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in the Loan or Term Commitment or (B) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2 or Section 4 of this Addendum 1, amounts with respect to such Taxes were payable either to such Lender’s assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (iii) Taxes attributable to such Recipient’s failure to comply with Section 7 of this Addendum 1 and (iv) any withholding Taxes imposed under FATCA.
- c. **“FATCA”** means Sections 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, any agreements entered into pursuant to Section 1471(b)(1) of the Code, and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among governmental authorities and implementing such Sections of the Code.
- d. **“Foreign Lender”** means a Lender that is not a U.S. Person.
- e. **“Indemnified Taxes”** means (i) 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 (ii) to the extent not otherwise described in clause (i), Other Taxes.
- f. **“Other Connection Taxes”** means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document).
- g. **“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.

- h. **“Recipient”** means Agent or any Lender, as applicable.
 - i. **“Withholding Agent”** means Borrower and Agent.
- 2. **Payments Free of Taxes.** 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 (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the 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 2 or Section 4 of this Addendum 1) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.
- 3. **Payment of Other Taxes by Borrower.** Borrower shall timely pay to the relevant governmental authority in accordance with applicable law, or at the option of Agent timely reimburse it for the payment of, any Other Taxes.
- 4. **Indemnification by Borrower.** Borrower shall indemnify each Recipient, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under Section 2 of this Addendum 1 or this Section 4) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant governmental authority. A certificate as to the amount of such payment or liability delivered to Borrower by a Lender (with a copy to Agent), or by Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error. In addition, Borrower agrees to pay, and to save Agent and any 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 such Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement.
- 5. **Indemnification by Lenders.** Each Lender shall severally indemnify Agent, within 10 days after demand therefor, for any Indemnified Taxes attributable to such Lender (but only to the extent that Borrower has not already indemnified Agent for such Indemnified Taxes and without limiting the obligation of Borrower to do so), that are payable or paid by Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant governmental authority. A certificate as to the amount of such payment or liability delivered to any Lender by Agent shall be conclusive absent manifest error. Each Lender hereby authorizes Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by Agent to Lender from any other source against any amount due to Agent under this Section 5.

6. **Evidence of Payments.** As soon as practicable after any payment of Taxes by Borrower to a governmental authority pursuant to the provisions of this Addendum 1, Borrower shall deliver to Agent the original or a certified copy of a receipt issued by such governmental authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Agent.
7. **Status of Lenders.**
- a. 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, any 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 or Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 7(b)(i), 7(b)(ii) and 7(b)(iv) of this Addendum 1) shall not be required if in Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.
 - b. Without limiting the generality of the foregoing, in the event that Borrower is a U.S. Person,
 - i. any Lender that is a U.S. Person shall deliver to Borrower and Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;
 - ii. any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), whichever of the following is applicable:
 - A. in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;
 - B. executed copies of IRS Form W-8ECI;

- C. in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit H-1 to the effect that such Foreign Lender is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, a “10 percent shareholder” of Borrower within the meaning of Section 871(h)(3)(B) of the Code, or a “controlled foreign corporation” related to Borrower as described in Section 881(c)(3)(C) of the Code (a “**U.S. Tax Compliance Certificate**”) and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E; or
 - D. to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit H-2 or Exhibit H-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit H-4 on behalf of each such direct and indirect partner;
 - iii. any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit Borrower or Agent to determine the withholding or deduction required to be made; and
 - iv. if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such 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 their obligations under FATCA and to determine that such Lender has complied with such Lender’s obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (iv), “FATCA” shall include any amendments made to FATCA after the date of this Agreement.
 - c. Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrower and Agent in writing of its legal inability to do so.
8. **Treatment of Certain Refunds.** If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to the

provisions of this Addendum 1 (including by the payment of additional amounts pursuant to the provisions of this Addendum 1), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under the provisions of this Addendum 1 with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant governmental authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this Section 8 (plus any penalties, interest or other charges imposed by the relevant governmental authority) in the event that such indemnified party is required to repay such refund to such governmental authority. Notwithstanding anything to the contrary in this Section 8, in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this Section 8 the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This Section 8 shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

9. **Increased Costs.** If any change in applicable law shall subject any Recipient to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (ii) through (iv) of the definition of Excluded Taxes and (C) Connection Income Taxes) on its loans, loan principal, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, and the result shall be to increase the cost to such Recipient of making, converting to, continuing or maintaining any Term Loan Advance or of maintaining its obligation to make any such Loan, or to reduce the amount of any sum received or receivable by such Recipient (whether of principal, interest or any other amount), then, upon the request of such Recipient, Borrower will pay to such Recipient such additional amount or amounts as will compensate such Recipient for such additional costs incurred or reduction suffered.
10. **Survival.** Each party's obligations under the provisions of this Addendum 1 shall survive the resignation or replacement of Agent or any assignment of rights by, or the replacement of, a Lender, the termination of the Term Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

ADDENDUM 2 to LOAN AND SECURITY AGREEMENT

1. **Borrower's Business.** For purposes of this Addendum 2, Borrower shall be deemed to include its "affiliates" as defined in Title 13 Code of Federal Regulations Section 121.103. Borrower represents and warrants to Agent and Lenders as of the SBA Funding Date and covenants to Agent and Lenders for a period of one year after the SBA Funding Date or for such longer period as set forth below with respect to subsections 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7 below, as follows:
 - a. Size Status. Borrower's primary NAICS code is 541714 and has less than 250 employees in the aggregate;
 - b. No Relender. Borrower's primary business activity does not involve, directly or indirectly, providing funds to others, purchasing debt obligations, factoring, or long-term leasing of equipment with no provision for maintenance or repair;
 - c. No Passive Business. Borrower is engaged in a regular and continuous business operation (excluding the mere receipt of payments such as dividends, rents, lease payments, or royalties). Borrower's employees are carrying on the majority of day to day operations. Borrower will not pass through substantially all of the proceeds of the Loan to another entity;
 - d. No Real Estate Business. Borrower is not classified under North American Industry Classification System (NAICS) codes 531110 (lessors of residential buildings and dwellings), 531120 (lessors of nonresidential buildings except miniwarehouses), 531190 (lessors of other real estate property), 237210 (land subdivision), or 236117 (new housing for-sale builders). Borrower is not classified under NAICS codes 236118 (residential remodelers), 236210 (industrial building construction), or 236220 (commercial and institutional building construction), if Borrower is primarily engaged in construction or renovation of properties on its own account rather than as a hired contractor. Borrower is not classified under NAICS codes 531210 (offices of real estate agents and brokers), 531311 (residential property managers), 531312 (nonresidential property managers), 531320 (offices of real estate appraisers), or 531390 (other activities related to real estate), unless it derives at least 80 percent of its revenue from non-Affiliate sources. The proceeds of the Loan will not be used to acquire or refinance real property unless Borrower (x) is acquiring an existing property and will use at least 51 percent of the usable square footage for its business purposes; (y) is building or renovating a building and will use at least 67 percent of the usable square footage for its business purposes; or (z) occupies the subject property and uses at least 67 percent of the usable square footage for its business purposes.
 - e. No Project Finance. Borrower's assets are not intended to be reduced or consumed, generally without replacement, as the life of its business progresses, and the nature of Borrower's business does not require that a stream of cash payments be made to the business's financing sources, on a basis associated with the continuing sale of assets (e.g., real estate development projects and oil and gas wells). The primary purpose of the Loan is not to fund production of a single item or defined limited number of items, generally over a defined production period, where such production will constitute the majority of the activities of Borrower (e.g., motion pictures and electric generating plants).
 - f. No Farm Land Purchases. Borrower will not use the proceeds of the Loan to acquire farm land which is or is intended to be used for agricultural or forestry purposes, such as the production of food, fiber, or wood, or is so taxed or zoned.

- g. **No Foreign Investment.** The proceeds of the Loan will not be used substantially for a foreign operation. Borrower will not have, on or within one year after the SBA Funding Date and each other Loan provided by a Lender that is an SBIC more than 49 percent of its employees or tangible assets located outside the United States of America.
2. **Small Business Administration Documentation.** Agent and Lenders acknowledge that Borrower completed, executed and delivered to Agent prior to the SBA Funding Date SBA Forms 480, 652 and 1031 (Parts A and B) together with a business plan showing Borrower's financial projections (including balance sheets and income and cash flows statements) for the period described therein and a written statement (whether included in the purchase agreement or pursuant to a separate statement) from Agent regarding its intended use of proceeds from the sale of securities to Lenders (the "Use of Proceeds Statement"). Borrower represents and warrants to Agent and Lenders that the information regarding Borrower and its affiliates set forth in the SBA Form 480, Form 652 and Form 1031 and the Use of Proceeds Statement delivered as of the SBA Funding Date is accurate and complete.
3. **Inspection.** The following covenants contained in this Section 3 are intended to supplement and not to restrict the related provisions of the Loan Documents. Subject to the preceding sentence, Borrower will permit, for so long as Lenders hold any debt or equity securities of Borrower, Agent, Lenders or their representative, at Agent's or Lenders' expense, and examiners of the SBA to visit and inspect the properties and assets of Borrower, to examine its books of account and records, and to discuss Borrower's affairs, finances and accounts with Borrower's officers, senior management and accountants, all at such reasonable times as may be requested by Agent or Lenders or the SBA.
4. **Annual Assessment.** Upon request of Agent or Lender, promptly after the end of each calendar year (but in any event prior to February 28 of each year) and at such other times as may be reasonably requested by Agent or Lenders, Borrower will deliver to Agent a written assessment of the economic impact of Lenders' investment in Borrower, specifying the full-time equivalent jobs created or retained in connection with the investment, the impact of the investment on the businesses of Borrower in terms of expanded revenue and taxes, other economic benefits resulting from the investment (such as technology development or commercialization, minority business development, or expansion of exports) and such other information as may be required regarding Borrower in connection with the filing of Lenders' SBA Form 468. Lenders will assist Borrower with preparing such assessment. In addition to any other rights granted hereunder, Borrower will grant Agent and Lenders and the SBA access to Borrower's books and records for the purpose of verifying the use of such proceeds. Borrower also will furnish or cause to be furnished to Agent and Lenders such other information regarding the business, affairs and condition of Borrower as Agent or Lenders may from time to time reasonably request, and such information shall be certified by the President, Chief Executive Officer or Chief Financial Officer of Borrower to the extent requested by Agent or Lender for compliance with the SBIC Act.
5. **Use of Proceeds.** Borrower will use the proceeds from the Loan only for purposes set forth in Section 7.17. Borrower will deliver to Agent from time to time promptly following Agent's request, a written report, certified as correct by Borrower's Chief Financial Officer, verifying the purposes and amounts for which proceeds from the Loan have been disbursed. Borrower will supply to Agent such additional information and documents as Agent reasonably requests with respect to its use of proceeds and will, to the extent required by Section 7.2, permit Agent and Lenders and the SBA to have access to any and all Borrower records and information and personnel as Agent deems necessary to verify how such proceeds have been or are being used, and to assure that the proceeds have been used for the purposes specified in Section 7.17.

6. **Activities and Proceeds.** Neither Borrower nor any of its affiliates (if any) will engage in any activities or use directly or indirectly the proceeds from the Loan for any purpose for which a small business investment company is prohibited from providing funds by the SBIC Act, including 13 C.F.R. §107.720. Borrower shall not, nor shall it cause or permit any of its subsidiaries to, without obtaining the prior written approval of Agent, change Borrower's or any such subsidiary's business activities from that conducted on the date hereof to a business activity from which a small business investment company is prohibited from providing funds by the SBIC Act. Borrower agrees that any such change in its or any such subsidiary's business activities without such prior written consent of Agent shall constitute a material breach of the obligations of Borrower under this Addendum 1.
7. **Redemption Provisions.** Notwithstanding any provision to the contrary contained in the Certificate of Incorporation of Borrower, as amended from time to time (the "Charter"), if, pursuant to the redemption provisions contained in the Charter, Lenders are entitled to a redemption of any warrant issued by Borrower, such redemption (in the case of Lenders) will be at a price equal to the redemption price set forth in the Charter (the "Existing Redemption Price"). If, however, Lenders deliver written notice to Borrower that the then current regulations promulgated under the SBIC Act prohibit payment of the Existing Redemption Price in the case of an SBIC (or, if applied, the Existing Redemption Price would cause any series of preferred stock to lose its classification as an "equity security" and Lenders have determined that such classification is unadvisable), the amount Lenders will be entitled to receive shall be the greater of (i) fair market value of the securities being redeemed taking into account the rights and preferences of such securities plus any costs and expenses of Lenders incurred in making or maintaining such warrant, and (ii) the Existing Redemption Price where the amount of accrued but unpaid dividends payable to Lenders is limited to Borrower's earnings plus any costs and expenses of Lenders incurred in making or maintaining such warrant; provided, however, the amount calculated in subsections (i) or (ii) above shall not exceed the Existing Redemption Price.
8. **Compliance and Resolution.** Borrower agrees that a failure to comply with Borrower's obligations under this Addendum, or any other set of facts or circumstances where it has been asserted by any governmental regulatory agency (or Agent or Lenders believe that there is a substantial risk of such assertion) that Agent, Lenders and their affiliates are not entitled to hold, or exercise any significant right with respect to, any securities issued to Lenders by Borrower, will constitute a breach of the obligations of Borrower under the financing agreements among Borrower, Agent and Lenders. In the event of (i) a failure to comply with Borrower's obligations under this Addendum; or (ii) an assertion by any governmental regulatory agency (or Agent or Lenders believe that there is a substantial risk of such assertion) of a failure to comply with Borrower's obligations under this Addendum, then (y) Agent, Lenders and Borrower will meet and resolve any such issue in good faith to the satisfaction of Borrower, Agent, Lenders, and any governmental regulatory agency, and (z) upon request of Lenders or Agent, Borrower will cooperate and assist with any assignment of the financing agreements among any Lender and Hercules Capital, Inc.

ADDENDUM 3 to LOAN AND SECURITY AGREEMENT

Agent and Lender Terms

(a) Each Lender hereby irrevocably appoints Hercules Capital, Inc. to act on its behalf as the Agent hereunder and under the other Loan Documents and irrevocably authorizes the Agent to take such actions on its behalf and to exercise such powers as are delegated to the Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. Agent shall have only those duties which are specified in this Agreement and it may perform such duties by or through its agents, representatives or employees. In performing its duties on behalf of Lenders, Agent shall exercise the same care which it would exercise in dealing with loans made for its own account, but it shall not be responsible to any Lender for the execution, effectiveness, genuineness, validity, enforceability, collectability or sufficiency of all or any of the Loan Documents, or for any representations, warranties, recitals or statements made therein or made in any written or oral statement or in any financial or other statements, instruments, reports, certificates or any other documents furnished or delivered in connection herewith or therewith by Agent to any Lender or by or on behalf of Borrower to Agent or any Lender, or be required to ascertain or inquire as to the performance or observance of any of the terms, conditions, provisions, covenants or agreements contained herein or therein, as to the use of the proceeds of the Term Loan Advances, the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or 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 the Agent. Agent shall not be responsible for insuring the Collateral or for the payment of any taxes, assessments, charges or any other charges or liens of any nature whatsoever upon the Collateral or otherwise for the maintenance of the Collateral, except in the event Agent enters into possession of a part or all of the Collateral, in which event Agent shall preserve the part in its possession. Unless the officers of Agent acting in their capacity as officer of Agent on Borrower's account have actual knowledge thereof or have been notified in writing thereof by Lenders, Agent shall not be required to ascertain or inquire as to the existence or possible existence of any Event of Default.

(b) Neither Agent nor any of its officers, directors, employees, attorneys, representatives or agents shall be liable to Lenders for any action taken or omitted hereunder or under any of the other Loan Documents or in connection herewith or therewith unless caused by its or their gross negligence or willful misconduct. No provision of this Agreement or of any other Loan Document shall be deemed to impose any duty or obligation on Agent to perform any act or to exercise any power in any jurisdiction in which it shall be illegal, or shall be deemed to impose any duty or obligation on Agent to perform any act or exercise any right or power if such performance or exercise (a) would subject Agent to a tax in a jurisdiction where it is not then subject to a tax or (b) would require Agent to qualify to do business in any jurisdiction where it is not so qualified. Without prejudice to the generality of the foregoing, no Lender shall have any right of action whatsoever against Agent as a result of Agent acting or (where so instructed) refraining from acting under this Agreement or under any of the other Loan Documents in accordance with the instructions of the Lenders. Agent shall be entitled to refrain from exercising any power, discretion or authority vested in it under this Agreement unless and until it has obtained the written instructions of the Lenders. The agency hereby created shall in no way impair or affect any of the rights and powers of, or impose any duties or obligations upon Agent in its individual capacity. With respect to its participation in the Loan Agreement hereunder, Agent shall have the same rights and powers hereunder as any other Lender and may exercise the same rights and powers as though it were not performing the duties and functions delegated to it hereunder and the term "Lender" or "Lenders" or any similar term shall unless the context clearly indicates otherwise include Agent in its individual capacity.

(c) 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 this 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 and the other Loan Documents at the request or direction of the Lenders unless Agent shall have been provided by the Lenders with adequate security and indemnity against the costs, expenses and liabilities that may be incurred by it in compliance with such request or direction.

(d) Each Lender agrees to indemnify the 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 percentages (based upon the total outstanding Term Commitments) in effect on the date on which indemnification is sought under this Addendum 3, 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 the 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 the 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.

(e) To the extent not reimbursed either by Borrower or from the application of Collateral proceeds pursuant to Section 10.2, a Lender (the "Indemnified Lender") shall be indemnified by the other Lender (an "Indemnifying Lender"), on a several basis in proportion to each Lender's pro rata portion of the Term Commitment, and each Indemnifying Lender agrees to reimburse the Indemnified Lender for the Indemnifying Lender's pro rata share of the following items (an "Indemnified Payment"):

(i) all reasonable out-of-pocket costs and expenses of the Indemnified Lender incurred by the Indemnified Lender in connection with the discharge of its activities under this Agreement or the Loan Agreement, including reasonable legal expenses and attorneys' fees; provided, that the Indemnified Lender shall consult with the other Lender regarding the incurrence of such costs and expenses at reasonable intervals (but not more often than monthly) and any such reasonable costs and expenses shall be "Claims" hereunder notwithstanding any disagreement by the other Lender as to their incurrence; and

(ii) from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever, which may be imposed on, incurred by or asserted against the Indemnified Lender in any way relating to or arising out of this Agreement, or any action taken or omitted by the Indemnified Lender hereunder; provided that the Indemnifying Lender shall not be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements, if the same results from the Indemnified Lender's gross negligence or willful misconduct or from undertaking Enforcement Actions in violation of clause (d) of Addendum 5;

(iii) provided, however, that the Indemnified Lender shall not be reimbursed or indemnified for an Indemnified Payment, except to the extent that the Indemnified Lender paid more

than its ratable share of such payment. All Indemnified Payments (as set forth in this paragraph c) to an Indemnified Lender are intended to be paid ratably by the other Lender.

(f) **Agent in Its Individual Capacity.** The Person serving as the 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 the 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.

(g) **Exculpatory Provisions.** The 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, the 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 the Agent is required to exercise as directed in writing by the Lenders, provided that the Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the 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 the Agent shall not be liable for the failure to disclose, any information relating to the Borrower or any of its Affiliates that is communicated to or obtained by any Person serving as the Agent or any of its Affiliates in any capacity.

(h) In connection with any exercise of Enforcement Actions hereunder, neither any Agent nor any Lender or any of its partners, or any of their respective directors, officers, employees, attorneys, accountants, or agents shall be liable as such for any action taken or omitted by it or them, except for its or their own gross negligence or willful misconduct with respect to its duties under this Agreement.

(i) Each Lender and Agent may execute any of its powers and perform any duties hereunder either directly or by or through agents or attorneys-in-fact. Each Lender and Agent shall be entitled to advice of counsel concerning all matters pertaining to such powers and duties. No Lender or Agent shall be responsible for the negligence or misconduct of any agents or attorneys-in-fact selected by it, if the selection of such agents or attorneys-in-fact was done without gross negligence or willful misconduct.

(j) Each Lender agrees that it will make its own independent investigation of the financial condition and affairs of Borrower in connection with the making of Term Loan Advances pursuant to the Loan Agreement and has made and shall continue to make its own appraisal of the creditworthiness of Borrower. Neither the Agent nor any Lender shall have any duty or responsibility either initially or on a continuing basis to make any such investigation or any such appraisal on behalf of all Lenders or to provide the other Lenders with any credit or other information with respect thereto whether coming into its possession before the date hereof or any time or times thereafter and shall further have no responsibility with respect to the accuracy of or the completeness of the information provided to the Lenders by Borrower.

ADDENDUM 4 to LOAN AND SECURITY AGREEMENT

Multiple Borrower Terms

(a) *Borrower's Agent.* Each of Borrowers hereby irrevocably appoints Gritstone bio, Inc. as its agent, attorney-in-fact and legal representative for all purposes, including requesting disbursement of the Loan and receiving account statements and other notices and communications to Borrowers (or any of them) from Agent or any Lender. Agent may rely, and shall be fully protected in relying, on any request for the Term Loan Advances, disbursement instruction, report, information or any other notice or communication made or given by Gritstone bio, Inc., whether in its own name or on behalf of one or more of the other Borrowers, and Agent shall not have any obligation to make any inquiry or request any confirmation from or on behalf of any other Borrower as to the binding effect on it of any such request, instruction, report, information, other notice or communication, nor shall the joint and several character of Borrowers' obligations hereunder be affected thereby.

(b) *Waivers.* Each Borrower hereby waives: (i) any right to require Agent to institute suit against, or to exhaust its rights and remedies against, any other Borrower or any other person, or to proceed against any property of any kind which secures all or any part of the Secured Obligations, or to exercise any right of offset or other right with respect to any reserves, credits or deposit accounts held by or maintained with Agent or any Indebtedness of Agent or any Lender to any other Borrower, or to exercise any other right or power, or pursue any other remedy Agent or any Lender may have; (ii) any defense arising by reason of any disability or other defense of any other Borrower or any guarantor or any endorser, co-maker or other person, or by reason of the cessation from any cause whatsoever of any liability of any other Borrower or any guarantor or any endorser, co-maker or other person, with respect to all or any part of the Secured Obligations, or by reason of any act or omission of Agent or others which directly or indirectly results in the discharge or release of any other Borrower or any guarantor or any other person or any Secured Obligations or any security therefor, whether by operation of law or otherwise; (iii) any defense arising by reason of any failure of Agent to obtain, perfect, maintain or keep in force any Lien on, any property of any Borrower or any other person; (iv) any defense based upon or arising out of any bankruptcy, insolvency, reorganization, arrangement, readjustment of debt, liquidation or dissolution proceeding commenced by or against any other Borrower or any guarantor or any endorser, co-maker or other person, including without limitation any discharge of, or bar against collecting, any of the Secured Obligations (including without limitation any interest thereon), in or as a result of any such proceeding. Until all of the Secured Obligations have been paid, performed, and discharged in full, nothing shall discharge or satisfy the liability of any Borrower hereunder except the full performance and payment of all of the Secured Obligations. If any claim is ever made upon Agent for repayment or recovery of any amount or amounts received by Agent in payment of or on account of any of the Secured Obligations, because of any claim that any such payment constituted a preferential transfer or fraudulent conveyance, or for any other reason whatsoever, and Agent repays all or part of said amount by reason of any judgment, decree or order of any court or administrative body having jurisdiction over Agent or any of its property, or by reason of any settlement or compromise of any such claim effected by Agent with any such claimant (including without limitation the any other Borrower), then and in any such event, each Borrower agrees that any such judgment, decree, order, settlement and compromise shall be binding upon such Borrower, notwithstanding any revocation or release of this Agreement or the cancellation of any note or other instrument evidencing any of the Secured Obligations, or any release of any of the Secured Obligations, and each Borrower shall be and remain liable to Agent and Lenders under this Agreement for the amount so repaid or recovered, to the same extent as if such amount had never originally been received by Agent or any Lender, and the provisions of this sentence shall survive, and continue in effect, notwithstanding any revocation or release of this Agreement. Each Borrower hereby expressly and unconditionally waives all rights of subrogation, reimbursement and indemnity of every kind against any other Borrower, and all rights of recourse to any assets or property of any other Borrower, and all rights to any collateral or security held for the payment

and performance of any Secured Obligations, including (but not limited to) any of the foregoing rights which Borrower may have under any present or future document or agreement with any other Borrower or other person, and including (but not limited to) any of the foregoing rights which any Borrower may have under any equitable doctrine of subrogation, implied contract, or unjust enrichment, or any other equitable or legal doctrine.

(c) *Consents.* Each Borrower hereby consents and agrees that, without notice to or by Borrower and without affecting or impairing in any way the obligations or liability of Borrower hereunder, Agent may, from time to time before or after revocation of this Agreement, do any one or more of the following in its sole and absolute discretion: (i) accept partial payments of, compromise or settle, renew, extend the time for the payment, discharge, or performance of, refuse to enforce, and release all or any parties to, any or all of the Secured Obligations; (ii) grant any other indulgence to any Borrower or any other Person in respect of any or all of the Secured Obligations or any other matter; (iii) accept, release, waive, surrender, enforce, exchange, modify, impair, or extend the time for the performance, discharge, or payment of, any and all property of any kind securing any or all of the Secured Obligations or any guaranty of any or all of the Secured Obligations, or on which Agent at any time may have a Lien, or refuse to enforce its rights or make any compromise or settlement or agreement therefor in respect of any or all of such property; (iv) substitute or add, or take any action or omit to take any action which results in the release of, any one or more other Borrowers or any endorsers or guarantors of all or any part of the Secured Obligations, including, without limitation one or more parties to this Agreement, regardless of any destruction or impairment of any right of contribution or other right of Borrower; (v) apply any sums received from any other Borrower, any guarantor, endorser, or co-signer, or from the disposition of any Collateral or security, to any Indebtedness whatsoever owing from such person or secured by such Collateral or security, in such manner and order as Agent determines in its sole discretion, and regardless of whether such Indebtedness is part of the Secured Obligations, is secured, or is due and payable. Each Borrower consents and agrees that Agent shall be under no obligation to marshal any assets in favor of Borrower, or against or in payment of any or all of the Secured Obligations. Each Borrower further consents and agrees that Agent shall have no duties or responsibilities whatsoever with respect to any property securing any or all of the Secured Obligations. Without limiting the generality of the foregoing, Agent shall have no obligation to monitor, verify, audit, examine, or obtain or maintain any insurance with respect to, any property securing any or all of the Secured Obligations.

(d) *Independent Liability.* Each Borrower hereby agrees that one or more successive or concurrent actions may be brought hereon against such Borrower, in the same action in which any other Borrower may be sued or in separate actions, as often as deemed advisable by Agent. Each Borrower is fully aware of the financial condition of each other Borrower and is executing and delivering this Agreement based solely upon its own independent investigation of all matters pertinent hereto, and such Borrower is not relying in any manner upon any representation or statement of Agent or any Lender with respect thereto. Each Borrower represents and warrants that it is in a position to obtain, and each Borrower hereby assumes full responsibility for obtaining, any additional information concerning any other Borrower's financial condition and any other matter pertinent hereto as such Borrower may desire, and such Borrower is not relying upon or expecting Agent to furnish to it any information now or hereafter in Agent's possession concerning the same or any other matter.

(e) *Subordination.* All Indebtedness of a Borrower now or hereafter arising held by another Borrower is subordinated to the Secured Obligations and Borrower holding the Indebtedness shall take all actions reasonably requested by Agent to effect, to enforce and to give notice of such subordination.

ADDENDUM 5 to LOAN AND SECURITY AGREEMENT

Intercreditor Provisions

(a) *Limitation of Further Credit Extensions.* After the date hereof, except pursuant to this Agreement and as permitted pursuant, no Lender may make loans to or otherwise extend credit to Borrower (excluding the provision by SVB to Borrower of the Bank Services in an aggregate amount outstanding at any time not to exceed the Bank Services Cap) without notice to and the consent of each other Lender, which consent will not be unreasonably withheld.

(b) *Transfer of Interests.*

(i) No Lender may sell or otherwise transfer any of its interest in this Agreement or the related Loan Documents without the prior written consent of the other Lenders (which consent may, for the avoidance of doubt, be conditioned on such successor or assign entering into an intercreditor agreement satisfactory to such other Lender), except that no such consent shall be required in connection with (a) any sale, assignment or transfer by any Lender of any of its interest in this Agreement and other Loan Documents to any Affiliate of such Lender or (b) a Lender's own financing or securitization transactions, in which case, such Lender may assign, transfer or indorse its rights hereunder and under the other Loan Documents to any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such assignment, transfer or indorsement under this clause (b) shall release such Lender from any of its obligations under this Agreement or under the Loan Documents or substitute any such Person or party for such Lender as a party hereto until Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Person or party as Agent reasonably shall require.

(ii) The transferee shall assume all obligations of the transferring Lender under this Agreement and the other Loan Documents with respect to the portion of the transferor's interest in this Agreement and the other Loan Document transferred, provided, that to the extent the transferor shall not transfer the entirety and shall retain any portion of its interest in this Agreement and the other Loan Documents, the transferor shall retain its obligations under this Agreement and the other Loan Documents with respect to that portion of its interest.

(iii) The transferee shall provide to the other Lender evidence reasonably satisfactory to such Lender that the proposed transferee has the financial ability and legal authority to assume and perform all obligations of the transferring Lender under this Agreement and the other applicable Loan Documents.

(iv) Any sale or transfer of an interest in this Agreement and other applicable Loan Documents shall be voidable at the option of the other Lender unless the provisions of this paragraph (b) are satisfied.

(c) *Possession of Collateral.* If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for the other Lenders for purposes of perfecting Agent's or such other Lenders' security interest therein.

(d) *Decision to Exercise Remedies.* Upon the occurrence of an Event of Default, Agent shall take such actions and only such actions as Lenders mutually agree to take to enforce their rights and

remedies under this Agreement; provided, however, that if after consultation, Lenders cannot mutually agree on what action to take, then either Lender shall have the right upon prior written notice to the other to cause the acceleration of this Agreement on behalf of the Lenders. Upon such acceleration, the Lenders shall mutually agree as to what Enforcement Action to take; provided, however, that if after consultation, Lenders cannot mutually agree on what action to take, then the Lender wishing to take the stronger Enforcement Action (the "Enforcing Lender") shall have the right to determine and shall control the timing, order and type of Enforcement Actions which will be taken and all other matters in connection with any such Enforcement Actions. To facilitate these rights to control Enforcement Actions, upon either Lender becoming the Enforcing Lender, if the Enforcing Lender is not already the Agent, then automatically and without the necessity of any further action being taken by any party, (x) the original Agent shall be deemed to have resigned as Agent and (y) the Lenders shall be deemed to have unanimously appointed the Enforcing Lender as successor Agent under this Agreement and the Loan Documents (and the Enforcing Lender shall be deemed to have accepted such appointment), provided that, once the Enforcing Lender shall have been appointed as the Agent under the provisions of this sentence, the Enforcing Lender as such successor Agent shall no longer be bound by the restrictions of the first sentence of this paragraph, but instead shall have the right to determine and control all Enforcement Actions as provided for in the immediately preceding sentence (subject to the provisions of the following sentence). In taking such Enforcement Actions pursuant to the previous sentence, the Enforcing Lender as such successor Agent shall act reasonably and in good faith and shall consult with and keep the other Lender informed thereof at reasonable intervals; provided, however, that notwithstanding any such consultations and provision of information to the other Lender, the Enforcing Lender as such successor Agent shall retain the right to make all determinations in the event of disagreements between the Enforcing Lender and the other Lender. In all cases with respect to Enforcement Actions, the Enforcing Lender shall have the right to act both on its own behalf and as agent for the other Lender with respect thereto. In addition, the other Lender shall take such actions and execute such documents and instruments as the Enforcing Lender may reasonably request in connection with and to facilitate any such Enforcement Actions and take any other action as the successor Agent requests to perfect or continue Agent's Lien in the Collateral or to effect the purposes of this Agreement and the Loan Documents.

(e) *Insolvency Events.* In the event of any distribution, division, or application, partial or complete, voluntary or involuntary, by operation of law or otherwise, of all or any part of the property of Borrower or the proceeds thereof to the creditors of Borrower, or the readjustment of any Collateral Claims, whether by reason of liquidation, bankruptcy, arrangement, receivership, assignment for the benefit of creditors or any other action or proceeding involving the readjustment of all or any part of any of the Collateral Claims, or the application of the property of Borrower to the payment or liquidation thereof, or upon the dissolution or other winding up of Borrower's business, or upon the sale of all or any substantial part of Borrower's property (any of the foregoing being hereinafter referred to as an "Insolvency Event"), then, and in any such event, and subject to any subordination arrangements to which the Lenders may be subject, (a) all payments and distributions of any kind or character, whether in cash or property or securities in respect of the Lenders' Collateral Claims shall be distributed pursuant to the provisions of Section 10.2 of this Agreement; (b) each Lender shall promptly file a claim or claims, on the form required in such proceeding, for the full outstanding amount of such Lender's Claim, and shall use its best efforts to cause said claim or claims to be approved; (c) each of the Lenders hereby irrevocably agrees that, to the extent that it fails timely to do so, any other Lender may in the name of the first Lender, or otherwise, prove up any and all Collateral Claims of the first Lender relating to the first Lender's Claim; and (d) in the event that, notwithstanding the foregoing, any payment or distribution of any kind or character (other than any payment received by SVB in respect of Bank Services) in respect of a Lender's Collateral Claims, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lender's Collateral Claims.

(f) *Foreclosure.*

(i) Only by mutual agreement shall the Lenders make or cause to be made a credit bid at any foreclosure sale or other sale of any of the Collateral on behalf of the Lenders. If Lenders are the successful bidders at the sale, then (a) the amount to be credited against their respective Collateral Claims shall be allocated pro rata between the Lenders according to the balances of such Collateral Claims, and (b) Lenders shall take title to the Collateral so purchased together, each holding a pro rata undivided interest in such Collateral. The parties shall mutually agree as to the most favorable disposition of any Collateral purchased with any such credit bid.

(ii) No Lender shall make or cause to be made a cash bid at any foreclosure sale or other sale of any of the Collateral without the prior written consent of the other Lender. If a cash bid is made and is successful, then (a) the proceeds of the sale shall be allocated as set forth in Section 10.2 of this Agreement, and (b) the Lender that entered the successful bid shall acquire the Collateral so purchased for its own account, and the other Lender shall have no further interest in that Collateral upon the payment to such other Lender of the shares of the proceeds in accordance with Section 10.2 of this Agreement.

(g) *Relationship of Lenders.* The relationship among the Lenders is, and at all times shall remain solely that of co-lenders. Lenders shall not under any circumstances be construed to be partners or joint venturers of one another; nor shall the Lenders under any circumstances be deemed to be in a relationship of confidence or trust or a fiduciary relationship with one another, or to owe any fiduciary duty to one another. Lenders do not undertake or assume any responsibility or duty to one another to select, review, inspect, supervise, pass judgment upon or otherwise inform each other of any matter in connection with Borrower's property, any Collateral held by any Lender or the operations of Borrower. Each Lender shall rely entirely on its own judgment with respect to such matters, and any review, inspection, supervision, exercise of judgment or supply of information undertaken or assumed by any Lender in connection with such matters is solely for the protection of such Lender.

(h) *Waterfall.* Notwithstanding anything in this Agreement to the contrary, the priorities set forth in Section 10.2 shall not apply to any and/or all of SVB's present and future rights (whether described as rights of setoff, banker's liens, chargeback or otherwise, and whether available to SVB under the law or under any other agreement between SVB and Borrower concerning any account maintained by Borrower with SVB or any of its affiliates ("Account")) with respect to: (i) the face amount of a check, draft, money order, instrument, wire transfer of funds, automated clearing house entry, credit from a merchant card transaction, other electronic transfer of funds or other item (x) deposited in or credited to any Account and returned unpaid or otherwise uncollected or subject to an adjustment entry, whether for insufficient funds or for any other reason and without regard to the timeliness of the return or adjustment or the occurrence or timeliness of any other person's notice of nonpayment or adjustment, (y) subject to a claim against SVB for breach of transfer, presentment, encoding, retention or other warranty under Federal Reserve Regulations or Operating Circulars, clearing house rules, the UCC or other applicable law, or (z) for a merchant card transaction, against which a contractual demand for chargeback has been made; (ii) service charges, fees or expenses payable or reimbursable SVB in connection with any Account or any related services; and (iii) any adjustments or corrections of any posting or encoding errors, for which SVB shall be senior to each other Lender.

(i) *Priority of Bank Services; Cash Collateral.* The parties agree that (x) notwithstanding anything to the contrary contained in this Agreement, SVB's lien on the Collateral shall be senior in priority to the liens of Lenders under the Loan Agreement to the extent of Borrower's reimbursement obligations in respect of Bank Services up to the Bank Services Cap (collectively, the "Reimbursement Obligations"), and (y) SVB may extend credit to Borrower in connection with the provision of Bank Services and take such action as SVB deems necessary to enforce its rights and remedies

(including, without limitation, any Enforcement Action (as defined in Addendum 3) against the Collateral and Borrower) to satisfy the Reimbursement Obligations with respect to Bank Services, all without prior notice to or the consent of Hercules. Notwithstanding the terms of this Agreement to the contrary, any Proceeds of Collection received by Agent or a Lender shall be paid over to SVB to be applied to the Reimbursement Obligations, with any remainder, after satisfaction of the Reimbursement Obligations to SVB, to be distributed to SVB and Hercules in the manner and order set forth in Sections 2.6 and 10.2, as applicable. In addition to the provision of Bank Services by SVB, which may be provided on a cash secured or a non-cash secured basis, the parties acknowledge that Borrower may in the future desire to pledge cash and/or securities in connection with the provision by SVB to Borrower of Bank Services. The parties agree that notwithstanding anything to the contrary contained in this Agreement, Borrower may pledge cash and/or securities in an aggregate amount up to (and without duplication of) the Bank Services Cap to SVB as collateral to secure its obligations to SVB relating to Bank Services (such cash and/or securities and the proceeds thereof (but expressly excluding any other Collateral) being hereinafter referred to as the "Cash Collateral"). Hercules may not foreclose upon, or force SVB to take any actions with respect to, the Cash Collateral notwithstanding anything in this Agreement to the contrary. SVB consents to Borrower's grant to Lenders of liens and security interests against the Cash Collateral, and the parties agree that the Cash Collateral and proceeds thereof shall be distributed to SVB and Hercules, after satisfaction of the Reimbursement Obligations to SVB, in the manner and order set forth in Sections 2.6 and 10.2, as applicable. This clause (i) shall not in any way (a) limit SVB's rights under Section 10.2 or (b) supersede the limitations on Bank Services as set forth in clause (a) of this Addendum.

(j) *Representations and Warranties.*

(i) Hercules represents and warrants that it is a corporation duly existing and in good standing under the laws of Maryland and is qualified and licensed to do business in, and is in good standing in, any state in which the conduct of its business or its ownership of property requires that it be so qualified, except for such states as to which any failure so to qualify would not have a material adverse effect on Hercules. SVB represents and warrants that it is a banking corporation duly existing and in good standing under the laws of California and it is qualified and licensed to do business in, and is in good standing in, any state in which the conduct of its business or its ownership of property requires, that it be so qualified, except for such states as to which any failure so to qualify would not have a material adverse effect on SVB.

(ii) Each Lender represents and warrants that it has all necessary power and authority to execute, deliver and perform this Agreement in accordance with the terms hereof and that it has all requisite power and authority to own and operate its properties and to carry on its business as now conducted.

(k) Each Lender represents and warrants that (a) the execution and delivery of this Agreement and the consummation of the transactions contemplated herein have each been duly authorized by all necessary action on the part of such Lender and (b) this Agreement has been duly executed and delivered and constitutes a legal, valid and binding obligation of such Lender, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws of general application relating to or affecting the enforcement of creditors' rights or by general principles of equity.

EXHIBIT A

ADVANCE REQUEST

To: Agent: _____ Date: _____
 Hercules Capital, Inc. (“Agent”)
 400 Hamilton Avenue, Suite 310
 Palo Alto, CA 94301
 email: legal@htgc.com; cbarnes@htgc.com, bgironda@htgc.com; hbhalla@htgc.com
 Attn: Legal Department; Cristy Barnes

Borrower hereby requests Agent to cause Lenders to make an Advance in the amount of _____ Dollars (\$ _____) on _____, _____ (the “Advance Date”) pursuant to the Loan and Security Agreement among Borrower, Agent and Lenders (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 Loan Documents 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 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 constitutes (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, Lenders may decline to fund the requested Advance.

Borrower hereby represents that Borrower’s jurisdiction of organization, organizational form, legal name and chief executive office location 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 Advance 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.

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This Advance Request is duly executed as of the date set forth above.

GRITSTONE BIO, INC.

SIGNATURE: _____

TITLE: _____

PRINT NAME: _____

ATTACHMENT TO ADVANCE REQUEST¹

Dated: _____

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

Name:

Type of organization:

State of organization:

Organization file number:

Borrower hereby represents and warrants to Agent that the street addresses, cities, states and postal codes of Borrower's current chief executive office locations are as follows:

¹ Complete to the extent there is any update to the information below.

EXHIBIT B
NAME, LOCATIONS, AND OTHER INFORMATION

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

Legal Name:	Gritstone bio, Inc.
Type of organization:	corporation
State of organization:	Delaware
Organization file number:	5786190

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:

Legal Names	Periods of Use
Gritstone bio, Inc.	May 3, 2021 – Present
Gritstone Oncology, Inc.	Formation – May 3, 2021

Borrower's fiscal year ends on: December 31

Borrower's federal employer tax identification number is: 47-4859534

Borrower represents and warrants to Agent that its chief executive office is located at: 5959 Horton St #300, Emeryville, CA 94608

EXHIBIT C

PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES

SEE SCHEDULE 5.10(A)

EXHIBIT D**DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS**

<u>Bank Name</u>	<u>Account Number</u>	<u>Branch Address</u>	<u>Company/ Subsidiary</u>	<u>Purpose of Account</u>
JP Morgan Chase	000000855920182	255 King Street, Suite F, San Francisco, CA 94107	Gritstone bio, Inc.	Checking
JP Morgan Chase	0000003365620326	255 King Street, Suite F, San Francisco, CA 94107	Gritstone bio, Inc.	Savings
JP Morgan Chase	0000003623962959	255 King Street, Suite F, San Francisco, CA 94107	Gritstone bio, Inc.	Savings
US Bank	001050993430	425 Walnut Street, CN-OH- W5IT, Cincinnati, OH, 45202	Gritstone bio, Inc.	Capital Advisors Group Investment Account (Custodian)
US Bank	19-520710	555 Southwest Oak Street, PL-6, Portland, OR, 97204	Gritstone bio, Inc.	Goldman Sachs Asset Management Investment Account (Custodian)
Silicon Valley Bank	3303783437	3003 Tasman Dr, Santa Clara, Ca. 95054	Gritstone bio, Inc.	Checking

EXHIBIT E

COMPLIANCE CERTIFICATE

Hercules Capital, Inc. (as “Agent”)
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com; hbhalla@htgc.com
Attention: Chief Legal Officer and Cristy Barnes

Reference is made to that certain Loan and Security Agreement dated as of July 19, 2022, by and among GRITSTONE BIO, INC., a Delaware corporation, each of its Subsidiaries from time to time party thereto (individually or collectively, as the context may require, “Borrower”), HERCULES CAPITAL, INC., a Maryland corporation (“Hercules”), SILICON VALLEY BANK, a California corporation (“SVB”), the several banks and other financial institutions or entities from time to time party thereto (each, a “Lender,” and collectively, “Lenders”) and Hercules, in its capacity as administrative agent and collateral agent for Lenders (in such capacity “Agent”). All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of Borrower, knowledgeable of all Borrower’s financial matters, and is authorized to provide certification of information regarding Borrower; hereby certifies, in such capacity, that in accordance with the terms and conditions of the Loan Agreement, Borrower 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. Attached are the required documents supporting the above certification. [The undersigned further certifies that no Event of Default exists as of the date hereof. The undersigned further certifies that any financial materials delivered with this Compliance Certificate are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statement and subject to normal year-end adjustments) and are consistent from one period to the next except as explained below.]²

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Monthly Financial Statements	Monthly, within 30 days	<input type="checkbox"/>
Quarterly Financial Statements	Quarterly, within 45 days	<input type="checkbox"/>
Audited Financial Statements	Annually, within 90 days of fiscal year end	<input type="checkbox"/>

The undersigned hereby also confirms the below disclosed accounts represent all depository accounts and securities accounts presently open in the name of Borrower or its Subsidiary/Affiliate, as applicable. Each new account that has been opened since delivery of the previous Compliance Certificate is designated below with a “*”.

² Insert with respect to quarterly and annual financials.

[SIGNATURE PAGE TO COMPLIANCE CERTIFICATE]

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

Financial Covenant	Required Level	Actual Level	In Compliance? (Y; N; N/A)
Minimum Cash <i>Section 7.20(a) of the Loan Agreement</i>	Greater than or equal to (x) the outstanding principal amount of the Term Loan Advances, <i>multiplied by</i> (y) (i) prior to the Performance Milestone IV Date, 0.55 and (ii) at all times after the Performance Milestone IV Date, 0.45	[<input type="checkbox"/>]	Yes No N/A ³

³ Only tested after April 1, 2023, and at all times thereafter so long as Borrower's Market Capitalization is no greater than \$400,000,000.

[SIGNATURE PAGE TO COMPLIANCE CERTIFICATE]

GRITSTONE BIO, INC.

SIGNATURE: _____

TITLE: _____

PRINT NAME: _____

[SIGNATURE PAGE TO COMPLIANCE CERTIFICATE]

EXHIBIT F
FORM OF JOINDER AGREEMENT

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

RECITALS

- A. Subsidiary’s Affiliate, Gritstone bio, Inc. (“Company”) has entered into that certain Loan and Security Agreement dated as of July 19, 2022, with the several banks and other financial institutions or entities from time to time party thereto as lender (each, a “Lender”, and collectively, “Lenders”) and Agent, as such agreement may be amended (the “Loan Agreement”), together with the other agreements executed and delivered in connection therewith; and
- 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 a 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 Lenders 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 Lenders 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 Lenders shall be deemed provided to Subsidiary; (ii) a Lenders’ 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 Lenders.
- 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 and complete 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: legal@htgc.com; cbarnes@htgc.com, bgironda@htgc.com; hbhalla@htgc.com

Telephone: 650-289-3060

[SIGNATURE PAGE TO JOINDER AGREEMENT]

EXHIBIT G

ACH DEBIT AUTHORIZATION AGREEMENT

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

Re: Loan and Security Agreement dated as of July 19, 2022 (the “Agreement”) by and among GRITSTONE BIO, INC., each of its Subsidiaries from time to time party thereto (individually or collectively, as the context may require, “Borrower”), Hercules Capital, Inc., as administrative agent (“Agent”) and the lenders party thereto (each, a “Lender”, and collectively, “Lender”).

In connection with the above referenced Agreement, the undersigned Borrower hereby authorizes Agent to initiate debit entries for (i) the periodic payments due under the Agreement and (ii) reasonable and documented out-of-pocket legal fees and costs incurred by Agent or Lenders pursuant to Section 11.12 of the Agreement to its account indicated below. The undersigned authorizes the depository institution named below to debit to such account.

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

This authority shall remain in full force and effect so long as any amounts are due under the Agreement.
GRITSTONE BIO, INC.

By: _____
Name: _____
Date: _____

EXHIBIT H-1

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the “Loan Agreement”) by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the “Borrower”), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as “Lenders”), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, “Agent”).

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Loan(s) (as well as any promissory note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) it is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a “ten percent shareholder” of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a “controlled foreign corporation” related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished Agent and Borrower with a certificate of its non-U.S. Person status on IRS Form W-8BEN or IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform Borrower and Agent, and (2) the undersigned shall have at all times furnished Borrower and Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____, 20__

[NAME OF LENDER]

By: _____
Name: _____
Title: _____

EXHIBIT H-2

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the “Loan Agreement”) by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the “Borrower”), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as “Lenders”), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, “Agent”).

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a “ten percent shareholder” of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a “controlled foreign corporation” related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with a certificate of its non-U.S. Person status on IRS Form W-8BEN or IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform such Lender in writing, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____, 20__

[NAME OF PARTICIPANT]

By: _____
Name: _____
Title: _____

EXHIBIT H-3

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the “Loan Agreement”) by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the “Borrower”), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as “Lenders”), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, “Agent”).

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect to such participation, neither the undersigned nor any of its direct or indirect partners/members is a “bank” extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a “ten percent shareholder” of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a “controlled foreign corporation” related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E from each of such partner’s/member’s beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform such Lender and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____, 20__

[NAME OF PARTICIPANT]

By: _____
Name: _____
Title: _____

EXHIBIT H-4

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the “Loan Agreement”) by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the “Borrower”), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as “Lenders”), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, “Agent”).

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Loan(s) (as well as any promissory note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Loan(s) (as well as any promissory note(s) evidencing such Loan(s)), (iii) with respect to the extension of credit pursuant to this Loan Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members is a “bank” extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a “ten percent shareholder” of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a “controlled foreign corporation” related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished Agent and Borrower with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E from each of such partner’s/member’s beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform Borrower and Agent, and (2) the undersigned shall have at all times furnished Borrower and Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____, 20____

[NAME OF LENDER]

By: _____
Name: _____
Title: _____

Schedule 1.1(a)

COMMITMENTS

LENDERS	TRANCHE I COMMITMENT	TRANCHE II COMMITMENT	TRANCHE III COMMITMENT	TRANCHE IV COMMITMENT	TRANCHE V COMMITMENT	TOTAL COMMITMENT
Hercules Capital, Inc.	\$22,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$15,000,000	\$60,000,000
Silicon Valley Bank	\$7,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$5,000,000	\$20,000,000
TOTAL COMMITMENTS	\$30,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$20,000,000	\$80,000,000

Schedule 1A Existing Indebtedness

1. Letter of credit issued by JPMORGAN CHASE BANK, N.A. for the benefit of CREFIII-RCI SARATOGA, LLC, dated as of February 14, 2018, for the amount of \$992,437.58.
2. Letter of credit issued by JPMORGAN CHASE BANK, N.A. for the benefit of RREF II KENMORE LESSOR III LLC and RREF II KENMORE LESSOR IV LLC, dated as of September 22, 2021, for the amount of \$4,602,926.64.
3. Equipment financing of Gritstone bio, Inc. with De Lage Landen Financial Services, Inc., for Illumina NovaSeq 6000 Sequencing System (“De Lage Equipment”)
4. Equipment financing of Gritstone bio, Inc. with Xerox Financial Services for Xerox Primelink C9070 (“Xerox Equipment”)

Schedule 1B Existing Investments

1. Schedule 5.14 is hereby incorporated by reference.
2. Securities account of Borrower with Capital Advisors Group, account number ending -3430.
3. Securities account of Borrower with Goldman Sachs Asset Management Investment Account, account number ending -0710.

Schedule 1C Existing Liens

1. Lien to secure the De Lage Equipment
2. Lien to secure the Xerox Equipment
3. Lien on JPMorgan Chase Bank, N.A. savings account number ending -0326 securing letters of credit issued by JPMorgan Chase Bank, N.A.

Schedule 5.8 Tax Matters

None.

Schedule 5.9 Intellectual Property Claims

EP Patent 2569633 – currently subject to appeal proceedings with the Opposition Division of the European Patent Office.

Schedule 5.10(a) Current Company IP

Attached.

Type	Country	Docket Number	Sub Case	Application Status	Owner	Application No.	Filing Date	Title
Patent	US	GSO-001	PR	Expired	Gritstone	62/268333	16-Dec-2015	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	PR2	Expired	Gritstone	62/317823	04-Apr-2016	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	PR5	Expired	Gritstone	62/425995	23-Nov-2016	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	PR3	Expired	Gritstone	62/379986	26-Aug-2016	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	PR4	Expired	Gritstone	62/394074	13-Sep-2016	Neoantigen Identification, Manufacture, and Use
Patent	ZA	GSO-001		Abandoned	Gritstone	2018/04301	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001		Abandoned	Gritstone	15/381375	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	TW	GSO-001		Allowed	Gritstone	105141968	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	NZ	GSO-001		Abandoned	Gritstone	743856	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	SG	GSO-001		Abandoned	Gritstone	11201804957V	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-001		Published	Gritstone	201680080924.4	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	RU	GSO-001		Granted	Gritstone	2018124997	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	PH	GSO-001		Abandoned	Gritstone	1-2018-501267	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	PE	GSO-001		Abandoned	Gritstone	1119-2018	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-001		NATIONLZED	Gritstone	PCT/US2016/067159	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	MY	GSO-001		Abandoned	Gritstone	PI2018000891	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	MX	GSO-001		Published	Gritstone	MX/a/2018/007204	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-001		Published	Gritstone	10-2018-7020164	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-001		Published	Gritstone	2018-550664	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	IN	GSO-001		Abandoned	Gritstone	201847025503	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	ID	GSO-001		Published	Gritstone	PID201805142	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	CO	GSO-001		Abandoned	Gritstone	NC2018/0007417	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-001		Published	Gritstone	3008641	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	BR	GSO-001		Abandoned	Gritstone	1120180123749	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-001		Pending	Gritstone	2016369519	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-001		Pending	Gritstone	259931	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-001		Published	Gritstone	16876766.3	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-001		Published	Gritstone	19100224.7	16-Dec-2016	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C1	Granted	Gritstone	15/466729	22-Mar-2017	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C2	Granted	Gritstone	16/001569	06-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C3	Granted	Gritstone	16/040409	19-Jul-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C4	Abandoned	Gritstone	16/128421	11-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	RU	GSO-001	D1	Abandoned	Gritstone	2020124672	24-Jul-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C5	Granted	Gritstone	17/101518	23-Nov-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C6	Published	Gritstone	17/101522	23-Nov-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-001	C5/X	Abandoned	Gritstone	17/119719	11-Dec-2020	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-001	D1	Pending	Gritstone	2022-089465	01-Jun-2022	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-005	PR	Expired	Gritstone	62/487469	19-Apr-2017	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-005		NATIONLZED	Gritstone	PCT/US2018/028438	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-005		Pending	Gritstone	2018254526	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	BR	GSO-005		Abandoned	Gritstone	1120190217827	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-005		Published	Gritstone	3060569	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-005		Published	Gritstone	201880026206.8	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	CO	GSO-005		Abandoned	Gritstone	NC2019/0012345	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-005		Published	Gritstone	18787958.0	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	ID	GSO-005		Abandoned	Gritstone	P00201910325	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	IN	GSO-005		Abandoned	Gritstone	201947045634	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-005		Pending	Gritstone	269855	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-005		Published	Gritstone	2019-556988	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-005		Published	Gritstone	10-2019-7031349	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	MX	GSO-005		Abandoned	Gritstone	MX/a/2019/012433	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	MY	GSO-005		Abandoned	Gritstone	PI2019006136	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	NZ	GSO-005		Abandoned	Gritstone	758489	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	RU	GSO-005		Abandoned	Gritstone	2019136762	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	SG	GSO-005		Abandoned	Gritstone	11201909652W	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	ZA	GSO-005		Abandoned	Gritstone	2019/07173	19-Apr-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-005	WOUS	Published	Gritstone	16/606577	18-Oct-2019	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-005		Published	Gritstone	62020013123.8	03-Aug-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-006	PR	Expired	Gritstone	62/503283	08-May-2017	Alphavirus Neoantigen Vectors
Patent	US	GSO-006	PR2	Expired	Gritstone	62/523201	21-Jun-2017	Alphavirus Neoantigen Vectors
Patent	US	GSO-006	PR3	Expired	Gritstone	62/590163	22-Nov-2017	Alphavirus Neoantigen Vectors
Patent	TW	GSO-006		Published	Gritstone	107115639	08-May-2018	Alphavirus Neoantigen Vectors
Patent	WO	GSO-006		NATIONLZED	Gritstone	PCT/US2018/031696	08-May-2018	Alphavirus Neoantigen Vectors
Patent	AU	GSO-006		Pending	Gritstone	2018266705	08-May-2018	Alphavirus Neoantigen Vectors
Patent	BR	GSO-006		Abandoned	Gritstone	1120190234772	08-May-2018	Alphavirus Neoantigen Vectors
Patent	CA	GSO-006		Published	Gritstone	3062591	08-May-2018	Alphavirus Neoantigen Vectors

Patent	CN	GSO-006		Published	Gritstone	2018800304766	08-May-2018	Alphavirus Neoantigen Vectors
Patent	CO	GSO-006		Abandoned	Gritstone	NC2019/0013609	08-May-2018	Alphavirus Neoantigen Vectors
Patent	EP	GSO-006		Published	Gritstone	18798194.9	08-May-2018	Alphavirus Neoantigen Vectors
Patent	ID	GSO-006		Pending	Gritstone	P00201911356	08-May-2018	Alphavirus Neoantigen Vectors
Patent	IL	GSO-006		Pending	Gritstone	270396	08-May-2018	Alphavirus Neoantigen Vectors
Patent	IN	GSO-006		Abandoned	Gritstone	201947049582	08-May-2018	Alphavirus Neoantigen Vectors
Patent	JP	GSO-006		Published	Gritstone	2019-561211	08-May-2018	Alphavirus Neoantigen Vectors
Patent	KR	GSO-006		Published	Gritstone	10-2019-7034437	08-May-2018	Alphavirus Neoantigen Vectors
Patent	MX	GSO-006		Pending	Gritstone	MX/a/2019/013259	08-May-2018	Alphavirus Neoantigen Vectors
Patent	MY	GSO-006		Abandoned	Gritstone	PI2019006546	08-May-2018	Alphavirus Neoantigen Vectors
Patent	NZ	GSO-006		Pending	Gritstone	759858	08-May-2018	Alphavirus Neoantigen Vectors
Patent	PE	GSO-006		Abandoned	Gritstone	2380-2019	08-May-2018	Alphavirus Neoantigen Vectors
Patent	PH	GSO-006		Abandoned	Gritstone	1-2019-502518	08-May-2018	Alphavirus Neoantigen Vectors
Patent	RU	GSO-006		Pending	Gritstone	2019138741	08-May-2018	Alphavirus Neoantigen Vectors
Patent	SG	GSO-006		Abandoned	Gritstone	11201910101S	08-May-2018	Alphavirus Neoantigen Vectors
Patent	US	GSO-006	WOUS	Published	Gritstone	16/612352	08-Nov-2019	Alphavirus Neoantigen Vectors
Patent	ZA	GSO-006		Pending	Gritstone	2019/07461	08-May-2018	Alphavirus Neoantigen Vectors
Patent	HK	GSO-006		Published	Gritstone	62020016958.4	28-Sep-2020	Alphavirus Neoantigen Vectors
Patent	US	GSO-006	D1	Allowed	Gritstone	17/693029	11-Mar-2022	Alphavirus Neoantigen Vectors
Patent	US	GSO-007	PR	Expired	Gritstone	62/425996	23-Nov-2016	VIRAL DELIVERY OF NEOANTIGENS
Patent	US	GSO-007	PR2	Expired	Gritstone	62/435266	16-Dec-2016	VIRAL DELIVERY OF NEOANTIGENS
Patent	US	GSO-007	PR3	Expired	Gritstone	62/503196	08-May-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	US	GSO-007	PR4	Expired	Gritstone	62/523212	21-Jun-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	WO	GSO-007		NATIONLZED	Gritstone	PCT/US2017/063133	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	TW	GSO-007		Published	Gritstone	106140830	23-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	BR	GSO-007		Abandoned	Gritstone	1120190105654	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	CA	GSO-007		Published	Gritstone	3044840	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	CN	GSO-007		Published	Gritstone	201780084182.7	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	IL	GSO-007		Pending	Gritstone	266679	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	JP	GSO-007		Published	Gritstone	2019-547607	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	MX	GSO-007		Pending	Gritstone	MX/a/2019/006010	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	MY	GSO-007		Abandoned	Gritstone	PI2019002841	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	PE	GSO-007		Abandoned	Gritstone	1060-2019	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	PH	GSO-007		Pending	Gritstone	1-2019-501130	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	SG	GSO-007		Pending	Gritstone	11201904645T	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	US	GSO-007	WOUS	Published	Gritstone	16/463787	23-May-2019	VIRAL DELIVERY OF NEOANTIGENS
Patent	AU	GSO-007		Pending	Gritstone	2017363308	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	CO	GSO-007		Abandoned	Gritstone	NC2019/0006541	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	ID	GSO-007		Abandoned	Gritstone	PID201905155	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	IN	GSO-007		Abandoned	Gritstone	201947024679	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	KR	GSO-007		Published	Gritstone	10-2019-7017777	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	NZ	GSO-007		Pending	Gritstone	754516	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	RU	GSO-007		Abandoned	Gritstone	2019119272	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	ZA	GSO-007		Abandoned	Gritstone	2019/03744	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	EP	GSO-007		Published	Gritstone	17873940.5	22-Nov-2017	VIRAL DELIVERY OF NEOANTIGENS
Patent	HK	GSO-007		Published	Gritstone	19132120.7	12-Nov-2019	VIRAL DELIVERY OF NEOANTIGENS
Patent	US	GSO-013	PR	Expired	Gritstone	62/590045	22-Nov-2017	Reducing Junction Epitope Presentation for Neoantigens
Patent	WO	GSO-013		NATIONLZED	Gritstone	PCT/US2018/062294	21-Nov-2018	Reducing Junction Epitope Presentation for Neoantigens
Patent	AU	GSO-013		Pending	Gritstone	2018373154	15-Jun-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	CA	GSO-013		Published	Gritstone	3083097	20-May-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	CN	GSO-013		Published	Gritstone	201880086681.4	15-Jul-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	EP	GSO-013		Published	Gritstone	18880880.2	18-Jun-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	IL	GSO-013		Pending	Gritstone	274799	20-May-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	JP	GSO-013		Published	Gritstone	2020-528117	21-May-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	KR	GSO-013		Published	Gritstone	10-2020-7017969	22-Jun-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	US	GSO-013	WOUS	Published	Gritstone	16/766627	22-May-2020	Reducing Junction Epitope Presentation for Neoantigens
Patent	HK	GSO-013		Published	Gritstone	62021027035.6	11-Mar-2021	Reducing Junction Epitope Presentation for Neoantigens
Patent	US	GSO-016	PR	Abandoned	Gritstone	62/523195	21-Jun-2017	Modified Alphavirus Vectors
Patent	US	GSO-017		Abandoned	Gritstone	62/523215	21-Jun-2017	Modified Adenoviral Vectors
Patent	US	GSO-017	PR2	Abandoned	Gritstone	62/675628	23-May-2018	Modified Adenoviral Vectors
Patent	US	GSO-018	PR	Expired	Gritstone	62/675624	23-May-2018	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	TW	GSO-018		Published	Gritstone	108117922	23-May-2019	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	WO	GSO-018		NATIONLZED	Gritstone	PCT/US2019/033828	23-May-2019	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	CA	GSO-018		Published	Gritstone	3099642	05-Nov-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	CN	GSO-018		Published	Gritstone	2019800444060	30-Dec-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	IL	GSO-018		Pending	Gritstone	278542	08-Nov-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	JP	GSO-018		Published	Gritstone	2020-565264	20-Nov-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION

Patent	EP	GSO-018		Published	Gritstone	19808512.8	18-Dec-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	KR	GSO-018		Published	Gritstone	10-2020-7036367	16-Dec-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	AU	GSO-018		Pending	Gritstone	2019275070	14-Dec-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	US	GSO-018	WOUS	Published	Gritstone	17/058113	23-Nov-2020	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	HK	GSO-018		Published	Gritstone	62021038781.2	13-Sep-2021	IMMUNE CHECKPOINT INHIBITOR CO-EXPRESSION
Patent	US	GSO-019	PR2	Expired	Gritstone	62/675649	23-May-2018	SHARED ANTIGENS
Patent	US	GSO-019	PR	Expired	Gritstone	62/675559	23-May-2018	SHARED ANTIGENS
Patent	WO	GSO-019		NATIONLZED	Gritstone	PCT/US2019/033830	23-May-2019	SHARED ANTIGENS
Patent	TW	GSO-019		Published	Gritstone	108117933	23-May-2019	SHARED ANTIGENS
Patent	CA	GSO-019		Published	Gritstone	3099644	05-Nov-2020	SHARED ANTIGENS
Patent	CN	GSO-019		Published	Gritstone	201980034786.X	23-Nov-2020	SHARED ANTIGENS
Patent	IL	GSO-019		Pending	Gritstone	278864	19-Nov-2020	SHARED ANTIGENS
Patent	JP	GSO-019		Published	Gritstone	2020-565312	20-Nov-2020	SHARED ANTIGENS
Patent	AU	GSO-019		Pending	Gritstone	2019275072	21-Dec-2020	SHARED ANTIGENS
Patent	EP	GSO-019		Published	Gritstone	19808088.9	18-Dec-2019	SHARED ANTIGENS
Patent	KR	GSO-019		Published	Gritstone	10-2020-7036368	16-Dec-2020	SHARED ANTIGENS
Patent	US	GSO-019	WOUS	Published	Gritstone	17/058128	23-Nov-2020	SHARED ANTIGENS
Patent	HK	GSO-019		Published	Gritstone	62021038785.3	13-Sep-2021	SHARED ANTIGENS
Patent	US	GSO-020	PR	Expired	Gritstone	62/675534	23-May-2018	Nodavirus-Based Antigen Delivery
Patent	US	GSO-023	PR	Expired	Gritstone	62/756980	07-Nov-2018	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	WO	GSO-023		NATIONLZED	Gritstone	PCT/US2019/060355	07-Nov-2019	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	CA	GSO-023		Published	Gritstone	3119752	19-Apr-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	CN	GSO-023		Published	Gritstone	201980068204.X	15-Apr-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	EP	GSO-023		Published	Gritstone	19882269.4	07-Nov-2019	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	IL	GSO-023		Pending	Gritstone	282793	29-Apr-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	JP	GSO-023		Published	Gritstone	2021-524020	06-May-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	KR	GSO-023		Published	Gritstone	10-2021-7016771	01-Jun-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	US	GSO-023	WOUS	Published	Gritstone	17/291984	06-May-2021	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	HK	GSO-023		Published	Gritstone	62022048980.6	28-Feb-2022	Alphavirus Neoantigen Vectors and Interferon Inhibitors
Patent	US	GSO-024	PR	Expired	Gritstone	62/756986	07-Nov-2018	Alphavirus Neoantigen Vectors and Decoy Receptors
Patent	US	GSO-029	PR2	Expired	Gritstone	62/826822	29-Mar-2019	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	US	GSO-029	PR	Expired	Gritstone	62/814801	06-Mar-2019	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	WO	GSO-029		NATIONLZED	Gritstone	PCT/US2020/021508	06-Mar-2020	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	TW	GSO-029		Published	Gritstone	109107542	06-Mar-2020	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	CA	GSO-029		Published	Gritstone	3132041	30-Aug-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	CN	GSO-029		Published	Gritstone	202080028058.0	11-Oct-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	IL	GSO-029		Pending	Gritstone	286086	02-Sep-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	JP	GSO-029		Published	Gritstone	2021-552549	03-Sep-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	KR	GSO-029		Published	Gritstone	10-2021-7031933	05-Oct-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	AU	GSO-029		Pending	Gritstone	2020232844	30-Sep-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	EP	GSO-029		Published	Gritstone	20765932.7	01-Oct-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	US	GSO-029	WOUS	Published	Gritstone	17/436367	03-Sep-2021	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	HK	GSO-029		Pending	Gritstone	62022055790.9	27-Jun-2022	IDENTIFICATION OF NEOANTIGENS WITH MHC CLASS
Patent	US	GSO-033	PR	Expired	Gritstone	62/854865	30-May-2019	MODIFIED ADENOVIRUSES
Patent	WO	GSO-033		NATIONLZED	Gritstone	PCT/US2020/035591	01-Jun-2020	MODIFIED ADENOVIRUSES
Patent	TW	GSO-033		Pending	Gritstone	109118370	01-Jun-2020	MODIFIED ADENOVIRUSES
Patent	AU	GSO-033		Pending	Gritstone	2020282369	09-Dec-2021	MODIFIED ADENOVIRUSES
Patent	BR	GSO-033		Published	Gritstone	1120210241272	30-Nov-2021	MODIFIED ADENOVIRUSES
Patent	CA	GSO-033		Published	Gritstone	3140019	29-Nov-2021	MODIFIED ADENOVIRUSES
Patent	EP	GSO-033		Published	Gritstone	20813102.9	23-Dec-2021	MODIFIED ADENOVIRUSES
Patent	IL	GSO-033		Pending	Gritstone	288283	21-Nov-2021	MODIFIED ADENOVIRUSES
Patent	IN	GSO-033		Published	Gritstone	202147060850	27-Dec-2021	MODIFIED ADENOVIRUSES
Patent	JP	GSO-033		Pending	Gritstone	2021-570743	29-Nov-2021	MODIFIED ADENOVIRUSES
Patent	KR	GSO-033		Published	Gritstone	10-2021-7042422	24-Dec-2021	MODIFIED ADENOVIRUSES
Patent	MX	GSO-033		Pending	Gritstone	MX/a/2021/014525	26-Nov-2021	MODIFIED ADENOVIRUSES
Patent	NZ	GSO-033		Pending	Gritstone	783284	09-Dec-2021	MODIFIED ADENOVIRUSES
Patent	SG	GSO-033		Pending	Gritstone	11202113187W	26-Nov-2021	MODIFIED ADENOVIRUSES
Patent	ZA	GSO-033		Pending	Gritstone	2021/10217	09-Dec-2021	MODIFIED ADENOVIRUSES
Patent	CN	GSO-033		Published	Gritstone	202080047889.2	29-Dec-2021	MODIFIED ADENOVIRUSES
Patent	US	GSO-033	WOC1	Track1-Pub	Gritstone	17/538716	30-Nov-2021	MODIFIED ADENOVIRUSES
Patent	US	GSO-034	PR	Expired	Gritstone	62/869877	02-Jul-2019	HIV ANTIGENS AND MHC COMPLEXES
Patent	US	GSO-034	PR2	Expired	Gritstone	63/029981	26-May-2020	HIV ANTIGENS AND MHC COMPLEXES
Patent	WO	GSO-034		Nationlzed	Gritstone	PCT/US2020/040630	02-Jul-2020	HIV ANTIGENS AND MHC COMPLEXES
Patent	CA	GSO-034		Published	Gritstone	3145833	31-Dec-2021	HIV ANTIGENS AND MHC COMPLEXES
Patent	CN	GSO-034		Published	Gritstone	202080059796.1	23-Feb-2022	HIV ANTIGENS AND MHC COMPLEXES
Patent	JP	GSO-034		Pending	Gritstone	2022-500009	04-Jan-2022	HIV ANTIGENS AND MHC COMPLEXES
Patent	AU	GSO-034		Pending	Gritstone	2020298552	28-Jan-2022	HIV ANTIGENS AND MHC COMPLEXES

Patent	EP	GSO-034		Published	Gritstone	20835351.6	25-Jan-2022	HIV ANTIGENS AND MHC COMPLEXES
Patent	IN	GSO-034		Published	Gritstone	202247004815	28-Jan-2022	HIV ANTIGENS AND MHC COMPLEXES
Patent	KR	GSO-034		Published	Gritstone	10-2022-7003297	27-Jan-2022	HIV ANTIGENS AND MHC COMPLEXES
Patent	US	GSO-034	C1	Pending	Gritstone	17/564920	29-Dec-2021	HIV ANTIGENS AND MHC COMPLEXES
Patent	US	GSO-036	PR	Expired	Gritstone	62/517786	09-Jun-2017	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-036		NATIONLZED	Gritstone	PCT/US2018/036571	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-036		Pending	Gritstone	2018279627	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-036		Published	Gritstone	3066635	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-036		Published	Gritstone	201880037822.3	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-036		Published	Gritstone	18814074.3	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-036		Pending	Gritstone	271038	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-036		Published	Gritstone	2019-567557	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	SG	GSO-036		Abandoned	Gritstone	11201911620P	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	ZA	GSO-036		Abandoned	Gritstone	2019/08455	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	NZ	GSO-036		Pending	Gritstone	759958	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-036		Published	Gritstone	10-2019-7036968	08-Jun-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-036	WOUS	Published	Gritstone	16/619652	05-Dec-2019	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-036		Published	Gritstone	62020016910.5	28-Sep-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-037	PR	Expired	Gritstone	62/554286	05-Sep-2017	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-037	PR2	Expired	Gritstone	62/579734	31-Oct-2017	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-037	PR3	Expired	Gritstone	62/644191	16-Mar-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-037	PR4	Expired	Gritstone	62/703197	25-Jul-2018	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-037		NATIONLZED	Gritstone	PCT/US2018/049614	05-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	TW	GSO-037		Published	Gritstone	107131173	05-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	ZA	GSO-037		Abandoned	Gritstone	2020/01531	11-Mar-2020	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-037		Published	Gritstone	10-2020-7009649	02-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-037		Published	Gritstone	18854437.3	31-Mar-2020	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-037		Pending	Gritstone	2018328220	03-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	MX	GSO-037		Abandoned	Gritstone	MX/a/2020/002499	05-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-037		Published	Gritstone	2020-534819	04-Mar-2020	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-037		Pending	Gritstone	273030	05-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-037		Published	Gritstone	3073812	05-Sep-2018	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-037		Published	Gritstone	201880071563.6	30-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-037	WOUS	Published	Gritstone	16/644934	05-Mar-2020	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-037		Published	Gritstone	62020022635.0	23-Dec-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-038	PR	Expired	Gritstone	62/675626	23-May-2018	Modified Alphavirus Vectors
Patent	US	GSO-038	PR2	Expired	Gritstone	62/756989	07-Nov-2018	Modified Alphavirus Vectors
Patent	US	GSO-078	PR	Expired	Gritstone	62/570569	10-Oct-2017	Neoantigen Identification, Manufacture, and Use
Patent	TW	GSO-078		Published	Gritstone	107135870	11-Oct-2018	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-078		NATIONLZED	Gritstone	PCT/US2018/055283	10-Oct-2018	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-078	WOC1	Granted	Gritstone	16/403331	03-May-2019	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-078		Published	Gritstone	3078744	07-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-078		Published	Gritstone	2020-520270	10-Oct-2018	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-078		Pending	Gritstone	273799	05-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-078		Pending	Gritstone	2018348165	30-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-078		Published	Gritstone	18866639.0	29-Apr-2020	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-078		Published	Gritstone	10-2020-7013168	07-May-2020	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-078		Published	Gritstone	201880079601.2	09-Jun-2020	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-078		Published	Gritstone	62021024498.9	29-Jan-2021	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-078	C2	Published	Gritstone	17/581788	21-Jan-2022	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-079		Expired	Gritstone	62/636061	27-Feb-2018	Neoantigen Identification, Manufacture, and Use
Patent	TW	GSO-079		Published	Gritstone	108106921	27-Feb-2019	Neoantigen Identification, Manufacture, and Use
Patent	WO	GSO-079		NATIONLZED	Gritstone	PCT/US2019/019836	27-Feb-2019	Neoantigen Identification, Manufacture, and Use
Patent	CA	GSO-079		Published	Gritstone	3091917	20-Aug-2020	Neoantigen Identification, Manufacture, and Use
Patent	IL	GSO-079		Pending	Gritstone	276839	20-Aug-2020	Neoantigen Identification, Manufacture, and Use
Patent	AU	GSO-079		Pending	Gritstone	2019227813	08-Sep-2020	Neoantigen Identification, Manufacture, and Use
Patent	JP	GSO-079		Published	Gritstone	2020-567466	26-Aug-2020	Neoantigen Identification, Manufacture, and Use
Patent	CN	GSO-079		Published	Gritstone	201980019430.9	15-Sep-2020	Neoantigen Identification, Manufacture, and Use
Patent	KR	GSO-079		Published	Gritstone	10-2020-7027458	23-Sep-2020	Neoantigen Identification, Manufacture, and Use
Patent	EP	GSO-079		Published	Gritstone	19760756.7	08-Sep-2020	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-079	WOUS	Published	Gritstone	16/975823	26-Aug-2020	Neoantigen Identification, Manufacture, and Use
Patent	HK	GSO-079		Published	Gritstone	62021033330.3	18-Jun-2021	Neoantigen Identification, Manufacture, and Use
Patent	US	GSO-080	PR	Expired	Gritstone	62/936303	15-Nov-2019	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	US	GSO-080	PR2	Expired	Gritstone	63/030774	27-May-2020	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	WO	GSO-080		Nationlized	Gritstone	PCT/US2020/060605	13-Nov-2020	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	CN	GSO-080		Pending	Gritstone		08-Jun-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	CA	GSO-080		Pending	Gritstone	3157411	05-May-2022	SHARED NEOANTIGEN T CELL RECEPTORS

Patent	IL	GSO-080		Pending	Gritstone	292535	26-Apr-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	JP	GSO-080		Pending	Gritstone	2022-527937	13-May-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	US	GSO-080	WOUS	Pending	Gritstone	17/744354	13-May-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	AU	GSO-080		Pending	Gritstone	2020384374	19-May-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	EP	GSO-080		Pending	Gritstone	20886309.2	20-May-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	KR	GSO-080		Pending	Gritstone	10-2022-7019577	09-Jun-2022	SHARED NEOANTIGEN T CELL RECEPTORS
Patent	US	GSO-082	PR	Expired	Gritstone	62/930460	04-Nov-2019	SHARED NEOANTIGEN VACCINES
Patent	US	GSO-082	PR2	Expired	Gritstone	62/946956	11-Dec-2019	SHARED NEOANTIGEN VACCINES
Patent	US	GSO-082	PR3	Expired	Gritstone	62/959798	10-Jan-2020	SHARED NEOANTIGEN VACCINES
Patent	WO	GSO-082		Nationlized	Gritstone	PCT/US2020/058983	04-Nov-2020	SHARED NEOANTIGEN VACCINES
Patent	US	GSO-082	WOC1	Pending	Gritstone	17/736738	04-May-2022	SHARED NEOANTIGEN VACCINES
Patent	EP	GSO-082		Pending	Gritstone	20883770.8	20-May-2022	SHARED NEOANTIGEN VACCINES
Patent	US	GSO-084	PR	Expired	Gritstone	62/959805	10-Jan-2020	CELL-FREE DNA MONITORING
Patent	WO	GSO-084		Published	Gritstone	PCT/US2021/012945	11-Jan-2021	CELL-FREE DNA MONITORING
Patent	US	GSO-085	PR	Expired	Gritstone	62/946947	11-Dec-2019	DURABLE VACCINATION
Patent	WO	GSO-085		Published	Gritstone	PCT/US2020/064699	11-Dec-2020	DURABLE VACCINATION
Patent	US	GSO-086	PR	Expired	Gritstone	63/013466	21-Apr-2020	ANTIGEN-ENCODING CASSETTES
Patent	WO	GSO-086		Published	Gritstone	PCT/US2021/028485	21-Apr-2021	ANTIGEN-ENCODING CASSETTES
Patent	US	GSO-088	PR	Expired	Gritstone	63/013456	21-Apr-2020	CAPPING COMPOUNDS, COMPOSITIONS AND
Patent	US	GSO-088	PR2	Expired	Gritstone	63/020473	05-May-2020	CAPPING COMPOUNDS, COMPOSITIONS AND
Patent	WO	GSO-088		Published	Gritstone	PCT/US2021/028486	21-Apr-2021	CAPPING COMPOUNDS, COMPOSITIONS AND
Patent	US	GSO-090	PR	Expired	Gritstone	63/005160	03-Apr-2020	INFECTIOUS DISEASE ANTIGENS AND VACCINES
Patent	WO	GSO-090		Published	Gritstone	PCT/US2021/025828	05-Apr-2021	INFECTIOUS DISEASE ANTIGENS AND VACCINES
Patent	US	GSO-091	PR	Expired	Gritstone	63/027283	19-May-2020	CORONAVIRUS VACCINE
Patent	US	GSO-091	PR2	Expired	Gritstone	63/047789	02-Jul-2020	CORONAVIRUS VACCINE
Patent	US	GSO-091	PR3	Pending	Gritstone	63/139292	19-Jan-2021	CORONAVIRUS VACCINE
Patent	WO	GSO-091		Published	Gritstone	PCT/US2021/033275	19-May-2021	CORONAVIRUS VACCINE
Patent	US	GSO-093	PR	Expired	Gritstone	63/058461	29-Jul-2020	ENGINEERED MULTI-SPECIFIC ANTIBODIES AND
Patent	US	GSO-094	PR	Expired	Gritstone	63/051227	13-Jul-2020	NEOANTIGEN VACCINE THERAPY
Patent	US	GSO-095	PR	Expired	Gritstone	63/062268	06-Aug-2020	MULTIEPITOPE VACCINE CASSETTES
Patent	WO	GSO-095		Published	Gritstone	PCT/US2021/045106	06-Aug-2021	MULTIEPITOPE VACCINE CASSETTES
Patent	US	GSO-095	WOC1	Track1-Pend	Gritstone	17/727610	22-Apr-2022	MULTIEPITOPE VACCINE CASSETTES
Patent	US	GSO-096	PR	Expired	Gritstone	63/121164	03-Dec-2020	HOMOLOGOUS ADENOVIRAL VACCINATION
Patent	WO	GSO-096		Published	Gritstone	PCT/US2021/061876	03-Dec-2021	HOMOLOGOUS ADENOVIRAL VACCINATION
Patent	US	GSO-097	PR	Abandoned	Gritstone	63/121606	04-Dec-2020	COMPOSITIONS AND METHODS OF USE THEREOF
Patent	US	GSO-098	PR	Expired	Gritstone	63/121603	04-Dec-2020	COMPOSITIONS AND METHODS OF USE THEREOF
Patent	WO	GSO-098		Published	Gritstone	PCT/US2021/061820	03-Dec-2021	COMPOSITIONS AND METHODS OF USE THEREOF
Patent	TW	GSO-098		Pending	Gritstone	110145349	03-Dec-2021	COMPOSITIONS AND METHODS OF USE THEREOF
Patent	US	GSO-100	PR	Expired	Gritstone	62/826724	29-Mar-2019	NEOANTIGEN IDENTIFICATION FOR T-CELL THERAPY
Patent	US	GSO-101	PR	Expired	Gritstone	63/139297	19-Jan-2021	MODIFIED ALPHAVIRUS VECTORS
Patent	WO	GSO-101		Pending	Gritstone	PCT/US2022/013004	19-Jan-2022	MODIFIED ALPHAVIRUS VECTORS
Patent	US	GSO-102	PR	Expired	Gritstone	63/190771	19-May-2021	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR2	Pending	Gritstone	63/251441	01-Oct-2021	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR3	Pending	Gritstone	63/277105	08-Nov-2021	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR4	Pending	Gritstone	63/295449	30-Dec-2021	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR5	Pending	Gritstone	63/306022	02-Feb-2022	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR6	Pending	Gritstone	63/322142	21-Mar-2022	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-102	PR7	Pending	Gritstone	63/346769	27-May-2022	PAN-CORONAVIRUS VACCINES
Patent	US	GSO-103	PR	Pending	Gritstone	63/220942	12-Jul-2021	EGFR VACCINE CASSETTES
Patent	US	GSO-104	PR	Pending	Gritstone	63/220947	12-Jul-2021	CTA VACCINE CASSETTES
Patent	US	GSO-105	PR	Pending	Gritstone	63/245663	17-Sep-2021	NEOANTIGEN ADJUVANT THERAPY
Patent	US	GSO-105	PR2	Pending	Gritstone	63/281027	18-Nov-2021	NEOANTIGEN ADJUVANT THERAPY
Patent	US	GSO-105	PR3	Pending	Gritstone	63/320685	16-Mar-2022	NEOANTIGEN ADJUVANT THERAPY
Patent	US	GSO-106	PR	Pending	Gritstone	63/245703	17-Sep-2021	KRAS-NEOANTIGEN THERAPIES
Patent	US	GSO-106	PR2	Pending	Gritstone	63/281029	18-Nov-2021	KRAS-NEOANTIGEN THERAPIES
Patent	US	GSO-106	PR3	Pending	Gritstone	63/321587	18-Mar-2022	KRAS-NEOANTIGEN THERAPIES
Patent	US	GSO-107	PR	Pending	Gritstone	63/277116	08-Nov-2021	SELF-AMPLIFYING RNA COMPOSITIONS AND
Patent	US	GSO-108	PR	Pending	Gritstone	63/286917	07-Dec-2021	COMPOSITIONS AND METHODS OF USE THEREOF
Patent	US	GSO-109	PR	Pending	Gritstone	63/265991	23-Dec-2021	OMICRON SARS-COV-2 VACCINES
Patent	US	GSO-110	PR	Pending	Gritstone	63/308907	10-Feb-2022	KRAS MHC CLASS II VACCINES
Patent	US	GSO-111	PR	Pending	Gritstone	63/322143	21-Mar-2022	LOW-DOSE NEOANTIGEN VACCINE THERAPY
Patent	US	GSO-112	PR	Pending	Gritstone	63/350345	08-Jun-2022	STABILIZED FORMULATIONS OF CHIMPANZEE
Patent	US	GSO-113	PR	Pending	Gritstone	63/329259	08-Apr-2022	NEOANTIGEN PREDICTION FOR VIRAL EPITOPES
Patent	US	GSO-114	PR	Expired	Gritstone	62/812572	01-Mar-2019	SELECTION OF T CELL RECEPTORS
Patent	WO	GSO-114		Nationlized	Gritstone	PCT/US2020/020296	28-Feb-2020	SELECTION OF T CELL RECEPTORS
Patent	AU	GSO-114		Pending	Gritstone	2020232211	31-Aug-2021	SELECTION OF T CELL RECEPTORS
Patent	CA	GSO-114		Published	Gritstone	3132072	30-Aug-2021	SELECTION OF T CELL RECEPTORS

Patent	CN	GSO-114	Published	Gritstone	202080032518.7	29-Oct-2021	SELECTION OF T CELL RECEPTORS
Patent	EP	GSO-114	Published	Gritstone	20765914.5	31-Aug-2021	SELECTION OF T CELL RECEPTORS
Patent	IL	GSO-114	Pending	Gritstone	285946	29-Aug-2021	SELECTION OF T CELL RECEPTORS
Patent	JP	GSO-114	Published	Gritstone	2021-551878	31-Aug-2021	SELECTION OF T CELL RECEPTORS
Patent	KR	GSO-114	Published	Gritstone	10-2021-7031338	28-Feb-2020	SELECTION OF T CELL RECEPTORS
Patent	ZA	GSO-114	Pending	Gritstone	2021/06396	28-Feb-2020	SELECTION OF T CELL RECEPTORS
Patent	US	GSO-114	WOUS Published	Gritstone	17/433817	25-Aug-2021	SELECTION OF T CELL RECEPTORS
Trademark	United States	GRITST.001TM-US	REGISTERED	Gritstone	87748380	9-Jan-2018	GRITSTONE
Trademark	United States	GRITST.002TM-US	Allowed	Gritstone	87882746	18-Apr-2018	GRANITE
Trademark	United States	GRITST.003TM-US	Allowed	Gritstone	88030324	9-Jul-2018	SLATE
Trademark	United States	GRITST.004TM-US	REGISTERED	Gritstone	87748391	9-Jan-2018	SANDSTONE
Trademark	Argentina	GRITST.006TM	REGISTERED	Gritstone	3722698	6-Jul-2018	GRITSTONE (ARGENTINA)
Trademark	Argentina	GRITST.007TM	REGISTERED	Gritstone	3722699	6-Jul-2018	GRITSTONE (ARGENTINA)
Trademark	Argentina	GRITST.008TM	REGISTERED	Gritstone	3722696	6-Jul-2018	GRITSTONE (ARGENTINA)
Trademark	Argentina	GRITST.009TM	REGISTERED	Gritstone	3722697	6-Jul-2018	GRITSTONE (ARGENTINA)
Trademark	Argentina	GRITST.064TM	REGISTERED	Gritstone	3722702	6-Jul-2018	SUNSTONE Logo
Trademark	Argentina	GRITST.065TM	REGISTERED	Gritstone	3722703	6-Jul-2018	SUNSTONE Logo
Trademark	Argentina	GRITST.066TM	REGISTERED	Gritstone	3722700	6-Jul-2018	SUNSTONE Logo
Trademark	Argentina	GRITST.067TM	REGISTERED	Gritstone	3722701	6-Jul-2018	SUNSTONE Logo
Trademark	Australia	GRITST.068TM_AUS	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Australia		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE (AUSTRALIA)
Trademark	Brazil		REGISTERED	Gritstone	914994638	21-May-2019	GRITSTONE
Trademark	Brazil		REGISTERED	Gritstone	914994646	21-May-2019	GRITSTONE
Trademark	Brazil		REGISTERED	Gritstone	914994301	21-May-2019	GRITSTONE
Trademark	Brazil	GRITST.014TM	REGISTERED	Gritstone	914994590	9-Jul-2018	GRITSTONE
Trademark	Brazil	GRITST.069TM	REGISTERED	Gritstone	914994727	9-Jul-2018	SUNSTONE Logo
Trademark	Brazil	GRITST.070TM_BRA	REGISTERED	Gritstone	914994743	9-Jul-2018	SUNSTONE Logo
Trademark	Brazil	GRITST.071TM_BRA	REGISTERED	Gritstone	914994689	9-Jul-2018	SUNSTONE Logo
Trademark	Brazil	GRITST.072TM_BRA	REGISTERED	Gritstone	914994697	9-Jul-2018	SUNSTONE Logo
Trademark	Canada	GRITST.015TM-CAN	REGISTERED	Gritstone	1908106	6-Jul-2018	GRITSTONE
Trademark	Canada	GRITST.073TM_CAN	REGISTERED	Gritstone	1908105	6-Jul-2018	SUNSTONE Logo
Trademark	Chile	GRITST.016TM	REGISTERED	Gritstone	1293547	6-Jul-2018	GRITSTONE
Trademark	Chile	GRITST.074TM	REGISTERED	Gritstone	1293546	6-Jul-2018	SUNSTONE Logo
Trademark	Chile	GRITST.075TM_Chile	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	China	GRITS.999TM_CN	REGISTERED	Gritstone	37565957	17-Apr-2019	GRITSTONE
Trademark	China	GRITST.005TM	REGISTERED	Gritstone	26281002	9-Sep-2017	GRINSTONE HEALTH (and design) / Rui Yu Industrial (Shanghai) Co., Ltd.
Trademark	China	GRITST.018TM	REGISTERED	Gritstone	41908196	28-Oct-2019	GRITSTONE
Trademark	China	GRITST.019TM	Pending	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	China	GRITST.020TM	Pending	Gritstone	37565955	7-Apr-2019	GRITSTONE
Trademark	China	GRITST.021TM - China	REGISTERED	Gritstone	41377454	29-Sep-2019	GRITSTONE
Trademark	China	GRITST.022TM	REGISTERED	Gritstone	37565956	17-Apr-2019	GRITSTONE
Trademark	China	GRITST.023TM	Pending	Gritstone	41269981	25-Sep-2019	GRITSTONE
Trademark	China	GRITST.060TM	Inactive	Gritstone	9192963	9-Mar-2011	GRITSTONE (in Chinese characters)
Trademark	China	GRITST.061TM	Inactive	Gritstone	9192861	9-Mar-2011	GRITSTONE (in Chinese characters)
Trademark	China	GRITST.062TM	Pending	Gritstone	26476945	18-Sep-2017	GRITSTONE (stylized) / Shanghai Jielan E-Commerce Co., Ltd.
Trademark	China	GRITST.063TM	Pending	Gritstone	26461825	8-Sep-2017	GRITSTONE (stylized) / Shanghai Jielan E-Commerce Co., Ltd.
Trademark	Colombia	GRITST.024TM	REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Colombia	GRITST.076TM_Columbia	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Costa Rica	GRITST.025TM	REGISTERED	Gritstone	2018006101	6-Jul-2018	GRITSTONE
Trademark	Costa Rica	GRITST.077TM_Costa Rica	REGISTERED	Gritstone	20180006102	6-Jul-2018	SUNSTONE Logo
Trademark	Costa Rica	GRITST.078TM_Costa Rica	REGISTERED	Gritstone	201810079	6-Jul-2018	SUNSTONE Logo
Trademark	European Union Tr	GRITST.079TM_EU	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	European Union Trademark and Designs Office		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Hong Kong	GRITST.080TM_HK	REGISTERED	Gritstone	304588480	6-Jul-2018	SUNSTONE Logo
Trademark	Hong Kong		REGISTERED	Gritstone	304588462	17-Dec-2018	GRITSTONE
Trademark	India	GRITST.081TM_India	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	India		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Indonesia	GRITST.082TM_Indonesia	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo Indonesia

Trademark	Indonesia		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Israel	GRITST.083TM_Isreal	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Israel		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Japan	GRITST.084TM_JPN	REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Japan		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Malaysia	GRITST.085TM_Malaysia	REGISTERED	Gritstone	2018062890	6-Jul-2018	SUNSTONE Logo
Trademark	Malaysia	GRITST.086TM_Malaysia	REGISTERED	Gritstone	2018062895	6-Jul-2018	SUNSTONE Logo
Trademark	Malaysia	GRITST.087TM_Malaysia	REGISTERED	Gritstone	2018062882	6-Jul-2018	SUNSTONE Logo
Trademark	Malaysia		REGISTERED	Gritstone	2018062885	29-Apr-2019	GRITSTONE
Trademark	Malaysia		REGISTERED	Gritstone	2018062922	29-Apr-2019	GRITSTONE
Trademark	Malaysia		REGISTERED	Gritstone	2018062924	29-Apr-2019	GRITSTONE
Trademark	Malaysia		REGISTERED	Gritstone	2018062919	29-Apr-2019	GRITSTONE
Trademark	Malaysia		REGISTERED	Gritstone	2018062921	29-Apr-2019	GRITSTONE
Trademark	Mexico		REGISTERED	Gritstone	2109036/A0077201	5-Jul-2018	GRITSTONE
Trademark	Mexico		REGISTERED	Gritstone	2109034/A0077201	5-Jul-2018	GRITSTONE
Trademark	Mexico		REGISTERED	Gritstone	2109035/A0077201	5-Jul-2018	GRITSTONE
Trademark	Mexico		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Mexico		Pending	Gritstone	2109037/A0077201	(-)	GRITSTONE
Trademark	New Zealand		REGISTERED	Gritstone	A0077201	5-Jul-2018	SUNSTONE Logo
Trademark	New Zealand		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Norway		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Norway		REGISTERED	Gritstone	201813500	5-Jul-2018	SUNSTONE Logo
Trademark	Philippines	GRITST.011TM_Philippines	Pending	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Philippines	GRITST.012TM_Philippines	Pending	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Republic of Korea		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Russian Federation		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Russian Federation		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Singapore		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Singapore		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	South Africa	GRITST.045TM	Pending	Gritstone	201819240	6-Jul-2018	GRITSTONE
Trademark	South Africa	GRITST.046TM	Pending	Gritstone	201819241	6-Jul-2018	GRITSTONE
Trademark	South Africa		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	South Africa		Pending	Gritstone	201819238	(-)	GRITSTONE
Trademark	South Africa		Pending	Gritstone	201819239	(-)	GRITSTONE
Trademark	South Africa		Pending	Gritstone	201819244	(-)	SUNSTONE Logo
Trademark	South Africa		Pending	Gritstone	201819245	(-)	SUNSTONE Logo
Trademark	South Africa		Pending	Gritstone	201819242	(-)	SUNSTONE Logo
Trademark	South Africa		Pending	Gritstone	201819243	(-)	SUNSTONE Logo
Trademark	Switzerland		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Switzerland		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Taiwan, Province o	GRITST.052TM	Pending	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Taiwan, Province of China		REGISTERED	Gritstone	107043746	1-Apr-2019	GRITSTONE
Trademark	Taiwan, Province of China		REGISTERED	Gritstone	107043903	6-Aug-2019	SUNSTONE Logo
Trademark	Thailand	GRITST.102TM	Pending	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Turkey		REGISTERED	Gritstone	A0077201	5-Jul-2018	GRITSTONE
Trademark	Turkey		REGISTERED	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo
Trademark	Turkey		REGISTERED	Gritstone	3323330	5-Oct-2019	SUNSTONE Logo
Trademark	United Kingdom		REGISTERED	Gritstone	3322981	5-Oct-2018	GRITSTONE
Trademark	Venezuela	GRITST.057TM	Pending	Gritstone	93552018	6-Jul-2018	GRITSTONE
Trademark	Venezuela	GRITST.106TM	Pending	Gritstone	93542018	6-Jul-2018	SUNSTONE Logo
Trademark	Venezuela	GRITST.107TM	Pending	Gritstone	93512018	6-Jul-2018	SUNSTONE Logo
Trademark	Venezuela	GRITST.108TM	Pending	Gritstone	93522018	6-Jul-2018	SUNSTONE Logo
Trademark	Venezuela		REGISTERED	Gritstone	93572018	22-Oct-2019	GRITSTONE
Trademark	Venezuela		REGISTERED	Gritstone	93582018	22-Oct-2019	GRITSTONE
Trademark	Venezuela		REGISTERED	Gritstone	93562018	22-Oct-2019	GRITSTONE
Trademark	Venezuela		REGISTERED	Gritstone	93532018	30-Nov-2020	SUNSTONE Logo
Trademark	World Intellectual F	GRITST.109TM	Pending	Gritstone	A0077200	5-Jul-2018	SUNSTONE Logo

Schedule 5.10(a) Current Company IP

Memorial Sloan Kettering Exclusive License 1.11.2016

Exhibit B

Exclusively Licensed Know-How

The following know-how and data existing as of the Effective Date:

1. Multiple approaches and bioinformatic pipelines for prediction and modeling neo-antigen landscapes generated in the laboratory of Dr. Timothy Chan. This includes:
 - a. Existing bioinformatic tools and new algorithms that identify and compare approaches to identifying neo-antigens
 - b. Bioinformatic pipeline for accurate somatic mutation calling and neo-antigen prediction
 - c. Modifications/improvements to publicly available bioinformatic tools used in the neo-antigen analysis pipeline that were developed at MSKCC
 - d. Analysis methods to increase detection accuracy of neo-antigen peptides likely to be overrepresented in responders to immune checkpoint therapy
2. Software and expertise used to identify commonalities across neo-antigen peptides in multiple cancer types
3. Software to analyze neo-antigen microbial antigen homology and its predictive value for therapeutic response
4. Data (including immunotherapy treatment response on a segment of patients when available) and methods extracted from extensive analysis of neo-antigen space across multiple cancers including melanoma, merkel cell carcinoma, prostate cancer, pancreatic cancer, lung cancer, lymphoma, and others, provided they are not subject to any restrictions under existing agreements. Limited to data that exists as of the effective date.
5. Software pipeline (including settings, scripts, documentation, and example data sets and examples) optimized by Dr. Timothy Chan's lab to evaluate clonality from tumor samples sequenced using next generation sequencing data. The software has been used by the Chan lab to (1) identify truncal mutations, and (2) evaluate the effect of clonality on immunotherapy clinical response. The software includes parameters which have been subject to learning and will provide Gritstone with additional options to predict truncal neoantigens and their relationship to tumor clonality.
6. Expertise with T cell receptor (TCR) analysis: Data from ongoing efforts to analyze TCR repertoire from patients treated with commercially approved immune checkpoint inhibitors, provided they are not subject to any restrictions under existing agreements. Limited to data that exists as of the effective date. This includes raw and processed data on patterns of TCR clone enrichment in tumors and resistant lesions as they are acquired.
7. Experience gained from immunogenomic analysis for cooperative groups (such as SU2C): Documents on the features, density, and qualitative characteristics of neoantigen analysis. While the raw datasets cannot be passed on without the permission of SU2C, the lessons

Schedule 5.10(a) Current Company IP

observed and the features extracted will form the foundation of rules governing neoantigen functionality. This knowledge base will be incorporated into feature sets and software in the Chan lab on an ongoing basis. Both can be shared with Gritstone.

8. Full genomics (including BAM files, intermediate analysis files, and variant calls), immunomonitoring, confirmatory genotyping data, and clinical data from previously published studies in melanoma (Snyder et al., NEJM 2014) and lung cancer (Rizvi et al., Science 2015):

64 patients who received anti-CTLA4 (full exome, 100X)

19 patients who received anti-CTLA4 (full transcriptome RNAseq) 34 NSCLC patients who received anti-PDI (full exome, 100x)

Note: Exome sequencing and RNA Seq data, with associated de-identified clinical data for samples used in the above two publications will be deposited into a public database, as required by the scientific journals.

Full clinical data and clinical updates from MSK patients used in the above published studies will be shared, subject to MSK's internal approvals for transferring clinical data, and provided they are not subject to any restrictions under existing agreements. Some will have recurrence, and if these patients are sequenced at MSK, this data can be shared with Gritstone.

9. Genomics (such as BAM files, intermediate analysis files, and variant calls), immunomonitoring, confirmatory genotyping data, and clinical data from lung cancer patients receiving commercial immune checkpoint inhibitors, provided they are not subject to any restrictions under existing agreements. Limited to data that exists as of the effective date.
10. For the above items (when applicable), software deliverables may include: (a) un-compiled source code, examples, test suites, and documentation, (b) code for fitting/training any statistical or machine learning models, (c) parameter settings for tools, applications, models or algorithms and (d) processed and unprocessed results (e.g., csv files) of experiments run in order to choose said parameters, provided the data used to obtain such results was generated solely by MSK and provided they are not subject to any restrictions under existing agreements.

Exhibit C
Nonexclusively Licensed Know-How

Immunomonitoring expertise for neo-antigen function: Written protocols for immunomonitoring methods such as T cell stimulation assays, T1 and T2 MHC stabilization assays, etc., used at MSK.

The following know-how and data generated or acquired by MSK after the Effective Date:

1. Future data (including immunotherapy treatment response on patients when available) extracted from extensive analysis of neo-antigen space across multiple cancers including melanoma, merkel cell carcinoma, prostate cancer, pancreatic cancer, lung cancer, lymphoma, and others, provided they are not subject to any restrictions under any other agreements and provided they are generated solely by MSK.
2. Expertise with T cell receptor (TCR) analysis: Future data from ongoing efforts to analyze TCR repertoire from patients treated with commercially approved immune checkpoint inhibitors, provided they are not subject to any restrictions under any other agreements and provided they are generated solely by MSK. This includes raw or processed data on patterns of TCR clone enrichment in tumors and resistant lesions as they are acquired.
3. Future genomics (such as **BAM** files, intermediate analysis files, and variant calls), immunomonitoring, confirmatory genotyping data, and clinical data from lung cancer patients receiving commercial immune checkpoint inhibitors provided they are not subject to any restrictions under any other agreements and provided they are generated solely by MSK.

Note: Some or all of the future data referenced above may be generated under a separate sponsored research agreement between Licensee and MSK.

Arbutus License Agreement

**Exhibit A
Arbutus Patents**

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.001AU3	ALN- 040	Australia	LIPID CONTAINING FORMULATIONS	2014200910	3-Oct-07			Published
08050.001CAI	ALN- 040	Canada	LIPID CONTAINING FORMULATIONS	2,665,225	3-Oct-07	2,665,225	30-Jun- 15	Issued
08050.001CA2	ALN- 040	Canada	LIPID CONTAINING FORMULATIONS	2,848,238	3-Oct-07	2,848,238	19-Jul- 16	Issued
08050.001CHI	ALN- 040	Switzerland	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001CH2		Switzerland	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.001CNI	ALN- 040	China	LIPID CONTAINING FORMULATIONS	200780044738	3-Oct-07	CN101616677	22-Jul- 15	Issued
08050.001CN2	ALN- 040	China	LIPID CONTAINING FORMULATIONS	201410667578	3-Oct-07	CN105030654A		Published
08050.001DEI	ALN- 040	Germany	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001DE2		Germany	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	60 2007 048 934.2	23- Nov-16	Issued
08050.001DKI	ALN- 040	Denmark	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001DK2		Denmark	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.00IEPI	ALN- 040	European Patent Office	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001EP2	ALN- 040	European Patent Office	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IESI	ALN- 040	Spain	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	ES2430206T3	18-Sep- 13	Issued
08050.001ES2		Spain	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IFRI	ALN- 040	France	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001FR2		France	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IGBI	ALN- 040	United Kingdom	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001GB2		United Kingdom	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IIIEI	ALN- 040	Ireland	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.0011E2		Ireland	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IINI	ALN- 040	India	LIPID CONTAINING FORMULATIONS	2211/DELNP/2009	3-Oct-07			Published
08050.0011N2	ALN- 040	India	LIPID CONTAINING FORMULATIONS	255/DELNP /2015	2-Apr-09			Published
08050.00IITI	ALN- 040	Italy	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.0011T2		Italy	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IJPI	ALN- 040	Japan	LIPID CONTAINING FORMULATIONS	2009-531586	3-Oct-07	5933163	13- May-16	Issued
08050.001JP2	ALN- 040	Japan	ASSOCIATION COMPLEX AND METHOD OF FORMING SAME	2013-123084	3-Oct-07	5833597	6-Nov- 15	Issued
08050.001JP4		Japan	ASSOCIATION COMPLEX AND METHOD OF FORMING SAME	2016-219673	3-Oct-07			Published
08050.00IKRI	ALN- 040	Republic of Korea	LIPID CONTAINING FORMULATIONS	10-2009-7009148	3-Oct-07	10-1129509	16- Mar-12	Issued
08050.001MX1	ALN- 040	Mexico	LIPID CONTAINING FORMULATIONS	MX/A/2009/003548	3-Oct-07	315843	28- Nov-13	Issued
08050.001MX2	ALN- 040	Mexico	LIPID CONTAINING FORMULATIONS	MX/A/2012/006901	3-Oct-07	328243	4-Mar- 15	Issued
08050.001NL1	ALN- 040	Netherlands	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001NL2		Netherlands	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.001SE1	ALN- 040	Sweden	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued
08050.001SE2		Sweden	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00ITRI	ALN- 040	Turkey	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep- 13	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.001TR2		Turkey	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23- Nov-16	Issued
08050.00IUSI	ALN- 040	United States of America	LIPID CONTAINING FORMULATIONS	12/056,230	3-Oct-07	8,034,376	11-Oct- 11	Issued
08050.001US2	ALN- 040	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/211,094	16-Aug- 11	8,642,076	4-Feb- 14	Issued
08050.001US3	ALN- 040	United States of America	LIPID CONTAINING FORMULATIONS	14/149,496	7-Jan-14			Published
08050.002US4	ALN- 050	United States of America	SCREENING METHOD FOR SELECTED AMINO LIPID-CONTAINING COMPOSITIONS	14/928,234	30-Oct- 15			Published
08050.004AU1	ALN- 060	Australia	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	2009234266	10-Apr- 09	2009234266	19- Nov-15	Issued
08050.004EP1	ALN- 060	European Patent Office	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDO5OMOLYTIC COMPONENTS	9730178.2	10-Apr- 09			Published
08050.004JP1	ALN- 060	Japan	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	2011-504224	10-Apr- 09	5788312	7-Aug- 15	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.004US1	ALN- 060	United States of America	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	12/936,961	10-Apr- 09	8,575,123	5-Nov- 13	Issued
08050.004US2	ALN- 060	United States of America	SITE SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	14/043,682	1-Oct-13	9,345,780	24- May-16	Issued
08050.004US3	ALN- 060	United States of America	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	15/133,010	19-Apr- 16			Published
08050.007AU1	ALN- 079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313201	10-Nov- 09	2009313201	29-Sep- 16	Issued
08050.007CN1	ALN- 079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	20098015438	10-Nov- 09	ZL200980154346.4	20-Apr- 16	Issued
08050.007CN2	ALN- 079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	201610166693	10-Nov- 09	105709229		Published
08050.007EP1	ALN- 079	European Patent Office	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	9825609.2	10-Nov- 09			Published

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.007HK1	ALN- 079	Hong Kong	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	12101632.8	10-Nov- 09			Published
08050.007ILI	ALN- 079	Israel	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	212801	10-Nov- 09	212801	1-Oct- 15	Issued
08050.007JP1	ALN- 079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535775	10-Nov- 09	5832898	6-Nov- 15	Issued
08050.007MX1	ALN- 079	Mexico	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	MX/ A/2011/004973	10-Nov- 09	338780	2-May- 16	Issued
08050.007NZ2	ALN- 079	New Zealand	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	608754	10-Nov- 09	608754	1-Sep- 15	Issued
08050.007US1	ALN- 079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,283	10-Nov- 09	9,186,325	17- Nov-15	Issued
08050.007US2	ALN- 079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/884,489	15-Oct- 15			Allowed
08050.008AU1	ALN- 079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313205	10-Nov- 09	2009313205	29-Sep- 16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.008CN1	ALN- 079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	200980154380	10-Nov- 09	ZL200980154380.1	15-Jul- 15	Issued
08050.008CN2	ALN- 079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	201510351267.X	10-Nov- 09			Published
08050.0081L1	ALN- 079	Israel	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	212802	10-Nov- 09	212802	1-Oct- 15	Issued
08050.008JP1	ALN- 079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535778	10-Nov- 09	5774486	10-Jul- 15	Issued
08050.008MX1	ALN- 079	Mexico	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	MX/ A/2011/00497 4	10-Nov- 09			Allowed
08050.008NZ2	ALN- 079	New Zealand	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	608756	10-Nov- 09	608756	25- Mar-15	Issued
08050.008SG2	ALN- 079	Singapore	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	201308308-4	10-Nov- 09			Published
08050.008US1	ALN- 079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,287	10-Nov- 09	8,999,351	7-Apr- 15	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.008US2	ALN- 079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/629,991	24-Feb- 15	9,682,139	20-Jun- 17	Issued
08050.009AU1	ALN- 079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313206	10-Nov- 09	2009313206	1-Sep- 16	Issued
08050.009JP1	ALN- 079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535779	10-Nov- 09	5747282	22- May-15	Issued
08050.009US1	ALN- 079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,253	10-Nov- 09	9,220,683	29-Dec- 15	Issued
08050.009US3	ALN- 079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/953,677	30-Nov- 15			Allowed
08050.010US1	ALN- 079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,363	10-Nov- 09	8,722,082	13- May-14	Issued
08050.011AUI	ALN- 085	Australia	Improved lipid formulation for the delivery of nucleic acids	2010208035	29-Jan- 10	2010208035	6-Oct- 16	Issued
08050.011DE1		Germany	LIPID FORMULATION	10703734.3	29-Jan- 10	60 2010 040 339.4	1-Mar- 17	Issued
08050.011EPI	ALN- 085	European Patent Office	IMPROVED LIPID FORMULATION FOR THE DELIVERY OF NUCLEIC ACIDS	10703734.3	29-Jan- 10	2391343	1-Mar- 17	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.0IIFRI		France	LIPID FORMULATION	10703734.3	29-Jan- 10	2391343	1-Mar- 17	Issued
08050.0IIGBI		United Kingdom	LIPID FORMULATION	10703734.3	29-Jan- 10	2391343	1-Mar- 17	Issued
08050.0IIUSI	ALN- 085	United States of America	LIPID FORMULATION	13/147,189	29-Jan- 10			Published
08050.012AU1	ALN- 095	Australia	LIPID COMPOSITIONS	2010245869	5-May- 10	2010245869	2-Feb- 17	Issued
08050.012CN1	ALN- 095	China	LIPID COMPOSITIONS	201080020203	5-May- 10	102421417	2-Mar- 16	Issued
08050.012CN2	ALN- 095	China	LIPID COMPOSITIONS	201610127574	5-May- 10			Published
08050.012EP2	ALN- 095	European Patent Office	LIPID COMPOSITIONS	16001356.1	5-May- 10			Published
08050.012ILI	ALN- 095	Israel	LIPID COMPOSITIONS	216142	5-May- 10			Allowed
08050.012INI	ALN- 095	India	LIPID COMPOSITIONS	2330/MUMNP/2011	5-May- 10			Published
08050.012JP1	ALN- 095	Japan	LIPID COMPOSITIONS	2012-509956	5-May- 10	5769701	3-Jul- 15	Issued
08050.012NZ1	ALN- 095	New Zealand	LIPID COMPOSITIONS	596186	5-May- 10	596186	1-Jul- 14	Issued
08050.012NZ2	ALN- 095	New Zealand	LIPID COMPOSITIONS	621981	5-May- 10	621981	6-Jan- 16	Issued
08050.012SG1	ALN- 095	Singapore	LIPID COMPOSITIONS	201108113-0	5-May- 10	176553	15-Aug- 14	Issued
08050.012US1	ALN- 095	United States of America	LIPID COMPOSITIONS	13/318,600	5-May- 10	8,883,202	11- Nov-14	Issued
08050.012US2	ALN- 095	United States of America	LIPID COMPOSITIONS	14/508,805	7-Oct-14	9,694,077	4-Jul- 17	Allowed
08050.0BAUI	ALN- 096	Australia	METHODS OF DELIVERING	2010245933	5-May- 10	2010245933	29-Sep- 16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
			OLIGONUCLEOTIDES TO IMMUNE CELLS					
08050.0BEPI	ALN- 096	European Patent Office	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	10772775.2	5-May- 10			Published
08050.0BJPI	ALN- 096	Japan	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	2012-509952	5-May- 10	5889783	26-Feb- 16	Issued
08050.013JP2	ALN- 096	Japan	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	2015-203615	5-May- 10	6113809	24- Mar-17	Issued
08050.0BUSI	ALN- 096	United States of America	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	12/774,330	5-May- 10			Published
08050.014CN1	ALCN-001	China	IMPROVED LIPID FORMULATION	201080026228	10-Jun- 10	ZL201080026228.8	3-Jun- 15	Issued
08050.014CN2	ALCN-001	China	IMPROVED LIPID FORMULATION	201510246787	10-Jun- 10			Published
08050.014EA1	ALCN-001	Eurasian Patent Office	LIPID FORMULATION	201190306	10-Jun- 10	24960	30- Nov-16	Issued
08050.014EP1	ALCN-001	European Patent Office	LIPID FORMULATION	10786869.7	10-Jun- 10			Published
08050.014HK1	ALCN-001	Hong Kong	LIPID FORMULATION	12103989.3	10-Jun- 10			Published
08050.014HK2	ALCN-001	Hong Kong	IMPROVED LIPID FORMULATION	16100614.8	10-Jun- 10			Published

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.014ILI	ALCN-001	Israel	CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	216876	10-Jun- 10	216876	22-Jul- 16	Issued
08050.014INI	ALCN-001	India	LIPID FORMULATION	2646/MUMNP/2011	10-Jun- 10			Published
08050.014JP1	ALCN-001	Japan	LIPID FORMULATION	2012-515160	10-Jun- 10	5819291	9-Oct- 15	Issued
08050.014JP2	ALCN-001	Japan	IMPROVED LIPID FORMULATION	2015-188187	10-Jun- 10	6132321	28-Apr- 17	Issued
08050.014KR1	ALCN-001	Republic of Korea	IMPROVED LIPID FORMULATION	10-2012-7000749	10-Jun- 10			Allowed
08050.014MO1		Macao	IMPROVED LIPID FORMULATION	J/001862	10-Jun- 10	J/001862	10-Jun- 16	Issued
08050.014MX1	ALCN-001	Mexico	LIPID FORMULATION	MX/ A/2011/013320	10-Jun- 10	313186	11-Sep- 13	Issued
08050.014MX2	ALCN-001	Mexico	LIPID FORMULATION	MX/ A/2013/007982	10-Jun- 10	328550	17- Mar-15	Issued
08050.014MX3	ALCN-001	Mexico	LIPID FORMULATION	MX/ A/2015/0()3232	10-Jun- 09	342785	12-Oct- 16	Issued
08050.014NZ1	ALCN-001	New Zealand	IMPROVED LIPID FORMULATION	596958	10-Jun- 10	596958	1-Aug- 14	Issued
08050.014NZ2	ALCN-001	New Zealand	IMPROVED LIPID FORMULATION	622843	10-Jun- 10	622843	2-Feb- 16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.0145GI	ALCN-001	Singapore	IMPROVED LIPID FORMULATION	201109154-3	10-Jun- 10	176786	15-Jul- 14	Issued
08050.014US1	ALCN-001	United States of America	LIPID FORMULATION	12/813,448	10-Jun- 10	8,158,601	17-Apr- 12	Issued
08050.014US2	ALCN-001	United States of America	LIPID FORMULATION	13/357,856	25-Jan- 12	8,802,644	12-Aug- 14	Issued
08050.014US3	ALCN-001	United States of America	LIPID FORM ULATIONS	14/319,996	30-Jun- 14	9,394,234	19-Jul- 16	Issued
08050.014US4	ALCN-001	United States of America	LIPID FORMULATION	15/187,633	20-Jun- 16			Published
08050.015US1	ALN- 089	United States of America	METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED SIRNA	13/378,346	15-Jun- 10	9,051,567	9-Jun- 15	Issued
08050.015US2	ALN- 089	United States of America	METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED SIRNA	14/700,938	30-Apr- 15			Published
08050.016AU1	ALN- 115	Australia	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	2010328336	7-Dec- 10			Published
08050.016EP1	ALN- 115	European Patent Office	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	10836504	7-Dec- 10			Published
08050.016HK1	ALN- 115	Hong Kong	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	13104553.6	7-Dec- 10			Published
08050.016US1	ALN- 115	United States of America	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	13/514,352	7-Dec- 10	9,687,550	27-Jun- 17	Allowed

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.017 AUI	ALCN-002	Australia	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	2010330814	17-Dec- 10			Published
08050.017EP1	ALCN-002	European Patent Office	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	10838298.7	17-Dec- 10			Published
08050.017HK1	ALCN-002	Hong Kong	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	13104807	17-Dec- 10			Published
08050.017NZ1	ALCN-002	New Zealand	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	600725	17-Dec- 10	600725	1-Dec- 15	Issued
08050.017US2	ALCN-002	United States of America	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	15/152,216	11-May- 16			Published
08050.017WO1	ALCN-002	PCT	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	PCT/US2010/061058	17-Dec- 10			Completed
08050.018US2	ALN- 129	United States of America	METHODS AND COMPOSITIONS FOR DELIVERY OF ACTIVE AGENTS	15/010,747	29-Jan- 16			Published
08050.018WO1	ALN- 129	PCT	METHODS AND COMPOSITIONS FOR DELIVERY OF ACTIVE AGENTS	PCT/US2011/045963	29-Jul- 11			Completed

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.019AU1	ALN- 047	Australia	TARGETING LIPIDS	2008340355	4-Dec- 08	2008340355	7-May- 15	Issued
08050.019CA1	ALN- 047	Canada	TARGETING LIPIDS	2,708,173	4-Dec- 08	2,708,173	2-Feb- 16	Issued
08050.019DE1		Germany	TARGETING LIPIDS	8865121.1	4-Dec- 08	6.02008E+11	29- Mar-17	Issued
08050.019EP1	ALN- 047	European Patent Office	TARGETING LIPIDS	8865121.1	4-Dec- 08	2231195	29- Mar-17	Issued
08050.019FR1		France	TARGETING LIPIDS	8865121.1	4-Dec- 08	2231195	29- Mar-17	Issued
08050.019GB1		United Kingdom	TARGETING LIPIDS	8865121.1	4-Dec- 08	2231195	29- Mar-17	Issued
08050.019IN2	ALN- 047	India	TARGETING LIPIDS	2.01618E+11	29-Jun- 16			Published
08050.019JP1	ALN- 047	Japan	TARGETING LIPIDS	2010-537080	4-Dec- 08	5635412	24-Oct- 14	Issued
08050.019JP2	ALN- 047	Japan	TARGETING LIPIDS	2014-211560	4-Dec- 08			Published
08050.019JP3		Japan	TARGETING LIPIDS	2016-191166	4-Dec- 08			Published
08050.019US2	ALN- 047	United States of America	TARGETING LIPIDS	14/060,353	22-Oct- 13			Published

08155 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08155.002US1	020801-009420US	United States of America	CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF NUCLEIC ACIDS	13/381,872	30-Jun- 10	8,569,256	29- Oct-13	Issued
08155.002US2	86399-009420US	United States of America	CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF THERAPEUTIC AGENTS	14/043,700	1-Oct- 13	9,018,187	28- Apr-15	Issued
08155.002WO1	020801-009420PC	PCT	IMPROVED CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF NUCLEIC ACIDS	PCT/CA2010/001029	30-Jun- 10			Completed
08155.003EP1	020801-008110EP	European Patent Office	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	10834125.6	1-Dec- 10			Published
08155.003US1	020801-008110US	United States of America	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	13/513,548	1-Dec- 10			Published
08155.003WO1	020801-008110PC	PCT	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	PCT/CA2010/001919	1-Dec- 10			Completed
08155.014WO1	TEKM-036/01WO	PCT	POLYANIONIC POLYMERS WHICH ENHANCE FUSOGENICITY	PCT/US1999/009076	27-Apr- 99			Completed

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
LIPID ENCAPSULATED INTERFERING RNA 001960AU	Australia	Issued	2005252273 Jun 7, 2005	2005252273 Aug 11, 2011	
LIPID ENCAPSULATED INTERFERING RNA 001960CA	Canada	Issued	2569664 Jun 7, 2005	2,569,664 Jul 16, 2013	
LIPID ENCAPSULATED INTERFERING RNA 001960CN	China	Issued	2005800225822 Jun 7, 2005	ZL200580022582.2 May 5, 2010	CN1981044A Jun 13, 2007
LIPID ENCAPSULATED INTERFERING RNA 001960EP	France, Germany, Switzerland, UK	Issued	057576514 Jun 7, 2005	1766035 Dec7,2011	1766035 Mar 28, 2007
LIPID ENCAPSULATED INTERFERING RNA 001960JP	Japan	Issued	2007526139 Jun 7, 2005	4796062 Aug 5, 2011	2008-501730 Jan 24, 2008
LIPID ENCAPSULATED INTERFERING RNA 001960US	United States of America	Issued	11148152 Jun 7, 2005	7799565 Sep 21, 2010	US 2006/0008910 A Jan 12, 2006
LIPID ENCAPSULATING INTERFERING RNA 001961US	United States of America	Issued	12852379 Aug 6, 2010	9181545 Nov 10, 2015	US-2011/0060032 A1 Mar 10, 2011
LIPID ENCAPSULATING INTERFERING RNA 001962US	United States of America	Published	14936169 Nov 9, 2015		US-2016-0115477 A1 Apr 28, 2016

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710AU	Australia	Issued	2009238175 Apr 15, 2009		
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710CN	China	Issued	2009801224134 Apr 15, 2009	ZL200980122413.4 Jun 3, 2015	CN 102119217 A Jul 6, 2011
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710EP	European Patent Office	Issued	097318661 Apr 15, 2009	2279254 Jul 5, 2017	2279254 Feb 2, 2011
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710IL	Israel	Issued	208744 Apr 15, 2009	208744 March 30, 2017	
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710JP	Japan	Issued	2011504295 Apr 15, 2009		
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710NZ	New Zealand	Issued	588583 Apr 15, 2009	588583 Dec 11, 2012	

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710US	United States of America	Issued	12424367 Apr 15, 2009	8058069 Nov 15, 2011	US 2010/0130588 A1 May 27, 2010
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007720US	United States of America	Issued	13/253,917 Oct 5, 2011	8492359 Jul 23, 2013	US 2012/0183581 A1 Jul 19, 2012
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007730US	United States of America	Issued	13/928,309 Jun 26, 2013	8822668 Sep 2, 2014	
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007740US	United States of America	Issued	14/462,441 Aug 18, 2014	9,364,435 Jun 14, 2016	US-2015-0164799-A1 Jun 18, 2015
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007750US	United States of America	Published	15/164,803 May 25, 2016		US-2017-0042814-A1 Feb 16, 2017
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	German Spain France	Issued	10793484.6 Jun 30, 2010	2449114 Nov 30, 2016	2449114 May 9, 2012

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
009610EP	UK Italy				
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009610JP	Japan	Issued	2012-518706 Jun 30, 2010	5766188 Jun 26, 2015	2012-531469 Dec 10, 2012
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009610US	United States of America	Issued	12828189 Jun 30, 2010	8283333 Oct 9, 2012	US 2011/0076335 A1 Mar 31, 2011
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009630US	United States of America	Published	14/606,905 Jan 27, 2015		US-2015-0374834 A1 Dec 31, 2015
CATIONIC LIPIDS AND METHODS OF USE 002430AU	Australia	Issued	2005251403 Jun 7, 2005	2005251403 Dec 15, 2011	
CATIONIC LIPIDS AND METHODS OF USE 002430CA	Canada	Issued	2569645 Jun 7, 2005	2,569,645 Oct 28, 2014	
CATIONIC LIPIDS AND METHODS OF USE	China	Issued	2005800223808	ZL200580022380.8	CN101163796A

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
002430CN			Jun 7, 2005	Aug 29, 2012	Apr 16, 2008
CATIONIC LIPIDS AND METHODS OF USE 002430EP	France, Germany, Switzerland, UK	Issued	057548497 Jun 7, 2005	1781593 Dec 14, 2011	1781593 May 9, 2007
CATIONIC LIPIDS AND METHODS OF USE 002430HK	Hong Kong	Issued	071116841 Jun 7, 2005		1103391 Dec 21 , 2007
CATIONIC LIPIDS AND METHODS OF USE 002430JP	Japan	Issued	2007526138 Jun 7 , 2005	4764426 Jun 17, 2011	2008-501729 Jan 24, 2008
CATIONIC LIPIDS AND METHODS OF USE 002430US	United States of America	Issued	11148430 Jun 7, 2005	7745651 Jun 29, 2010	US 2006/0083780 A1 Apr 20,2006
CATIONIC LIPIDS AND METHODS OF USE 002440US	United States of America	Published	12796573 Jun 8, 2010		US 2011/0262527 A1 Oct 27, 2011
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010AU	Australia	Issued	2004272646 Sep 15, 2004	2004272646 Mar 8, 2012	
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010CA	Canada	Issued	2551022 Sep 15, 2004	2551022 Jun 4, 2013	

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010CN	China	Issued	2004800336163 Sep 15, 2004	ZL200480033616.3 Aug 15, 2012	CN1882693A Dec 20, 2006
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010EP	Switzerland Germany France UK Netherlands Sweden	Issued	047618384 Sep 15, 2004	1664316 Aug 29, 2012	1664316 Jun 7, 2006
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND NUCLEIC ACID-LIPID PARTICLES CONTAINING THE SAME 002010IL	Israel	Issued	174315 Sep 15, 2004	174315 Dec 25, 2015	
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010JP	Japan	Issued	2006526496 Sep 15, 2004	4842821 Oct 14, 2011	2007-505954 Mar 15, 2007
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF	Republic of Korea	Issued	1020067006599 Sep 15, 2004	10-1164256 Jul 3, 2012	2006-0120009 Nov 24, 2006

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
002010KR					
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010SG	Singapore	Issued	2006015044 Sep 15, 2004	120352 Jan 30, 2009	
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010US	United States of America	Issued	10942379 Sep 15, 2004	7803397 Sep 28, 2010	US 2005/0175682 A1 Aug 11, 2005
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002011NZ	New Zealand	Issued	581166 Sep 15, 2004	581166 Oct10,2011	
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002011US	United States of America	Issued	12852362 Aug 6, 2010	8936942 Jan 20, 2015	US 2011/0091525 A1 Apr 21, 2011
POLYETHYLENEGLYCOL -MODIFIED LIPID COMPOUNDS AND USES THEREOF 002012NZ	New Zealand	Issued	592917 Sep 15, 2004	592917 Mar 22, 2013	
METHOD AND APPARATUS FOR	Australia	Issued	2003245160	2003245160	

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
PRODUCING LIPOSOMES 001210AU			Jun 30, 2003	Jan 7, 2010	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210CA	Canada	Issued	2491164 Jun 30, 2003	2491164 May 8, 2012	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210EP	Austria Belgium Switzerland Germany Denmark Spain France UK Ireland Italy Netherlands Sweden	Issued	037377892 Jun 30, 2003	1519714 Oct 20, 2010	1519714 Apr 6, 2005
METHOD AND APPARATUS FOR	Japan	Issued	2004516377 Jun 30, 2003	4722481 Apr 15, 2011	538967 Dec 22, 2005

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
PRODUCING LIPOSOMES 001210JP					
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001210US	United States of America	Issued	10611274 Jun 30, 2003	7901708 Mar 8, 2011	US 2004/0142025 A1 Jul 22, 2004
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211AU	Australia	Issued	2009212823 Jun 30, 2003	2009212823 Dec 15, 2011	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211EP	German France UK	Issued	101849107 Jun 30, 2003		
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211JP	Japan	Issued	2010129251 Jun 30, 2003	5192515 Feb 8, 2013	2010-184947 Aug 26, 2010
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001211US	United States of America	Issued	12965555 Dec 10, 2010	8329070 Dec 11, 2012	US 2011/0216622 A1 Sep 8, 2011
METHOD AND APPARATUS FOR	Germany	Issued	14171001.2		2823809

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
PRODUCING LIPOSOMES 001212EP	France UK		Jun 30, 2003		Jan 14, 2015
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001213JP	Japan	Published	2016-135694 Jun 30, 2003		2016-172778 Sept 29, 2016
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001214JP	Japan	Published	2016-154302 Jun 30, 2003		2016-199585 Dec 1, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001212US	United States of America	Issued	13/684,066 Nov 21, 2012	9,492,386 Nov 15, 2016	US-2014-0044772-A1 Feb 13, 2014
LIPID COMPOSITIONS FOR NUCLEIC ACID DELIVERY 001220US	United States of America	Issued	14/304,578 Jun 13, 2014	9,504,651 Nov 29, 2016	US-2014-0294937-A1 Oct 2, 2014
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310AU	Australia	Issued	2006274413 Jul 27, 2006	2006274413 Apr 26, 2013	
SYSTEMS AND METHODS FOR	Canada	Issued	2616877	2616877	

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
MANUFACTURING LIPOSOMES 005310CA			Jul 27, 2006	Jan 28, 2014	
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310EP	European Patent Office	Allowed	067611947 Jul 27, 2006		1937213 Jul 2, 2008
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES005310JP	Japan	Issued	2008523088 Jul 27, 2006	5639338 Oct 31, 2014	2009-505957 Feb 12, 2009
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310US	United States of America	Issued	11495150 Jul 27, 2006	9005654Apr 14,2015	US 2007/0042031 A1 Feb 22, 2007
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005311CN	China	Published	201410185463.X Jul 27, 2006		CN 103989633 A Aug 20, 2014

08155 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08155.004EP1	020801-010620EP	European Patent Office	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	11731455.9	12- May-11			Published
08155.004HK1		Hong Kong	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	13110605.1	12- May-11			Published
08155.004JP2	020801-010620JP	Japan	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	2016-109673	12- May-11			Published
08155.004US2	020801-010620US	United States of America	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	15/261,570	9-Sep- 16			Published
08155.004WO1	020801-010620PC	PCT	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT/GB2011/000723	12- May-11			Completed
08155.005US1	020801-011100US	United States of America	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	13/235,253	16-Sep- 11	8,466,122	18- Jun-13	Issued
08155.007US1	020801-010110US	United States of America	NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE	13/696,999	8-Nov- 12			Published
08155.007WO1	020801-010110PC	PCT	NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT/GB2011/000722	12- May-11			Completed
08155.009CN1		China	COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	2.0148E+II	22-Jul- 14			Published
08155.009HK1		Hong Kong	COMPOSITIONS AND METHODS FOR	16107813.2	22-Jul- 14			Published

			DELIVERING MESSENGER RNA					
08155.009JP1		Japan	COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	2016-528634	22-Jul- 14			Published
08155.009US1		United States of America	COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	14/907,181	22-Jul- 14			Published
08155.009WO1		PCT	COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	PCT/IB2014/063289	22-Jul- 14			Completed
08155.019US1	TEKM- 072/0IUS	United States of America	NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	13/599,220	30- Aug-12	9,126,966	8-Sep- 15	Issued
08155.022CN1	TEKM-077 /0ICN	China	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	201380020104	22-Feb- 13			Published
08155.022EP1	TEKM-077 /0IEP	European Patent Office	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	13709634.3	22-Feb- 13			-- Published
08155.022HK1	TEKM- 077/0IHK ,	Hong Kong	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	15103551.8	22-Feb- 13			Published
08155.0221DI	TEKM- 077/0IID	Indonesia	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	P-00201405729	22-Feb- 13			Published
08155.022JP1	TEKM- 077/0IJP	Japan	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	2014-558898	22-Feb- 13			Published
08155.022MX1	TEKM- 077/0IMX	Mexico	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	MX/ A/2014/010211	22-Feb- 13			Published

08155.022NZ1	TEKM-077/0INZ	New Zealand	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	700075	22-Feb- 13	700075	30- Aug-16	Issued
08155.022PH1	TEKM-077/OIPH	Philippines	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	1-2014-501901	22-Feb- 13			Published
08155.022SG1	TEKM-077/OISG	Singapore	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	11201405157P	22-Feb- 13	11201405157P	24- Jun-16	Issued
08155.022US1	TEKM-077/OIUS	United States of America	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	14/380,536	22-Feb- 13	9,352,042	31- May- 16	Issued
08155.022US2	TEKM-077/OIUS	United States of America	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	15/150,016	9-May- 16			Published
08155.022WO1	TEKM-077/01 WO	PCT	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT/US2013/027469	22-Feb- 13			Completed
08155.022ZA1	TEKM-077/OIZA	South Africa	TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	2014/06896	22-Feb- 13		25- May- 16	Issued

Title	Country	Status	Serial No.	Patent No.	Publication No.
IP Family Number			Filing Date	Issue Date	Publication Date
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY 010010US	United States of America	Issued	13/807,288 Jun 30, 2011	9006417 Apr 14, 2015	US-2013-0303587 A1 Nov 14, 2013
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY 010020US	United States of America	Issued	14/642,452 Mar 9, 2015	9,404,127 August 2, 2016	US-2016-0032320 A1 Feb 4, 2016
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY 010030US	United States of America	Issued	15/153,487 May 12, 2016	9,518,272 Dec 13, 2016	US-2016-0251681-A1 Sep 1, 2016

Arbutus License Agreement

**Exhibit E
Non Exclusive Patents**

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.001AU3	ALN-040	Australia	LIPID CONTAINING FORMULATIONS	2014200910	3-Oct-07			Published
08050.001CA1	ALN-040	Canada	LIPID CONTAINING FORMULATIONS	2,665,225	3-Oct-07	2,665,225	30-Jun-15	Issued
08050.001CA2	ALN-040	Canada	LIPID CONTAINING FORMULATIONS	2,848,238	3-Oct-07	2,848,238	19-Jul-16	Issued
08050.001CHI	ALN-040	Switzerland	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001CH2		Switzerland	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.001CNI	ALN-040	China	LIPID CONTAINING FORMULATIONS	200780044738	3-Oct-07	2.0078E+II 101616677	22-Jul-15	Issued
08050.001CN2	ALN-040	China	LIPID CONTAINING FORMULATIONS	2.01411E+II	3-Oct-07			Published
08050.001DE1	ALN-040	Germany	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001DE2		Germany	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	602 48 595.9	23-Nov-16	Issued
08050.001DK1	ALN-040	Denmark	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001DK2		Denmark	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.00IEPI	ALN-040	European Patent Office	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001EP2	ALN-040	European Patent Office	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.00IESI	ALN-040	Spain	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	ES2430206T3	18-Sep-13	Issued
08050.001ES2		Spain	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.00IFRI	ALN-040	France	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001FR2		France	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.00IGBI	ALN-040	United Kingdom	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001GB2		United Kingdom	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.00IIIEI	ALN-040	Ireland	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001IE2		Ireland	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.00IINI	ALN-040	India	LIPID CONTAINING FORMULATIONS	2211/DELNP/2009	3-Oct-07			Published
08050.001IN2	ALN-040	India	LIPID CONTAINING FORMULATIONS	255/DELNP/2015	2-Apr-09			Published
08050.00IITI	ALN-040	Italy	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.001IT2		Italy	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.001JPI	ALN-040	Japan	LIPID CONTAINING FORMULATIONS	2009-531586	3-Oct-07	5933163	13-May-16	Issued
08050.001JP2	ALN-040	Japan	ASSOCIATION COMPLEX AND METHOD OF FORMING SAME	2013-123084	3-Oct-07	5833597	6-Nov-15	Issued
08050.001JP4		Japan	ASSOCIATION COMPLEX AND METHOD OF FORMING SAME	2016-219673	3-Oct-07			Published
08050.00IKRI	ALN-040	Republic of Korea	LIPID CONTAINING FORMULATIONS	10-2009-7009148	3-Oct-07	10-1129509	16-Mar-12	Issued
08050.00IMXI	ALN-040	Mexico	LIPID CONTAINING FORMULATIONS	MX/ A/2009/003548	3-Oct-07	315843	28-Nov-13	Issued
08050.001MX2	ALN-040	Mexico	LIPID CONTAINING FORMULATIONS	MX/A/2012/006901	3-Oct-07	328243	4-Mar-15	Issued
08050.00INLI	ALN-040	Netherlands	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001NL2		Netherlands	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.001SE1	ALN-040	Sweden	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued
08050.001SE2		Sweden	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.001TRI	ALN-040	Turkey	LIPID CONTAINING FORMULATIONS	7853756	3-Oct-07	2068886	18-Sep-13	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.001TR2		Turkey	LIPID CONTAINING FORMULATIONS	13004405	3-Oct-07	2695608	23-Nov-16	Issued
08050.001US1	ALN-040	United States of America	LIPID CONTAINING FORMULATIONS	12/056,230	3-Oct-07	8,034,376	11-Oct-11	Issued
08050.001US2	ALN-040	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/211,094	16-Aug-11	8,642,076	4-Feb-14	Issued
08050.001US3	ALN-040	United States of America	LIPID CONTAINING FORMULATIONS	14/149,496	7-Jan-14			Published
08050.002US4	ALN-050	United States of America	SCREENING METHOD FOR SELECTED AMINO LIPID-CONTAINING COMPOSITIONS	14/928,234	30-Oct-15			Published
08050.004AU1	ALN-060	Australia	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	2009234266	10-Apr-09	2009234266	19-Nov-15	Issued
08050.004EP1	ALN-060	European Patent Office	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	9730178.2	10-Apr-09			Published
08050.004JP1	ALN-060	Japan	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY	2011-504224	10-Apr-09	5788312	7-Aug-15	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
			COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS					
08050.004US1	ALN-060	United States of America	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	12/936,961	10-Apr-09	8,575,123	5-Nov-13	Issued
08050.004US2	ALN-060	United States of America	SITE SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	14/043,682	1-Oct-13	9,345,780	24-May-16	Issued
08050.004US3	ALN-060	United States of America	SITE-SPECIFIC DELIVERY OF NUCLEIC ACIDS BY COMBINING TARGETING LIGANDS WITH ENDOSOMOLYTIC COMPONENTS	15/133,010	19-Apr-16			Published
08050.007 AU1	ALN-079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313201	10-Nov-09	2009313201	29-Sep-16	Issued
08050.007CN1	ALN-079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	200980154380	10-Nov-09	ZL200980154346.4	20-Apr-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.007CN2	ALN-079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	20161016669	10-Nov-09			Published
08050.007EP1	ALN-079	European Patent Office	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	9825609.2	10-Nov-09			Published
08050.007HK1	ALN-079	Hong Kong	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	12101632.8	10-Nov-09			Published
08050.007ILI	ALN-079	Israel	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	212801	10-Nov-09	212801	1-Oct-15	Issued
08050.007JP1	ALN-079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535775	10-Nov-09	5832898	6-Nov-15	Issued
08050.007MX1	ALN-079	Mexico	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	MX/ A/2011/004973	10-Nov-09	338780	2-May-16	Issued
08050.007NZ2	ALN-079	New Zealand	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	608754	10-Nov-09	608754	1-Sep-15	Issued
08050.007US1	ALN-079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,283	10-Nov-09	9,186,325	17-Nov-15	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.007US2	ALN-079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/884,489	15-Oct-15			Allowed
08050.008AU1	ALN-079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313205	10-Nov-09	2009313205	29-Sep-16	Issued
08050.008CN1	ALN-079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	200980154346	10-Nov-09	ZL200980154380.1	15-Jul-15	Issued
08050.008CN2	ALN-079	China	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	201510351267.x	10-Nov-09			Published
08050.008IL1	ALN-079	Israel	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	212802	10-Nov-09	212802	1-Oct-15	Issued
08050.008JP1	ALN-079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535778	10-Nov-09	5774486	10-Jul-15	Issued
08050.008MX1	ALN-079	Mexico	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	MX/ A/2011/00497 4	10-Nov-09			Allowed
08050.008NZ2	ALN-079	New Zealand	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	608756	10-Nov-09	608756	25-Mar-15	Issued
08050.008SG2	ALN-079	Singapore	NOVEL LIPIDS AND COMPOSITIONS FOR	201308308-4	10-Nov-09			Published

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
			THE DELIVERY OF THERAPEUTICS					
08050.008US1	ALN-079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,287	10-Nov-09	8,999,351	7-Apr-15	Issued
08050.008US2	ALN-079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/629,991	24-Feb-15	9,682,139	20-Jun-17	Issued
08050.009AU1	ALN-079	Australia	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2009313206	10-Nov-09	2009313206	1-Sep-16	Issued
08050.009JP1	ALN-079	Japan	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	2011-535779	10-Nov-09	5747282	22-May-15	Issued
08050.009US1	ALN-079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,253	10-Nov-09	9,220,683	29-Dec-15	Issued
08050.009US3	ALN-079	United States of America	NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	14/953,677	30-Nov-15			Allowed
08050.010US1	ALN-079	United States of America	LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	13/128,363	10-Nov-09	8,722,082	13-May-14	Issued
08050.011AU1	ALN-085	Australia	Improved lipid formulation for the	2010208035	29-Jan-10	2010208035	6-Oct-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
			delivery of nucleic acids					
08050.0IIDEI		Germany	LIPID FORMULATION	10703734.3	29-Jan-10	60 2010 040 339.4	1-Mar-17	Issued
08050.0IIEPI	ALN-085	European Patent Office	IMPROVED LIPID FORMULATION FOR THE DELIVERY OF NUCLEIC ACIDS	10703734.3	29-Jan-10	2391343	1-Mar-17	Issued
08050.0IIFRI		France	LIPID FORMULATION	10703734.3	29-Jan-10	2391343	1-Mar-17	Issued
08050.0IIGBI		United Kingdom	LIPID FORMULATION	10703734.3	29-Jan-10	2391343	1-Mar-17	Issued
08050.0IIUSI	ALN-085	United States of America	LIPID FORMULATION	13/147,189	29-Jan-10			Published
08050.012AU1	ALN-095	Australia	LIPID COMPOSITIONS	2010245869	5-May-10	2010245869	2-Feb-17	Issued
08050.012CN1	ALN-095	China	LIPID COMPOSITIONS	201080020203	5-May-10	102421417	2-Mar-16	Issued
08050.012CN2	ALN-095	China	LIPID COMPOSITIONS	201610127574	5-May-10			Published
08050.012EP2	ALN-095	European Patent Office	LIPID COMPOSITIONS	16001356.1	5-May-10			Published
08050.012IL1	ALN-095	Israel	LIPID COMPOSITIONS	216142	5-May-10			Allowed
08050.012IN1	ALN-095	India	LIPID COMPOSITIONS	2330/MUMNP/2011	5-May-10			Published
08050.012JP1	ALN-095	Japan	LIPID COMPOSITIONS	2012-509956	5-May-10	5769701	3-Jul-15	Issued
08050.012NZ1	ALN-095	New Zealand	LIPID COMPOSITIONS	596186	5-May-10	596186	1-Jul-14	Issued
08050.012NZ2	ALN-095	New Zealand	LIPID COMPOSITIONS	621981	5-May-10	621981	6-Jan-16	Issued
08050.012SG1	ALN-095	Singapore	LIPID COMPOSITIONS	201108113-0	5-May-10	176553	15-Aug-14	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.012US1	ALN-095	United States of America	LIPID COMPOSITIONS	13/318,600	5-May-10	8,883,202	11-Nov-14	Issued
08050.012US2	ALN-095	United States of America	LIPID COMPOSITIONS	14/508,805	7-Oct-14	9,694,077	4-Jul-17	Allowed
08050.013AU1	ALN-096	Australia	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	2010245933	5-May-10	2010245933	29-Sep-16	Issued
08050.013EP1	ALN-096	European Patent Office	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	10772775.2	5-May-10			Published
08050.013JP1	ALN-096	Japan	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	2012-509952	5-May-10	5889783	26-Feb-16	Issued
08050.013JP2	ALN-096	Japan	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	2015-203615	5-May-10	6113809	24-Mar-17	Issued
08050.013US1	ALN-096	United States of America	METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	12/774,330	5-May-10			Published
08050.014CN1	ALCN-001	China	IMPROVED LIPID FORMULATION	201080026228	10-Jun-10	ZL201080026228.8	3-Jun-15	Issued
08050.014CN2	ALCN-001	China	IMPROVED LIPID FORMULATION	201510246787	10-Jun-10			Published
08050.014EA1	ALCN-001	Eurasian Patent Office	LIPID FORMULATION	201190306	10-Jun-10	24960	30-Nov-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.014EP1	ALCN-001	European Patent Office	LIPID FORMULATION	10786869.7	10-Jun-10			Published
08050.014HK1	ALCN-001	Hong Kong	LIPID FORMULATION	12103989.3	10-Jun-10			Published
08050.014HK2	ALCN-001	Hong Kong	IMPROVED LIPID FORMULATION	16100614.8	10-Jun-10			Published
08050.014ILI	ALCN-001	Israel	CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	216876	10-Jun-10	216876	22-Jul-16	Issued
08050.014INI	ALCN-001	India	LIPID FORMULATION	2646/MUMNP/2011	10-Jun-10			Published
08050.014JP1	ALCN-001	Japan	LIPID FORMULATION	2012-515160	10-Jun-10	5819291	9-Oct-15	Issued
08050.014JP2	ALCN-001	Japan	IMPROVED LIPID FORMULATION	2015-188187	10-Jun-10	6132321	28-Apr-17	Issued
08050.014KR1	ALCN-001	Republic of Korea	IMPROVED LIPID FORMULATION	10-2012-7000749	10-Jun-10			Allowed
08050.014MO1		Macao	IMPROVED LIPID FORMULATION	J/001862	10-Jun-10	J/001862	10-Jun-16	Issued
08050.014MX1	ALCN-001	Mexico	LIPID FORMULATION	MX/ A/2011/013320	10-Jun-10	313186	11-Sep-13	Issued
08050.014MX2	ALCN-001	Mexico	LIPID FORMULATION	MX/ A/2013/007982	10-Jun-10	328550	17-Mar-15	Issued
08050.014MX3	ALCN-001	Mexico	LIPID FORMULATION	MX/A/2015/003232	10-Jun-09	342785	12-Oct-16	Issued

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.014NZ1	ALCN-001	New Zealand	IMPROVED LIPID FORMULATION	596958	10-Jun-10	596958	1-Aug-14	Issued
08050.014NZ2	ALCN-001	New Zealand	IMPROVED LIPID FORMULATION	622843	10-Jun-10	622843	2-Feb-16	Issued
08050.014SG1	ALCN-001	Singapore	IMPROVED LIPID FORMULATION	201109154-3	10-Jun-10	176786	15-Jul-14	Issued
08050.014US1	ALCN-001	United States of America	LIPID FORMULATION	12/813,448	10-Jun-10	8,158,601	17-Apr-12	Issued
08050.014US2	ALCN-001	United States of America	LIPID FORMULATION	13/357,856	25-Jan-12	8,802,644	12-Aug-14	Issued
08050.014US3	ALCN-001	United States of America	LIPID FORMULATIONS	14/319,996	30-Jun-14	9,394,234	19-Jul-16	Issued
08050.014US4	ALCN-001	United States of America	LIPID FORMULATION	15/187,633	20-Jun-16			Published
08050.015US1	ALN-089	United States of America	METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED SIRNA	13/378,346	15-Jun-10	9,051,567	9-Jun-15	Issued
08050.015US2	ALN-089	United States of America	METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED SIRNA	14/700,938	30-Apr-15			Published
08050.016AU1	ALN-115	Australia	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	2010328336	7-Dec-10			Published
08050.016EP1	ALN-115	European Patent Office	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	10836504	7-Dec-10			Published

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08050.016HK1	ALN-115	Hong Kong	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	13104553.6	7-Dec-10			Published
08050.016US1	ALN-115	United States of America	COMPOSITIONS FOR NUCLEIC ACID DELIVERY	13/514,352	7-Dec-10	9,687,550	27-Jun-17	Allowed
08050.017AU1	ALCN-002	Australia	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	2010330814	17-Dec-10			Published
08050.017EP1	ALCN-002	European Patent Office	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	10838298.7	17-Dec-10			Published
08050.017HK1	ALCN-002	Hong Kong	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	13104807	17-Dec-10			Published
08050.017NZ1	ALCN-002	New Zealand	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	600725	17-Dec-10	600725	1-Dec-15	Issued
08050.017US2	ALCN-002	United States of America	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	15/152,216	11-May-16			Published
08050.017WO1	ALCN-002	PCT	METHODS AND COMPOSITIONS FOR DELIVERY OF NUCLEIC ACIDS	PCT/US2010/061058	17-Dec-10			Completed
08050.018US2	ALN-129	United States of America	METHODS AND COMPOSITIONS FOR	15/010,747	29-Jan-16			Published

08050 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
			DELIVERY OF ACTIVE AGENTS					
08050.018WO1	ALN-129	PCT	METHODS AND COMPOSITIONS FOR DELIVERY OF ACTIVE AGENTS	PCT/US2011/045963	29-Jul-11			Completed
08050.019AU1	ALN-047	Australia	TARGETING LIPIDS	2008340355	4-Dec-08	2008340355	7-May-15	Issued
08050.019CA1	ALN-047	Canada	TARGETING LIPIDS	2,708,173	4-Dec-08	2,708,173	2-Feb-16	Issued
08050.019DE1		Germany	TARGETING LIPIDS	8865121.1	4-Dec-08	6.02008E+11	29-Mar-17	Issued
08050.019EP1	ALN-047	European Patent Office	TARGETING LIPIDS	8865121.1	4-Dec-08	2231195	29-Mar-17	Issued
08050.019FR1		France	TARGETING LIPIDS	8865121.1	4-Dec-08	2231195	29-Mar-17	Issued
08050.019GB1		United Kingdom	TARGETING LIPIDS	8865121.1	4-Dec-08	2231195	29-Mar-17	Issued
08050.019IN2	ALN-047	India	TARGETING LIPIDS	2.01618E+11	29-Jun-16			Published
08050.019JP1	ALN-047	Japan	TARGETING LIPIDS	2010-537080	4-Dec-08	5635412	24-Oct-14	Issued
08050.019JP2	ALN-047	Japan	TARGETING LIPIDS	2014-211560	4-Dec-08			Published
08050.019JP3		Japan	TARGETING LIPIDS	2016-191166	4-Dec-08			Published
08050.019US2	ALN-047	United States of America	TARGETING LIPIDS	14/060,353	22-Oct-13			Published

08155 Matters								
VHP REF.	REF.	COUNTRY	TITLE	APPLN NO.	FILING DATE	PATENT NO.	ISSUE DATE	STATUS
08155.002US1	020801-009420US	United States of America	CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF NUCLEIC ACIDS	13/381,872	30-Jun-10	8,569,256	29-Oct-13	Issued
08155.002US2	86399-009420US	United States of America	CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF THERAPEUTIC AGENTS	14/043,700	1-Oct-13	9,018,187	28-Apr-15	Issued
08155.002WO1	020801-009420PC	PCT	IMPROVED CATIONIC LIPIDS AND METHODS FOR THE DELIVERY OF NUCLEIC ACIDS	PCT/CA2010/001029	30-Jun-10			Completed
08155.003EP1	020801-008110EP	European Patent Office	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	10834125.6	1-Dec-10			Published
08155.003US1	020801-008110US	United States of America	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	13/513,548	1-Dec-10			Published
08155.003WO1	020801-008110PC	PCT	SNALP FORMULATIONS CONTAINING ANTIOXIDANTS	PCT/CA2010/001919	1-Dec-10			Completed
08155.014WO1	TEKM-036/01WO	PCT	POLYANIONIC POLYMERS WHICH ENHANCE FUSOGENICITY	PCT/US1999/009076	27-Apr-99			Completed

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
LIPID ENCAPSULATED INTERFERING RNA 001960AU	Australia	Issued	2005252273 Jun 7, 2005	2005252273 Aug 11, 2011	
LIPID ENCAPSULATED INTERFERING RNA 001960CA	Canada	Issued	2569664 Jun 7, 2005	2,569,664 Jul 16, 2013	
LIPID ENCAPSULATED INTERFERING RNA 001960CN	China	Issued	2005800225822 Jun 7, 2005	ZL200580022582.2 May 5, 2010	CN1981044A Jun 13, 2007
LIPID ENCAPSULATED INTERFERING RNA 001960EP	France, Germany, Switzerland, UK	Issued	057576514 Jun 7, 2005	1766035 Dec 7, 2011	1766035 Mar 28, 2007
LIPID ENCAPSULATED INTERFERING RNA 001960JP	Japan	Issued	2007526139 Jun 7, 2005	4796062 Aug 5, 2011	2008-501730 Jan 24, 2008
LIPID ENCAPSULATED INTERFERING RNA 001960US	United States of America	Issued	11148152 Jun 7, 2005	7799565 Sep 21, 2010	US 2006/0008910 A1 Jan 12, 2006
LIPID ENCAPSULATING INTERFERING RNA 001961US	United States of America	Issued	12852379 Aug 6, 2010	9181545 Nov 10, 2015	US-2011/0060032 A1 Mar 10, 2011
LIPID ENCAPSULATING INTERFERING RNA 001962US	United States of America	Published	14936169 Nov 9, 2015		US-2016-0115477 A1 Apr 28, 2016

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710AU	Australia	Issued	2009238175 Apr 15,2009		
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710CN	China	Issued	2009801224134 Apr 15, 2009	ZL200980122413.4 Jun 3, 2015	CN 102119217 A Jul6,2011
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710EP	European Patent Office	Issued	097318661 Apr 15, 2009	2279254 Jul 5, 2017	2279254 Feb 2, 2011
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 0077101L	Israel	Issued	208744 Apr 15, 2009	208744 March 30, 2017	
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710JP	Japan	Issued	2011504295 Apr 15,2009		
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710NZ	New Zealand	Issued	588583 Apr 15, 2009	588583 Dec 11, 2012	
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007710US	United States of America	Issued	12424367 Apr 15, 2009	8058069 Nov 15,2011	US 2010/0130588 A1 May 27, 2010
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007720US	United States of America	Issued	13/253,917 Oct 5, 2011	8492359 Jul 23, 2013	US 2012/0183581 A1 Jul 19, 2012

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007730US	United States of America	Issued	13/928,309 Jun 26, 2013	8822668 Sep 2, 2014	
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007740US	United States of America	Issued	14/462,441 Aug 18, 2014	9,364,435 Jun 14, 2016	US-2015-0164799-A1 Jun 18, 2015
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY 007750US	United States of America	Published	15/164,803 May 25, 2016		US-2017-0042814-A1 Feb 16, 2017
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009610EP	Germany Spain France Italy UK	Issued	10793484.6 Jun 30, 2010	2449114 Nov 30, 2016	2449114 May 9, 2012
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009610JP	Japan	Issued	2012-518706 Jun 30, 2010	5766188 Jun 26, 2015	2012-531469 Dec 10, 2012
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS 009610US	United States of America	Issued	12828189 Jun 30, 2010	8283333 Oct 9, 2012	US 2011/0076335 A1 Mar 31, 2011
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	United States of America	Published	14/606,905 Jan 27, 2015		US-2015-0374834 A1 Dec 31, 2015

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
009630US					
CATIONIC LIPIDS AND METHODS OF USE 002430AU	Australia	Issued	2005251403 Jun 7, 2005	2005251403 Dec 15, 2011	
CATIONIC LIPIDS AND METHODS OF USE 002430CA	Canada	Issued	2569645 Jun 7, 2005	2,569,645 Oct 28, 2014	
CATIONIC LIPIDS AND METHODS OF USE 002430CN	China	Issued	2005800223808 Jun 7, 2005	ZL200580022380.8 Aug 29, 2012	CN101163796A Apr16,2008
CATIONIC LIPIDS AND METHODS OF USE 002430EP	France, Germany, Switzerland, UK	Issued	057548497 Jun 7, 2005	1781593 Dec 14, 2011	1781593 May 9, 2007
CATIONIC LIPIDS AND METHODS OF USE 002430HK	Hong Kong	Issued	071116841 Jun 7, 2005		1103391 Dec 21, 2007
CATIONIC LIPIDS AND METHODS OF USE 002430JP	Japan	Issued	2007526138 Jun 7, 2005	4764426 Jun 17, 2011	2008-501729 Jan 24, 2008
CATIONIC LIPIDS AND METHODS OF USE 002430US	United States of America	Issued	11148430 Jun 7, 2005	7745651 Jun 29, 2010	US 2006/0083780 A1 Apr 20,2006
CATIONIC LIPIDS AND METHODS OF USE	United States of America	Published	12796573 Jun 8, 2010		US 2011/0262527 A1 Oct 27, 2011

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
002440US					
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010AU	Australia	Issued	2004272646 Sep 15, 2004	2004272646 Mar 8, 2012	
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010CA	Canada	Issued	2551022 Sep 15, 2004	2551022 Jun 4, 2013	
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010CN	China	Issued	2004800336163 Sep 15, 2004	ZL200480033616.3 Aug 15, 2012	CN1882693A Dec 20, 2006
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010EP	Switzerland Germany France UK Netherlands Sweden	Issued	047618384 Sep 15, 2004	1664316 Aug 29, 2012	1664316 Jun 7, 2006
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND NUCLEIC ACID-LIPID PARTICLES CONTAINING THE SAME 0020101L	Israel	Issued	174315 Sep 15, 2004	174315 Dec 25, 2015	
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010JP	Japan	Issued	2006526496 Sep 15, 2004	4842821 Oct 14, 2011	2007-505954 Mar 15, 2007

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010KR	Republic of Korea	Issued	1020067006599 Sep 15, 2004	10-1164256 Jul 3, 2012	2006-0120009 Nov 24, 2006
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010SG	Singapore	Issued	2006015044 Sep 15, 2004	120352 Jan 30, 2009	
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002010US	United States of America	Issued	10942379 Sep 15, 2004	7803397 Sep 28, 2010	US 2005/0175682 A1 Aug 11, 2005
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002011NZ	New Zealand	Issued	581166 Sep 15, 2004	581166 Oct 10, 2011	
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002011US	United States of America	Issued	12852362 Aug 6, 2010	8936942 Jan 20, 2015	US 2011/0091525 A1 Apr 21, 2011
POLYETHYLENEGLYCOL - MODIFIED LIPID COMPOUNDS AND USES THEREOF 002012NZ	New Zealand	Issued	592917 Sep 15, 2004	592917 Mar 22, 2013	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210AU	Australia	Issued	2003245160 Jun 30, 2003	2003245160 Jan 7, 2010	

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210CA	Canada	Issued	2491164 Jun 30, 2003	2491164 May 8, 2012	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210EP	Austria Belgium Switzerland Germany Denmark Spain France UK Ireland Italy Netherlands Sweden	Issued	037377892 Jun 30, 2003	1519714 Oct 20, 2010	1519714 Apr 6, 2005
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001210JP	Japan	Issued	2004516377 Jun 30, 2003	4722481 Apr 15,2011	538967 Dec 22, 2005
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001210US	United States of America	Issued	10611274 Jun 30, 2003	7901708 Mar 8, 2011	US 2004/0142025 A1 Jul 22, 2004
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211AU	Australia	Issued	2009212823 Jun 30, 2003	2009212823 Dec 15,2011	
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211EP	Germany France UK	Issued	101849107 Jun 30, 2003		
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001211JP	Japan	Issued	2010129251 Jun 30, 2003	5192515 Feb 8, 2013	2010-184947 Aug 26, 2010

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001211US	United States of America	Issued	12965555 Dec 10, 2010	8329070 Dec 11, 2012	US 2011/0216622 A1 Sep 8, 2011
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001212EP	Germany France UK	Issued	14171001.2 Jun 30, 2003		2823809 Jan 14, 2015
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001213JP	Japan	Published	2016-135694 Jun 30, 2003		2016-172778 Sept 29, 2016
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES 001214JP	Japan	Published	2016-154302 Jun 30, 2003		2016-199585 Dec 1, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS 001212US	United States of America	Issued	13/684,066 Nov 21, 2012	9,492,386 Nov 15, 2016	US-2014-0044772-A 1 Feb 13, 2014
LIPID COMPOSITIONS FOR NUCLEIC ACID DELIVERY 001220US	United States of America	Issued	14/304,578 Jun 13, 2014	9,504,651 Nov 29, 2016	US-2014-0294937-A1 Oct 2, 2014
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310AU	Australia	Issued	2006274413 Jul 27, 2006	2006274413 Apr 26, 2013	
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310CA	Canada	Issued	2616877 Jul 27, 2006	2616877 Jan 28, 2014	

Title IP Family Number	Country	Status	Serial No. Filing Date	Patent No. Issue Date	Publication No. Publication Date
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310EP	European Patent Office	Allowed	067611947 Jul 27, 2006		1937213 Jul 2, 2008
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310JP	Japan	Issued	2008523088 Jul 27, 2006	5639338 Oct 31,2014	2009-505957 Feb 12, 2009
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 005310US	United States of America	Issued	11495150 Jul 27, 2006	9005654 Apr 14,2015	US 2007/0042031 A1 Feb 22, 2007
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES 05311CN	China	Published	201410185463.X Jul 27, 2006		CN 103989633 A Aug 20, 2014

Genevant Sciences GmbH – License Agreement – Standalone – October 21, 2020

**Exhibit E
Genevant Patents**

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID ENCAPSULATED INTERFERING RNA	Australia	Issued	2004257373	Jul 16, 2004	2004257373	Jul 7, 2011
LIPID ENCAPSULATED INTERFERING RNA	Canada	Issued	2,532,228	Jul 16, 2004	2,532,228	Feb 14, 2017
LIPID ENCAPSULATED INTERFERING RNA	China	Issued	200480025168.2	Jul 16, 2004	ZL200480025168.2	Jun 27, 2012
LIPID ENCAPSULATED INTERFERING RNA	Germany France Italy UK	Issued	04761574.5	Jul 16, 2004	1648519	Oct 8, 2014
LIPID ENCAPSULATED INTERFERING RNA	Hong Kong	Issued	09103668.6	Jul 16, 2004	1123751	Apr 12, 2013
NUCLEIC ACID-LIPID PARTICLES COMPRISING INTERFERING RNA, COMPOSITIONS COMPRISING SAME AND USES THEREOF	Israel	Issued	173052	Jul 16, 2004	173052	Jul 1, 2015
LIPID ENCAPSULATED INTERFERING RNA	Japan	Issued	2006-519738	Jul 16, 2004	4951338	Mar 16, 2012
LIPID ENCAPSULATED INTERFERING RNA	Republic of Korea	Issued	102006700099 2	Jul 16, 2004	10-1168440	Jul 18, 2012
LIPID ENCAPSULATED INTERFERING RNA	New Zealand	Issued	544637	Jul 16, 2004	544637	Aug 12, 2010
LIPID ENCAPSULATED INTERFERING RNA	Singapore	Issued	2006001150	Jul 16, 2004	118824 [WO 2005/007196]	Aug 31, 2009
LIPID ENCAPSULATED INTERFERING RNA	Germany Spain France UK	Issued	12191154.9	Jul 16, 2004	2567693	Oct 21, 2015
NUCLEIC ACID-LIPID PARTICLES COMPRISING INTERFERING RNA, COMPOSITIONS COMPRISING SAME AND USES THEREOF	Israel	Issued	237721	Jul 16, 2004	237721	May 29, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID ENCAPSULATED INTERFERING RNA	Japan	Issued	2011-010545	Jul 16, 2004	5784914	Jul 31, 2015
LIPID ENCAPSULATED INTERFERING RNA	New Zealand	Issued	583623	Jul 16, 2004	583623	Jan 9, 2012
LIPID ENCAPSULATED INTERFERING RNA	Singapore	Issued	2009051772	Jul 16, 2004	154530	May 31, 2013
LIPID ENCAPSULATED INTERFERING RNA	Singapore	Issued	201303316-2	Jul 16, 2004	190613	Nov 15, 2016
LIPID ENCAPSULATED INTERFERING RNA	Japan	Issued	2015-094544	Jul 16, 2004	5977394	Jul 29, 2016
LIPID ENCAPSULATED INTERFERING RNA	United States of America	Issued	11/426,907	Jun 27, 2006	7,982,027	Jul 19, 2011
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Australia	Issued	2009238175	Apr 15, 2009	2009238175	Mar 27, 2014
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Canada	Published	2,721,333	Apr 15, 2009		
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	China	Issued	200980122413.4	Apr 15, 2009	ZL200980122413.4	Jun 3, 2015
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Austria Belgium Denmark Finland France Germany Greece Hungary Iceland Ireland Italy Luxembourg Monaco Netherlands Norway Poland Portugal Spain Sweden Switzerland	Issued	09731866.1	Apr 15, 2009	2279254	Jul 5, 2017

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
	Turkey UK					
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Israel	Issued	208744	Apr 15, 2009	208744	Mar 30, 2017
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Japan	Issued	2011-504295	Apr 15, 2009	5475753	Feb 14, 2014
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	New Zealand	Issued	588583	Apr 15, 2009	588583	Dec 11, 2012
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	12/424,367	Apr 15, 2009	8,058,069	Nov 15, 2011
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/253,917	Oct 5, 2011	8,492,359	Jul 23, 2013
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/928,309	Jun 26, 2013	8,822,668	Sep 2, 2014
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/462,441	Aug 18, 2014	9,364,435	Jun 14, 2016
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Published	16/422,441	May 24, 2019		
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	Canada	Published	2,767,127	Jun 30, 2010		
NUCLEIC ACID-LIPID PARTICLES, COMPOSITIONS COMPRISING THE SAME AND USES THEREOF	Israel	Pending	257382	Jun 30, 2010		
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	United States of America	Issued	14/606,905	Jan 27, 2015	9,878,042	Jan 30, 2018
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	United States of America	Published	16/109,130	Aug 22, 2018		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/807,288	Jun 30, 2011	9,006,417	Apr 14, 2015
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/642,452	Mar 9, 2015	9,404,127	Aug 2, 2016
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	15/153,487	May 12, 2016	9,518,272	Dec 13, 2016
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Published	15/892,314	Feb 8, 2018		
CATIONIC LIPIDS AND METHODS OF USE	France, Germany, Switzerland, UK	Issued	05754849.7	Jun 7, 2005	1781593	Dec 14, 2011
CATIONIC LIPIDS AND METHODS OF USE	Japan	Issued	2007-526138	Jun 7, 2005	4764426	Jun 17, 2011
CATIONIC LIPIDS AND METHODS OF USE	United States of America	Issued	11/148,430	Jun 7, 2005	7,745,651	Jun 29, 2010
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Australia	Issued	2004272646	Sep 15, 2004	2004272646	Mar 8, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Canada	Issued	2,551,022	Sep 15, 2004	2,551,022	Jun 4, 2013
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	China	Issued	200480033616.3	Sep 15, 2004	ZL200480033616.3	Aug 15, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Switzerland Germany France UK Netherlands Sweden	Issued	04761838.4	Sep 15, 2004	1664316	Aug 29, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND NUCLEIC ACID-LIPID PARTICLES	Israel	Issued	174315	Sep 15, 2004	174315	Dec 25, 2015

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	India	Published	803KOLNP200 6	Sep 15, 2004		
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Japan	Issued	2006-526496	Sep 15, 2004	4842821	Oct 14, 2011
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Republic of Korea	Issued	102006700659 9	Sep 15, 2004	10-1164256	Jul 3, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Singapore	Issued	2006015044	Sep 15, 2004	120352	Jan 30, 2009
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	United States of America	Issued	10/942,379	Sep 15, 2004	7,803,397	Sep 28, 2010
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS	Israel	Issued	241209	Sep 15, 2004	241209	May 29, 2019
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	New Zealand	Issued	581166	Sep 15, 2004	581166	Oct 10, 2011
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	United States of America	Issued	12/852,362	Aug 6, 2010	8,936,942	Jan 20, 2015
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS	Israel	Published	264517	Sep 15, 2004		
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	New Zealand	Issued	592917	Sep 15, 2004	592917	Mar 22, 2013
LIPID COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/304,578	Jun 13, 2014	9,504,651	Nov 29, 2016
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Australia	Issued	2003245160	Jun 30, 2003	2003245160	Jan 7, 2010
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Canada	Issued	2,491,164	Jun 30, 2003	2,491,164	May 8, 2012
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Austria Belgium Switzerland Germany	Issued	03737789.2	Jun 30, 2003	1519714	Oct 20, 2010

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
	Denmark Spain France UK Ireland Italy Netherlands Sweden					
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Japan	Issued	2004-516377	Jun 30, 2003	4722481	Apr 15, 2011
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Issued	10/611,274	Jun 30, 2003	7,901,708	Mar 8, 2011
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Australia	Issued	2009212823	Jun 30, 2003	2009212823	Dec 15, 2011
METHOD FOR PRODUCING LIPOSOMES	Germany France UK	Issued	10184910.7	Jun 30, 2003	2338478	Jul 23, 2014
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Japan	Issued	2010-129251	Jun 30, 2003	5192515	Feb 8, 2013
LIPOSOMAL APPARATUS AND MANUFACTURING METHOD	United States of America	Issued	12/965,555	Dec 10, 2010	8,329,070	Dec 11, 2012
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Germany France UK	Issued	14171001.2	Jun 30, 2003	2823809	Nov 2, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Issued	13/684,066	Nov 21, 2012	9,492,386	Nov 15, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Pending	16/576,587	Sep 19, 2019		
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Australia	Issued	2006274413	Jul 27, 2006	2006274413	Apr 26, 2013
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Canada	Issued	2,616,877	Jul 27, 2006	2,616,877	Jan 28, 2014

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Switzerland Germany France UK Ireland Sweden	Issued	06761194.7	Jul 27, 2006	1937213	Oct 25, 2017
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Japan	Issued	2008-523088	Jul 27, 2006	5639338	Oct 31, 2014
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	United States of America	Issued	11/495,150	Jul 27, 2006	9,005,654	Apr 14, 2015
LIPID CONTAINING FORMULATIONS	Australia	Issued	2014200910	Oct 3, 2007	2014200910	May 25, 2017
LIPID CONTAINING FORMULATIONS	Australia	Pending	2020202816	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Canada	Issued	2,665,225	Oct 3, 2007	2,665,225	Jun 30, 2015
LIPID CONTAINING FORMULATIONS	Canada	Pending	2,927,045	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Switzerland	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	China	Issued	200780044738. 6	Oct 3, 2007	200780044738.6	Jul 22, 2015
LIPID CONTAINING FORMULATIONS	China	Pending	201910154334 7	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Germany	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Denmark	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	European Patent Office	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	European Patent Office	Pending	16002442.8	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Spain	Issued	07853756.0	Oct 3, 2007	ES2430206T3	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	France	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID CONTAINING FORMULATIONS	United Kingdom	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Ireland	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	India	Issued	2211/DELNP/2009	Oct 3, 2007	296912	May 21, 2018
LIPID CONTAINING FORMULATIONS	India	Pending	255/DELNP/2015	Apr 2, 2009		
LIPID CONTAINING FORMULATIONS	Italy	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Japan	Issued	2009-531586	Oct 3, 2007	5933163	May 13, 2016
COMPOUND FOR FORMULATION	Japan	Pending	2018-236147	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Republic of Korea	Issued	10-2009- 7009148	Oct 3, 2007	10-1129509	Mar 16, 2012
LIPID CONTAINING FORMULATIONS	Mexico	Issued	MX/A/2012/006901	Oct 3, 2007	328243	Mar 4, 2015
LIPID CONTAINING FORMULATIONS	Mexico	Pending	MX/A/2019/003005	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Netherlands	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	United States of America	Completed	60/828,022	Oct 3, 2006		
LIPID CONTAINING FORMULATIONS	United States of America	Completed	60/870,457	Dec 18, 2006		
LIPID CONTAINING FORMULATIONS	Sweden	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Turkey	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/211,094	Aug 16, 2011	8,642,076	Feb 4, 2014
LIPID CONTAINING FORMULATIONS	United States of America	Pending	16/713,712	Dec 13, 2019		
LIPID CONTAINING FORMULATIONS	PCT	Completed	PCT/US2007/080331	Oct 3, 2007		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Austria	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313201	Nov 10, 2009	2009313201	Sep 29, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019283906	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Belgium	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,135	Nov 10, 2009	2,743,135	May 21, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,039,251	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Switzerland	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	200980154346.4	Nov 10, 2009	ZL200980154346.4	Apr 20, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	201610166693.0	Nov 10, 2009	ZL201610166693.0	Jul 28, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Pending	202010679918.9	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Czech Republic	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	09825609.2	Nov 10, 2009	602009051656.6	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	17001160.5	Nov 10, 2009	602009062208.0	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Denmark	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Eurasian Patent Office	Pending	201170553	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Estonia	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20177336.3	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Spain	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Finland	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Issued	12101632.8	Nov 10, 2009	HK1161096	Aug 31, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	18108332.0	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hungary	Issued	09825609.2	Nov 10, 2009	E037082	Apr 4, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Ireland	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Issued	212801	Nov 10, 2009	212801	Oct 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	238885	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	247647	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Issued	1948/KOLNP/2 011	Nov 10, 2009	314151	Jun 13, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Pending	201838025189	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Iceland	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Italy	Issued	09825609.2	Nov 10, 2009	502018000015791	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535775	Nov 10, 2009	5832898	Nov 6, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2015-210531	Nov 10, 2009	6324937	Apr 20, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2018-75270	Nov 10, 2009	6636560	Dec 27, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2019-228435	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Issued	10-2011-7013225	Nov 10, 2009	10-204721	Nov 4, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Pending	10-2020-7023715	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Liechtenstein	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Luxembourg	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Latvia	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Monaco	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Malta	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2011/00 4973	Nov 10, 2009	338780	May 2, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2014/00 9612	Nov 10, 2009	363082	Mar 7, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Pending	MX/A/2019/00 2632	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Netherlands	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Netherlands	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Norway	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Issued	608754	Nov 10, 2009	608754	Sep 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Pending	768125	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Poland	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Portugal	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/113,179	Nov 10, 2008		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/154,350	Feb 20, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/171,439	Apr 21, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/185,438	Jun 9, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/225,898	Jul 15, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/234,098	Aug 14, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Sweden	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Issued	201308310-0	Nov 10, 2009	196186	Mar 4, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Pending	1020190189T	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Turkey	Issued	09825609.2	Nov 10, 2009	2355851	Apr 4, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,283	Nov 10, 2009	9,186,325	Nov 17, 2015
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/884,489	Oct 15, 2015	9,707,292	Jul 18, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Pending	15/617,520	Jun 8, 2017		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/063927	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313205	Nov 10, 2009	2009313205	Sep 29, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2016208434	Nov 10, 2009	2016208434	May 3, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019206116	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,136	Nov 10, 2009	2,743,136	Feb 26, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,029,724	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Switzerland	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	200980154380.1	Nov 10, 2009	ZL200980154380.1	Jul 15, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Pending	202010810599.0	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	16002656.3	Nov 10, 2009	602009061039.2	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Eurasian Patent Office	Pending	201170554	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20150151.7	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	17108959.3	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	42020015295.7	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Issued	212802	Nov 10, 2009	212802	Oct 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Allowed	247646	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	277157	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Issued	1947/KOLNP/2 011	Nov 10, 2009	318555	Aug 20, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Pending	201838029870	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535778	Nov 10, 2009	5774486	Jul 10, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2015-132563	Nov 10, 2009	6273234	Jan 12, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2017-190496	Nov 10, 2009	6726149	Jun 30, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2020-109623	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Issued	10-2017- 7020863	Nov 10, 2009	10-1967417	Apr 3, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Pending	10-2019- 7009606	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2011/00 4974	Nov 10, 2009	347860	May 16, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2014/00 9962	Nov 10, 2009	351819	Oct 30, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2017/01 0204	Nov 10, 2009	359674	Oct 5, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Pending	MX/a/2018/012 161	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Issued	608756	Nov 10, 2009	608756	Mar 25, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Pending	751216	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Issued	201308308-4	Nov 10, 2009	195653	Mar 4, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Pending	10201901106W	Nov 10, 2009		
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,287	Nov 10, 2009	8,999,351	Apr 7, 2015
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/629,991	Feb 24, 2015	9,682,139	Jun 20, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	15/603,069	May 23, 2017	10,117,941	Nov 6, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Allowed	16/123,209	Sep 6, 2018		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Pending	17/065,208	Oct 7, 2020		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/063931	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313206	Nov 10, 2009	2009313206	Sep 1, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019222922	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,139	Nov 10, 2009	2,743,139	Apr 2, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,033,577	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	09825614.2	Nov 10, 2009	602009048610.1	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	17000240.6	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20196362.6	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	18105652.8	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535779	Nov 10, 2009	5747282	May 22, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2016-22540	Nov 10, 2009	6189461	Aug 10, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2017-146352	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2019-39951	Nov 10, 2009		
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,253	Nov 10, 2009	9,220,683	Dec 29, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/953,677	Nov 30, 2015	9,764,036	Sep 19, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Allowed	15/671,809	Aug 8, 2017		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Pending	17/065,296	Oct 7, 2020		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/063933	Nov 10, 2009		
LIPID COMPOSITIONS	Australia	Issued	2010245869	May 5, 2010	2010245869	Feb 2, 2017
LIPID COMPOSITIONS	Australia	Allowed	2018264026	May 5, 2010		
LIPID COMPOSITIONS	Australia	Pending	2020203972	May 5, 2010		
LIPID COMPOSITIONS FOR THE DELIVERY OF THERAPEUTIC AGENTS	Canada	Issued	2,760,776	May 5, 2010	2,760,776	Jul 9, 2019
LIPID COMPOSITIONS FOR THE DELIVERY OF THERAPEUTIC AGENTS	Canada	Pending	3,042,927	May 5, 2010		
LIPID COMPOSITIONS	China	Issued	201080020203.7	May 5, 2010	201080020203.7	Mar 2, 2016
LIPID COMPOSITIONS	China	Pending	201610127574.4	May 5, 2010		
LIPID COMPOSITIONS	Eurasian Patent Office	Issued	201190242	May 5, 2010	035438	Jun 15, 2020
LIPID COMPOSITIONS	Eurasian Patent Office	Pending	202090677	May 5, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID COMPOSITIONS	European Patent Office	Pending	16001356.1	May 5, 2010		
LIPID COMPOSITIONS	Israel	Issued	216142	May 5, 2010	216142	Aug 30, 2017
LIPID COMPOSITIONS	Israel	Pending	251846	May 5, 2010		
LIPID COMPOSITIONS	India	Pending	2330/MUMNP/2011	May 5, 2010		
LIPID COMPOSITIONS	Japan	Issued	2012-509956	May 5, 2010	5769701	Jul 3, 2015
LIPID COMPOSITIONS	Japan	Issued	2015-75095	May 5, 2010	6491014	Mar 8, 2019
LIPID COMPOSITIONS	Japan	Issued	2017-111612	May 5, 2010	6466512	Jan 18, 2019
LIPID COMPOSITIONS	Japan	Issued	2019-1746	May 5, 2010	6746726	Aug 7, 2020
LIPID COMPOSITIONS	Japan	Pending	2020-133109	May 5, 2010		
LIPID COMPOSITIONS	Republic of Korea	Pending	10-2011- 7026392	May 5, 2010		
LIPID COMPOSITIONS	Republic of Korea	Pending	10-2018- 7023298	May 5, 2010		
LIPID COMPOSITIONS	New Zealand	Issued	596186	May 5, 2010	596186	Jul 1, 2014
LIPID COMPOSITIONS	New Zealand	Issued	621981	May 5, 2010	621981	Jan 6, 2016
LIPID COMPOSITIONS	New Zealand	Issued	711583	May 5, 2010	711583	Jul 4, 2017
LIPID COMPOSITIONS	New Zealand	Pending	763389	May 5, 2010		
LIPID COMPOSITIONS	United States of America	Completed	61/175,770	May 5, 2009		
LIPID COMPOSITIONS	United States of America	Completed	61/299,291	Jan 28, 2010		
LIPID COMPOSITIONS	Singapore	Issued	201108113-0	May 5, 2010	176553	Aug 15, 2014
LIPID COMPOSITIONS	Singapore	Pending	10201402054U	May 5, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID COMPOSITIONS	Singapore	Pending	10201911942U	May 5, 2010		
LIPID COMPOSITIONS	United States of America	Issued	13/318,600	May 5, 2010	8,883,202	Nov 11, 2014
LIPID COMPOSITIONS	United States of America	Issued	14/508,805	Oct 7, 2014	9,694,077	Jul 4, 2017
LIPID COMPOSITIONS	United States of America	Issued	15/594,244	May 12, 2017	10,456,473	Oct 29, 2019
LIPID COMPOSITIONS	United States of America	Pending	16/593,661	Oct 4, 2019		
LIPID COMPOSITIONS	PCT	Completed	PCT/US2010/033777	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Australia	Pending	2019250141	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Canada	Pending	3,045,126	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	European Patent Office	Pending	20150010.5	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Japan	Pending	2019-209596	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/175,777	May 5, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/234,045	Aug 14, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/242,761	Sep 15, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/251,991	Oct 15, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/258,848	Nov 6, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Pending	15/900,618	Feb 20, 2018		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	PCT	Completed	PCT/US2010/033747	May 5, 2010		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	United States of America	Completed	61/187,242	Jun 15, 2009		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	United States of America	Pending	16/036,550	Jul 16, 2018		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	PCT	Completed	PCT/US2010/038679	Jun 15, 2010		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Australia	Issued	2010328336	Dec 7, 2010	2010328336	Jun 15, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Canada	Issued	2,783,372	Dec 7, 2010	2,783,372	Jul 16, 2019
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Germany	Issued	10836504.0	Dec 7, 2010	602010043789.2	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	European Patent Office	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	France	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United Kingdom	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Hong Kong	Issued	13104553.6	Dec 7, 2010	1177429	May 18, 2018
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/334,398	May 13, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/267,419	Dec 7, 2009		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/384,303	Sep 19, 2010		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/514,352	Dec 7, 2010	9,687,550	Jun 27, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	PCT	Completed	PCT/US2010/059206	Dec 7, 2010		
LIPID FORMULATION	Albania	Issued	10786869.7	Jun 10, 2010	7456	Jul 18, 2018
LIPID FORMULATION	Austria	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
Improved lipid formulation	Australia	Issued	2010259984	Jun 10, 2010	2010259984	Jun 22, 2017
Improved lipid formulation	Australia	Issued	2017202702	Jun 10, 2010	2017202702	Aug 15, 2019
Improved lipid formulation	Australia	Pending	2019204984	Jun 10, 2010		
LIPID FORMULATION	Belgium	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Bulgaria	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED CATIONIC LIPID OF FORMULA 1	Canada	Issued	2,764,609	Jun 10, 2010	2,764,609	Oct 2, 2018
IMPROVED CATIONIC LIPID OF FORMULA I	Canada	Pending	3,014,827	Jun 10, 2010		
LIPID FORMULATION	Switzerland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	China	Issued	201080026228.8	Jun 10, 2010	ZL201080026228.8	Jun 3, 2015
IMPROVED LIPID FORMULATION	China	Issued	201510246787.4	Jun 10, 2010	ZL201510246787.4	Jun 22, 2018
LIPID FORMULATION	Cyprus	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Czech Republic	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	Germany	Issued	10786869.7	Jun 10, 2010	602010052039.0	Jul 18, 2018
Improved lipid formulation	Denmark	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Eurasian Patent Office	Issued	201190306	Jun 10, 2010	024960	Nov 30, 2016
LIPID FORMULATION	Eurasian Patent Office	Issued	201690312	Jun 10, 2010	028860	Jan 31, 2018
IMPROVED LIPID FORMULATION	Eurasian Patent Office	Pending	201791744	Jun 10, 2010		
LIPID FORMULATION	Estonia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	European Patent Office	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	European Patent Office	Pending	18174274.3	Jun 10, 2010		
LIPID FORMULATION	Spain	Issued	10786869.7	Jun 10, 2010	ES 2689168 T3	Jul 18, 2018
LIPID FORMULATION	Finland	Issued	10786869.7	Jun 10, 2010	2440183	Aug 14, 2018
LIPID FORMULATION	France	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	United Kingdom	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Greece	Issued	10786869.7	Jun 10, 2010	3096820	Jul 18, 2018
LIPID FORMULATION	Hong Kong	Issued	12103989.3	Jun 10, 2010	HK1163506	May 24, 2019
IMPROVED LIPID FORMULATION	Hong Kong	Issued	16100614.8	Jun 10, 2010	HK1212620	Sep 13, 2019
IMPROVED LIPID FORMULATION	Hong Kong	Pending	19121598.7	Jun 10, 2010		
LIPID FORMULATION	Croatia	Issued	10786869.7	Jun 10, 2010	P20181221	Jul 18, 2018
LIPID FORMULATION	Hungary	Issued	10786869.7	Jun 10, 2010	E038796	Jul 18, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	Ireland	Issued	10786869.7	Jun 10, 2010	2440183	Aug 18, 2018
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	Israel	Issued	216876	Jun 10, 2010	216876	Jul 22, 2016
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	Israel	Allowed	244945	Jun 10, 2010		
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING	Israel	Pending	274826	Jun 10, 2010		
SAME AND USE THEREOF IN THE PREPAR...						
LIPID FORMULATION	India	Issued	2646/MUMNP/2011	Jun 10, 2010	300692	Sep 4, 2018
LIPID FORMULATION	India	Pending	201828029183	Jun 10, 2010		
LIPID FORMULATION	Iceland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Italy	Issued	10786869.7	Jun 10, 2010	502018000028216	Jul 18, 2018
LIPID FORMULATION	Japan	Issued	2012-515160	Jun 10, 2010	5819291	Oct 9, 2015
IMPROVED LIPID FORMULATION	Japan	Issued	2015-188187	Jun 10, 2010	6132321	Apr 28, 2017
IMPROVED LIPID FORMULATION	Japan	Issued	2017-78802	Jun 10, 2010	6359719	Jun 29, 2018
IMPROVED LIPID FORMULATION	Japan	Issued	2018-115962	Jun 10, 2010	6592144	Sep 27, 2019
IMPROVED LIPID FORMULATION	Republic of Korea	Issued	10-2012- 7000749	Jun 10, 2010	10-1766408	Aug 2, 2017
IMPROVED LIPID FORMULATION	Republic of Korea	Issued	10-2017- 7021633	Jun 10, 2010	10-1987962	Jun 4, 2019
IMPROVED LIPID FORMULATION	Republic of Korea	Pending	10-2019- 7015933	Jun 10, 2010		
IMPROVED LIPID FORMULATION	Republic of Korea	Pending	10-2020- 700445	Jun 10, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	Lithuania	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Luxembourg	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Latvia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Monaco	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Fmr. Yug. Rep. of Macedonia	Issued	10786869.7	Jun 10, 2010	909196	Jul 18, 2018
IMPROVED LIPID FORMULATION	Macao	Issued	J/001862	Jun 10, 2010	J/001862	Jun 10, 2016
LIPID FORMULATION	Malta	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Mexico	Issued	MX/A/2011/01 3320	Jun 10, 2010	313186	Sep 11, 2013
LIPID FORMULATION	Mexico	Issued	MX/A/2013/00 7982	Jun 10, 2010	328550	Mar 17, 2015
LIPID FORMULATION	Mexico	Issued	MX/A/2015/00 3232	Jun 10, 2009	342785	Oct 12, 2016
LIPID FORMULATION	Mexico	Issued	MX/a/2016/013 324	Jun 10, 2009	367665	Aug 30, 2019
LIPID FORMULATION	Mexico	Pending	MX/A/2019/01 0340	Jun 10, 2009		
LIPID FORMULATION	Netherlands	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Norway	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	New Zealand	Issued	596958	Jun 10, 2010	596958	Aug 1, 2014
IMPROVED LIPID FORMULATION	New Zealand	Issued	622843	Jun 10, 2010	622843	Feb 2, 2016
IMPROVED LIPID FORMULATION	New Zealand	Issued	712719	Jun 10, 2010	712719	Jul 4, 2017
IMPROVED LIPID FORMULATION	New Zealand	Pending	763433	Jun 10, 2010		
LIPID FORMULATION	Poland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Portugal	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	United States of America	Completed	61/185,800	Jun 10, 2009		
LIPID FORMULATION	United States of America	Completed	61/244,834	Sep 22, 2009		
LIPID FORMULATION	Romania	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Sweden	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	Singapore	Issued	201109154-3	Jun 10, 2010	176786	Jul 15, 2014
IMPROVED LIPID FORMULATION	Singapore	Issued	10201403054S	Jun 10, 2010	10201403054S	Jun 25, 2020
IMPROVED LIPID FORMULATION	Singapore	Pending	10201912450X	Jun 10, 2010		
LIPID FORMULATION	Slovenia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Slovakia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	San Marino	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Turkey	Issued	10786869.7	Jun 10, 2010	TR 2018/11076 T4	Jul 18, 2018
LIPID FORMULATION	United States of America	Issued	12/813,448	Jun 10, 2010	8,158,601	Apr 17, 2012
LIPID FORMULATION	United States of America	Issued	13/357,856	Jan 25, 2012	8,802,644	Aug 12, 2014
LIPID FORMULATIONS	United States of America	Issued	14/319,996	Jun 30, 2014	9,394,234	Jul 19, 2016
LIPID FORMULATION	PCT	Completed	PCT/US2010/038224	Jun 10, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Canada	Pending	2,799,091	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Pending	11731455.9	May 12, 2011		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Pending	13110605.1	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Pending	2020-117454	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/334,104	May 12, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/384,050	Sep 17, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Pending	16/787,912	Feb 11, 2020		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/GB2011/000723	May 12, 2011		
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/334,096	May 12, 2010		
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE	United States of America	Issued	13/696,999	May 12, 2011	10,077,232	Sep 18, 2018
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/GB2011/000722	May 12, 2011		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Canada	Pending	2,919,226	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Switzerland	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	China	Pending	201911293252.7	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Germany	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	European Patent Office	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	European Patent Office	Pending	19213048.2	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	France	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United Kingdom	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Hong Kong	Pending	16107813.2	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Hong Kong	Pending	42020013074.8	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Japan	Issued	2016-528634	Jul 22, 2014	6620093	Nov 22, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Japan	Pending	2019-207786	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Liechtenstein	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Netherlands	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Completed	61/857,573	Jul 23, 2013		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Pending	14/907,181	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	PCT	Completed	PCT/IB2014/06 3289	Jul 22, 2014		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Austria	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Australia	Issued	2013222179	Feb 22, 2013	2013222179	Dec 7, 2017

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Belgium	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Bulgaria	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Brazil	Pending	BR1120140208 24-7	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Canada	Allowed	2,865,412	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Switzerland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	China	Pending	201910048388.5	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Cyprus	Issued	13709634.3	Feb 22, 2013	CY1121232	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Czech Republic	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Germany	Issued	13709634.3	Feb 22, 2013	602013044438.2	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Denmark	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Pending	18193953.9	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Spain	Issued	13709634.3	Feb 22, 2013	2702874	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Finland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	France	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United Kingdom	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Greece	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Issued	15103551.8	Feb 22, 2013	HK1202855	Jul 19, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Pending	19131449.1	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Croatia	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hungary	Issued	13709634.3	Feb 22, 2013	E041494	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Indonesia	Issued	P-00201405729	Feb 22, 2013	IDP000058501	May 9, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Ireland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Israel	Allowed	234266	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Israel	Pending	276924	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	India	Issued	2018/KOLNP/2 014	Feb 22, 2013	312892	May 20, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Iceland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Italy	Issued	13709634.3	Feb 22, 2013	502018000038561	Oct 3, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Issued	2014-558898	Feb 22, 2013	6275655	Jan 19, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Pending	2017-236756	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Republic of Korea	Issued	10-2014-7026598	Feb 22, 2013	10-2075810	Feb 4, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Republic of Korea	Pending	10-2020-7003227	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Liechtenstein	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Lithuania	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Luxembourg	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Monaco	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Malta	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Mexico	Issued	MX/A/2014/01 0211	Feb 22, 2013	356904	Jun 7, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Mexico	Pending	MX/A/2018/00 6897	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Netherlands	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Norway	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	New Zealand	Issued	700075	Feb 22, 2013	700075	Aug 30, 2016

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Philippines	Issued	1-2014-501901	Feb 22, 2013	1-2014-501901	May 29, 2017
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Poland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Portugal	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/602,990	Feb 24, 2012		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Romania	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Serbia	Issued	13709634.3	Feb 22, 2013	58077	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Russian Federation	Issued	2014138476	Feb 22, 2013	2718053	Mar 30, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Russian Federation	Pending	2020111326	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Sweden	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Singapore	Issued	11201405157P	Feb 22, 2013	11201405157P	Jun 24, 2016
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Slovenia	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Slovakia	Issued	13709634.3	Feb 22, 2013	E 29887	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Turkey	Issued	13709634.3	Feb 22, 2013	TR 2018 18796 T4	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Ukraine	Issued	A201410393	Feb 22, 2013	120026	Sep 25, 2019

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Issued	14/380,536	Feb 22, 2013	9,352,042	May 31, 2016
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Issued	15/150,016	May 9, 2016	10561732	Feb 18, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Pending	16/776,950	Jan 30, 2020		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/US2013/027469	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	South Africa	Issued	2014/06896	Feb 22, 2013	2014/06896	May 25, 2016
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Completed	62/171,148	Jun 4, 2015		
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Issued	15/570,103	Jun 6, 2016	10626393	Apr 21, 2020
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Pending	16/819,766	Mar 16, 2020		
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	PCT	Completed	PCT/US2016/036069	Jun 6, 2016		
Compositions and Methods for Delivering Messenger RNA	Australia	Pending	2017286980	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Canada	Pending	3,034,681	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	China	Pending	201780049850.2	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	European Patent Office	Pending	17740546.1	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Hong Kong	Pending	19123669.4	Jun 30, 2017		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
Compositions and Methods for Delivering Messenger RNA	Japan	Pending	2018-567951	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Mexico	Pending	MX/a/2018/016 389	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	United States of America	Completed	62/357,189	Jun 30, 2016		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Completed	62/375,292	Aug 15, 2016		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Pending	16/312,162	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	PCT	Completed	PCT/US2017/0 40446	Jun 30, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Australia	Pending	2017379901	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Canada	Pending	3,047,326	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	European Patent Office	Pending	17884567.3	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Hong Kong	Pending	62020003825.0	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Japan	Pending	2019-533337	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	United States of America	Completed	62/437,537	Dec 21, 2016		
METHODS FOR AMELIORATING INFUSION REACTIONS	United States of America	Pending	16/470,490	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	PCT	Completed	PCT/US2017/067664	Dec 20, 2017		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
CATIONIC LIPIDS CONTAINING SILICON	United States of America	Completed	62/758,108	Nov 9, 2018		
CATIONIC LIPIDS CONTAINING SILICON	PCT	Pending	PCT/US2019/060556	Nov 8, 2019		
NEGATIVELY CHARGED PEG- LIPID CONJUGATES	United States of America	Completed	62/758,099	Nov 9, 2018		
NEGATIVELY CHARGED PEG- LIPID CONJUGATES	PCT	Pending	PCT/US2019/060518	Nov 8, 2019		
LIPID NANOPARTICLE FORMULATIONS	United States of America	Completed	62/758,088	Nov 9, 2018		
LIPID NANOPARTICLE FORMULATIONS	PCT	Pending	PCT/US2019/060582	Nov 8, 2019		
LIPID NANOPARTICLE FORMULATIONS	United States of America	Completed	62/758,055	Nov 9, 2018		
LIPID NANOPARTICLE FORMULATIONS	PCT	Pending	PCT/US2019/060595	Nov 8, 2019		
LIPID NANOPARTICLES	United States of America	Pending	62/839,452	Apr 26, 2019		
LIPID NANOPARTICLES	United States of America	Pending	62/867,098	Jun 26, 2019		
LIPID NANOPARTICLES	PCT	Pending	PCT/US2020/029907	Apr 24, 2020		
CATIONIC LIPIDS FOR LIPID NANOPARTICLE DELIVERY OF THERAPEUTICS TO HEPATIC STELL...	United States of America	Pending	62/975,116	Feb 11, 2020		
CATIONIC LIPIDS FOR LIPID NANOPARTICLE DELIVERY OF THERAPEUTICS TO HEPATIC STELL...	United States of America	Pending	62/990,939	Mar 17, 2020		
LIPID NANOPARTICLES FOR DELIVERING THERAPEUTICS TO LUNGS	United States of America	Pending	63/050,594	July 10, 2020		

Exhibit D

Genevant Patents

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID ENCAPSULATED INTERFERING RNA	Canada	Issued	2,532,228	Jul 16, 2004	2,532,228	Feb 14, 2017
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Australia	Issued	2009238175	Apr 15, 2009	2009238175	Mar 27, 2014
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Canada	Issued	2,721,333	Apr 15, 2009	2,721,333	Dec 1, 2020
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	China	Issued	200980122413.4	Apr 15, 2009	ZL200980122413.4	Jun 3, 2015
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Austria Belgium Denmark Finland France Germany Greece Hungary Iceland Ireland Italy Luxembourg Monaco Netherlands Norway Poland Portugal Spain					
Sweden Switzerland Turkey UK		Issued	09731866.1	Apr 15, 2009	2279254	Jul 5, 2017
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Israel	Issued	208744	Apr 15, 2009	208744	Mar 30, 2017
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	Japan	Issued	2011-504295	Apr 15, 2009	5475753	Feb 14, 2014
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	New Zealand	Issued	588583	Apr 15, 2009	588583	Dec 11, 2012
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	12/424,367	Apr 15, 2009	8,058,069	Nov 15, 2011
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/253,917	Oct 5, 2011	8,492,359	Jul 23, 2013
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/928,309	Jun 26, 2013	8,822,668	Sep 2, 2014
LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/462,441	Aug 18, 2014	9,364,435	Jun 14, 2016
NOVEL LIPID FORMULATIONS FOR NUCLEIC ACID DELIVERY	United States of America	Pending	17/094,724	Nov 10, 2020		
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	Canada	Published	2,767,127	Jun 30, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NUCLEIC ACID-LIPID PARTICLES, COMPOSITIONS COMPRISING THE SAME AND USES THEREOF	Israel	Pending	257382	Jun 30, 2010		
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	United States of America	Issued	14/606,905	Jan 27, 2015	9,878,042	Jan 30, 2018
NOVEL LIPID FORMULATIONS FOR DELIVERY OF THERAPEUTIC AGENTS TO SOLID TUMORS	United States of America	Published	16/109,130	Aug 22, 2018		
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/807,288	Jun 30, 2011	9,006,417	Apr 14, 2015
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/642,452	Mar 9, 2015	9,404,127	Aug 2, 2016
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	15/153,487	May 12, 2016	9,518,272	Dec 13, 2016
NON-LIPOSOMAL SYSTEMS FOR NUCLEIC ACID DELIVERY	United States of America	Published	15/892,314	Feb 8, 2018		
CATIONIC LIPIDS AND METHODS OF USE	France, Germany, Switzerland, UK	Issued	05754849.7	Jun 7, 2005	1781593	Dec 14, 2011
CATIONIC LIPIDS AND METHODS OF USE	Japan	Issued	2007-526138	Jun 7, 2005	4764426	Jun 17, 2011
CATIONIC LIPIDS AND METHODS OF USE	United States of America	Issued	11/148,430	Jun 7, 2005	7,745,651	Jun 29, 2010
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Australia	Issued	2004272646	Sep 15, 2004	2004272646	Mar 8, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Canada	Issued	2,551,022	Sep 15, 2004	2,551,022	Jun 4, 2013
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	China	Issued	200480033616.3	Sep 15, 2004	ZL200480033616.3	Aug 15, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Switzerland Germany France UK Netherlands Sweden	Issued	04761838.4	Sep 15, 2004	1664316	Aug 29, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND NUCLEIC ACID-LIPID PARTICLES	Israel	Issued	174315	Sep 15, 2004	174315	Dec 25, 2015
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	India	Published	803KOLNP2006	Sep 15, 2004		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Japan	Issued	2006-526496	Sep 15, 2004	4842821	Oct 14, 2011
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Republic of Korea	Issued	1020067006599	Sep 15, 2004	10-1164256	Jul 3, 2012
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	Singapore	Issued	2006015044	Sep 15, 2004	120352	Jan 30, 2009
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	United States of America	Issued	10/942,379	Sep 15, 2004	7,803,397	Sep 28, 2010
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS	Israel	Issued	241209	Sep 15, 2004	241209	May 29, 2019
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	New Zealand	Issued	581166	Sep 15, 2004	581166	Oct 10, 2011
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	United States of America	Issued	12/852,362	Aug 6, 2010	8,936,942	Jan 20, 2015
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS	Israel	Published	264517	Sep 15, 2004		
POLYETHYLENEGLYCOL- MODIFIED LIPID COMPOUNDS AND USES THEREOF	New Zealand	Issued	592917	Sep 15, 2004	592917	Mar 22, 2013
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Australia	Issued	2003245160	Jun 30, 2003	2003245160	Jan 7, 2010
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Canada	Issued	2,491,164	Jun 30, 2003	2,491,164	May 8, 2012
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Austria Belgium Switzerland Germany Denmark Spain France UK Ireland Italy Netherlands Sweden	Issued	03737789.2	Jun 30, 2003	1519714	Oct 20, 2010
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Japan	Issued	2004-516377	Jun 30, 2003	4722481	Apr 15, 2011
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Issued	10/611,274	Jun 30, 2003	7,901,708	Mar 8, 2011
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Australia	Issued	2009212823	Jun 30, 2003	2009212823	Dec 15, 2011

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
METHOD FOR PRODUCING LIPOSOMES	Germany France UK	Issued	10184910.7	Jun 30, 2003	2338478	Jul 23, 2014
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Japan	Issued	2010-129251	Jun 30, 2003	5192515	Feb 8, 2013
LIPOSOMAL APPARATUS AND MANUFACTURING METHOD	United States of America	Issued	12/965,555	Dec 10, 2010	8,329,070	Dec 11, 2012
METHOD AND APPARATUS FOR PRODUCING LIPOSOMES	Germany France UK	Issued	14171001.2	Jun 30, 2003	2823809	Nov 2, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Issued	13/684,066	Nov 21, 2012	9,492,386	Nov 15, 2016
LIPOSOMAL APPARATUS AND MANUFACTURING METHODS	United States of America	Pending	16/576,587	Sep 19, 2019		
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Australia	Issued	2006274413	Jul 27, 2006	2006274413	Apr 26, 2013
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Canada	Issued	2,616,877	Jul 27, 2006	2,616,877	Jan 28, 2014
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Switzerland Germany France UK Ireland Sweden	Issued	06761194.7	Jul 27, 2006	1937213	Oct 25, 2017
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	Japan	Issued	2008-523088	Jul 27, 2006	5639338	Oct 31, 2014
SYSTEMS AND METHODS FOR MANUFACTURING LIPOSOMES	United States of America	Issued	11/495,150	Jul 27, 2006	9,005,654	Apr 14, 2015
LIPID CONTAINING FORMULATIONS	Australia	Issued	2014200910	Oct 3, 2007	2014200910	May 25, 2017
LIPID CONTAINING FORMULATIONS	Australia	Pending	2020202816	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Canada	Issued	2,665,225	Oct 3, 2007	2,665,225	Jun 30, 2015
LIPID CONTAINING FORMULATIONS	Canada	Pending	2,927,045	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Switzerland	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	China	Issued	200780044738.6	Oct 3, 2007	200780044738.6	Jul 22, 2015
LIPID CONTAINING FORMULATIONS	China	Pending	2019101543347	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Germany	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Denmark	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	European Patent Office	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	European Patent Office	Pending	16002442.8	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Spain	Issued	07853756.0	Oct 3, 2007	ES2430206T3	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	France	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	United Kingdom	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Ireland	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	India	Issued	2211/DELNP/20 09	Oct 3, 2007	296912	May 21, 2018
LIPID CONTAINING FORMULATIONS	India	Pending	255/DELNP/201 5	Apr 2, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID CONTAINING FORMULATIONS	Italy	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Japan	Issued	2009-531586	Oct 3, 2007	5933163	May 13, 2016
COMPOUND FOR FORMULATION	Japan	Pending	2020-182378	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Republic of Korea	Issued	10-2009- 7009148	Oct 3, 2007	10-1129509	Mar 16, 2012
LIPID CONTAINING FORMULATIONS	Mexico	Issued	MX/A/2012/006 901	Oct 3, 2007	328243	Mar 4, 2015
LIPID CONTAINING FORMULATIONS	Mexico	Pending	MX/A/2019/003 005	Oct 3, 2007		
LIPID CONTAINING FORMULATIONS	Netherlands	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	United States of America	Completed	60/828,022	Oct 3, 2006		
LIPID CONTAINING FORMULATIONS	United States of America	Completed	60/870,457	Dec 18, 2006		
LIPID CONTAINING FORMULATIONS	Sweden	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
LIPID CONTAINING FORMULATIONS	Turkey	Issued	07853756.0	Oct 3, 2007	2068886	Sep 18, 2013
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/211,094	Aug 16, 2011	8,642,076	Feb 4, 2014
LIPID CONTAINING FORMULATIONS	United States of America	Pending	16/713,712	Dec 13, 2019		
LIPID CONTAINING FORMULATIONS	PCT	Completed	PCT/US2007/08 0331	Oct 3, 2007		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313201	Nov 10, 2009	2009313201	Sep 29, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019283906	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,135	Nov 10, 2009	2,743,135	May 21, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,039,251	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	200980154346.4	Nov 10, 2009	ZL200980154346.4	Apr 20, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	201610166693.0	Nov 10, 2009	ZL201610166693.0	Jul 28, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Pending	202010679918.9	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	17001160.5	Nov 10, 2009	602009062208.0	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Eurasian Patent Office	Pending	201170553	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20177336.3	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Issued	12101632.8	Nov 10, 2009	HK1161096	Aug 31, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	18108332.0	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Issued	212801	Nov 10, 2009	212801	Oct 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	238885	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	247647	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Issued	1948/KOLNP/2 011	Nov 10, 2009	314151	Jun 13, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Pending	201838025189	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535775	Nov 10, 2009	5832898	Nov 6, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2015-210531	Nov 10, 2009	6324937	Apr 20, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2018-75270	Nov 10, 2009	6636560	Dec 27, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2019-228435	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Issued	10-2011- 7013225	Nov 10, 2009	10-204721	Nov 4, 2019

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Pending	10-2020- 7023715	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2011/004 973	Nov 10, 2009	338780	May 2, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2014/009 612	Nov 10, 2009	363082	Mar 7, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Pending	MX/A/2019/002 632	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Netherlands	Issued	17001160.5	Nov 10, 2009	3284482	Jun 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Issued	608754	Nov 10, 2009	608754	Sep 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Pending	768125	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/113,179	Nov 10, 2008		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/154,350	Feb 20, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/171,439	Apr 21, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/185,438	Jun 9, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/225,898	Jul 15, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Completed	61/234,098	Aug 14, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Issued	201308310-0	Nov 10, 2009	196186	Mar 4, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Pending	1020190189T	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,283	Nov 10, 2009	9,186,325	Nov 17, 2015

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/884,489	Oct 15, 2015	9,707,292	Jul 18, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Pending	15/617,520	Jun 8, 2017		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/06 3927	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313205	Nov 10, 2009	2009313205	Sep 29, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2016208434	Nov 10, 2009	2016208434	May 3, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019206116	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,136	Nov 10, 2009	2,743,136	Feb 26, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,029,724	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Switzerland	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Issued	200980154380.1	Nov 10, 2009	ZL200980154380.1	Jul 15, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	China	Pending	202010810599.0	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	16002656.3	Nov 10, 2009	602009061039.2	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Eurasian Patent Office	Pending	201170554	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20150151.7	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	16002656.3	Nov 10, 2009	3207944	Jan 15, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	17108959.3	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	42020015295.7	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Issued	212802	Nov 10, 2009	212802	Oct 1, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Allowed	247646	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Israel	Pending	277157	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Issued	1947/KOLNP/2 011	Nov 10, 2009	318555	Aug 20, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	India	Pending	201838029870	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535778	Nov 10, 2009	5774486	Jul 10, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2015-132563	Nov 10, 2009	6273234	Jan 12, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2017-190496	Nov 10, 2009	6726149	Jun 30, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2020-109623	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Issued	10-2017- 7020863	Nov 10, 2009	10-1967417	Apr 3, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Republic of Korea	Pending	10-2019- 7009606	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2011/004 974	Nov 10, 2009	347860	May 16, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2014/009 962	Nov 10, 2009	351819	Oct 30,2017

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Issued	MX/A/2017/010 204	Nov 10, 2009	359674	Oct 5, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Mexico	Pending	MX/a/2018/012 161	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Issued	608756	Nov 10, 2009	608756	Mar 25, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	New Zealand	Pending	770646	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Issued	201308308-4	Nov 10, 2009	195653	Mar 4, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Singapore	Pending	10201901106W	Nov 10, 2009		
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,287	Nov 10, 2009	8,999,351	Apr 7, 2015
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/629,991	Feb 24, 2015	9,682,139	Jun 20, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	15/603,069	May 23, 2017	10,117,941	Nov 6, 2018
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	16/123,209	Sep 6, 2018	10,821,186	Nov 3, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Pending	17/065,208	Oct 7, 2020		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/06 3931	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Issued	2009313206	Nov 10, 2009	2009313206	Sep 1, 2016
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Australia	Pending	2019222922	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Issued	2,743,139	Nov 10, 2009	2,743,139	Apr 2, 2019
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Canada	Pending	3,033,577	Nov 10, 2009		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Germany	Issued	09825614.2	Nov 10, 2009	602009048610.1	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	17000240.6	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	European Patent Office	Pending	20196362.6	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	France	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United Kingdom	Issued	09825614.2	Nov 10, 2009	2355658	Sep 27, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Hong Kong	Pending	18105652.8	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2011-535779	Nov 10, 2009	5747282	May 22, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Issued	2016-22540	Nov 10, 2009	6189461	Aug 10, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2017-146352	Nov 10, 2009		
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	Japan	Pending	2019-39951	Nov 10, 2009		
LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	13/128,253	Nov 10, 2009	9,220,683	Dec 29, 2015
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	14/953,677	Nov 30, 2015	9,764,036	Sep 19, 2017
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	United States of America	Issued	15/671,809	Aug 8, 2017	10,835,612	Nov 17, 2020
NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS	PCT	Completed	PCT/US2009/06 3933	Nov 10, 2009		
LIPID COMPOSITIONS	Australia	Issued	2010245869	May 5, 2010	2010245869	Feb 2, 2017
LIPID COMPOSITIONS	Australia	Allowed	2018264026	May 5, 2010		
LIPID COMPOSITIONS	Australia	Pending	2020203972	May 5, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID COMPOSITIONS FOR THE DELIVERY OF THERAPEUTIC AGENTS	Canada	Issued	2,760,776	May 5, 2010	2,760,776	Jul 9, 2019
LIPID COMPOSITIONS FOR THE DELIVERY OF THERAPEUTIC AGENTS	Canada	Pending	3,042,927	May 5, 2010		
LIPID COMPOSITIONS	China	Issued	201080020203.7	May 5, 2010	201080020203.7	Mar 2, 2016
LIPID COMPOSITIONS	China	Pending	201610127574.4	May 5, 2010		
LIPID COMPOSITIONS	Eurasian Patent Office	Issued	201190242	May 5, 2010	035438	Jun 15, 2020
LIPID COMPOSITIONS	Eurasian Patent Office	Pending	202090677	May 5, 2010		
LIPID COMPOSITIONS	European Patent Office	Pending	16001356.1	May 5, 2010		
LIPID COMPOSITIONS	Israel	Issued	216142	May 5, 2010	216142	Aug 30, 2017
LIPID COMPOSITIONS	Israel	Pending	251846	May 5, 2010		
LIPID COMPOSITIONS	India	Pending	2330/MUMNP/2 011	May 5, 2010		
LIPID COMPOSITIONS	Japan	Issued	2012-509956	May 5, 2010	5769701	Jul 3, 2015
LIPID COMPOSITIONS	Japan	Issued	2015-75095	May 5, 2010	6491014	Mar 8, 2019
LIPID COMPOSITIONS	Japan	Issued	2017-111612	May 5, 2010	6466512	Jan 18, 2019
LIPID COMPOSITIONS	Japan	Issued	2019-1746	May 5, 2010	6746726	Aug 7, 2020
LIPID COMPOSITIONS	Japan	Pending	2020-133109	May 5, 2010		
LIPID COMPOSITIONS	Republic of Korea	Pending	10-2011- 7026392	May 5, 2010		
LIPID COMPOSITIONS	New Zealand	Issued	596186	May 5, 2010	596186	Jul 1, 2014
LIPID COMPOSITIONS	New Zealand	Issued	621981	May 5, 2010	621981	Jan 6, 2016
LIPID COMPOSITIONS	New Zealand	Issued	711583	May 5, 2010	711583	Jul 4, 2017
LIPID COMPOSITIONS	New Zealand	Pending	763389	May 5, 2010		
LIPID COMPOSITIONS	United States of America	Completed	61/175,770	May 5, 2009		
LIPID COMPOSITIONS	United States of America	Completed	61/299,291	Jan 28, 2010		
LIPID COMPOSITIONS	Singapore	Issued	201108113-0	May 5, 2010	176553	Aug 15, 2014
LIPID COMPOSITIONS	Singapore	Pending	10201402054U	May 5, 2010		
LIPID COMPOSITIONS	Singapore	Pending	10201911942U	May 5, 2010		
LIPID COMPOSITIONS	United States of America	Issued	13/318,600	May 5, 2010	8,883,202	Nov 11, 2014
LIPID COMPOSITIONS	United States of America	Issued	14/508,805	Oct 7, 2014	9,694,077	Jul 4, 2017
LIPID COMPOSITIONS	United States of America	Issued	15/594,244	May 12, 2017	10,456,473	Oct 29, 2019
LIPID COMPOSITIONS	United States of America	Pending	16/593,661	Oct 4, 2019		
LIPID COMPOSITIONS	PCT	Completed	PCT/US2010/03 3777	May 5, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Australia	Pending	2019250141	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Canada	Pending	3,045,126	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	European Patent Office	Pending	20150010.5	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	Japan	Pending	2019-209596	May 5, 2010		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/175,777	May 5, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/234,045	Aug 14, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/242,761	Sep 15, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/251,991	Oct 15, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Completed	61/258,848	Nov 6, 2009		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	United States of America	Pending	15/900,618	Feb 20, 2018		
METHODS OF DELIVERING OLIGONUCLEOTIDES TO IMMUNE CELLS	PCT	Completed	PCT/US2010/03 3747	May 5, 2010		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	United States of America	Completed	61/187,242	Jun 15, 2009		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	United States of America	Pending	16/036,550	Jul 16, 2018		
METHODS FOR INCREASING EFFICACY OF LIPID FORMULATED siRNA	PCT	Completed	PCT/US2010/03 8679	Jun 15, 2010		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Australia	Issued	2010328336	Dec 7, 2010	2010328336	Jun 15, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Canada	Issued	2,783,372	Dec 7, 2010	2,783,372	Jul 16, 2019
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Germany	Issued	10836504.0	Dec 7, 2010	602010043789.2	Jul 19, 2017

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	European Patent Office	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	France	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United Kingdom	Issued	10836504.0	Dec 7, 2010	2509636	Jul 19, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	Hong Kong	Issued	13104553.6	Dec 7, 2010	1177429	May 18, 2018
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/334,398	May 13, 2010		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/267,419	Dec 7, 2009		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Completed	61/384,303	Sep 19, 2010		
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	13/514,352	Dec 7, 2010	9,687,550	Jun 27, 2017
COMPOSITIONS FOR NUCLEIC ACID DELIVERY	PCT	Completed	PCT/US2010/05 9206	Dec 7, 2010		
LIPID FORMULATION	Albania	Issued	10786869.7	Jun 10, 2010	7456	Jul 18, 2018
LIPID FORMULATION	Austria	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
Improved lipid formulation	Australia	Issued	2010259984	Jun 10, 2010	2010259984	Jun 22, 2017
Improved lipid formulation	Australia	Issued	2017202702	Jun 10, 2010	2017202702	Aug 15, 2019
Improved lipid formulation	Australia	Pending	2019204984	Jun 10, 2010		
LIPID FORMULATION	Belgium	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Bulgaria	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED CATIONIC LIPID OF FORMULA 1	Canada	Issued	2,764,609	Jun 10, 2010	2,764,609	Oct 2, 2018
IMPROVED CATIONIC LIPID OF FORMULA I	Canada	Pending	3,014,827	Jun 10, 2010		
LIPID FORMULATION	Switzerland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	China	Issued	201080026228.8	Jun 10, 2010	ZL201080026228.8	Jun 3, 2015
IMPROVED LIPID FORMULATION	China	Issued	201510246787.4	Jun 10, 2010	ZL201510246787.4	Jun 22, 2018
LIPID FORMULATION	Cyprus	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Czech Republic	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Germany	Issued	10786869.7	Jun 10, 2010	602010052039.0	Jul 18, 2018
Improved lipid formulation	Denmark	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Eurasian Patent Office	Issued	201190306	Jun 10, 2010	024960	Nov 30, 2016
LIPID FORMULATION	Eurasian Patent Office	Issued	201690312	Jun 10, 2010	028860	Jan 31, 2018
IMPROVED LIPID FORMULATION	Eurasian Patent Office	Pending	201791744	Jun 10, 2010		
LIPID FORMULATION	Estonia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	European Patent Office	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	European Patent Office	Pending	18174274.3	Jun 10, 2010		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	Spain	Issued	10786869.7	Jun 10, 2010	ES 2689168 T3	Jul 18, 2018
LIPID FORMULATION	Finland	Issued	10786869.7	Jun 10, 2010	2440183	Aug 14, 2018
LIPID FORMULATION	France	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	United Kingdom	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Greece	Issued	10786869.7	Jun 10, 2010	3096820	Jul 18, 2018
LIPID FORMULATION	Hong Kong	Issued	12103989.3	Jun 10, 2010	HK1163506	May 24, 2019
IMPROVED LIPID FORMULATION	Hong Kong	Issued	16100614.8	Jun 10, 2010	HK1212620	Sep 13, 2019
IMPROVED LIPID FORMULATION	Hong Kong	Pending	19121598.7	Jun 10, 2010		
LIPID FORMULATION	Croatia	Issued	10786869.7	Jun 10, 2010	P20181221	Jul 18, 2018
LIPID FORMULATION	Hungary	Issued	10786869.7	Jun 10, 2010	E038796	Jul 18, 2018
LIPID FORMULATION	Ireland	Issued	10786869.7	Jun 10, 2010	2440183	Aug 18, 2018
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	Israel	Issued	216876	Jun 10, 2010	216876	Jul 22, 2016
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPARATION OF THERAPEUTIC AGENTS FOR DELIVERING TO CELLS	Israel	Allowed	244945	Jun 10, 2010		
CATIONIC LIPID, LIPID FORMULATIONS COMPRISING SAME AND USE THEREOF IN THE PREPAR...	Israel	Pending	274826	Jun 10, 2010		
LIPID FORMULATION	India	Issued	2646/MUMNP/2 011	Jun 10, 2010	300692	Sep 4, 2018
LIPID FORMULATION	India	Pending	201828029183	Jun 10, 2010		
LIPID FORMULATION	Iceland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Italy	Issued	10786869.7	Jun 10, 2010	502018000028216	Jul 18, 2018
LIPID FORMULATION	Japan	Issued	2012-515160	Jun 10, 2010	5819291	Oct 9, 2015
IMPROVED LIPID FORMULATION	Japan	Issued	2015-188187	Jun 10, 2010	6132321	Apr 28, 2017
IMPROVED LIPID FORMULATION	Japan	Issued	2017-78802	Jun 10, 2010	6359719	Jun 29, 2018
IMPROVED LIPID FORMULATION	Japan	Issued	2018-115962	Jun 10, 2010	6592144	Sep 27, 2019
IMPROVED LIPID FORMULATION	Republic of Korea	Issued	10-2012- 7000749	Jun 10, 2010	10-1766408	Aug 2, 2017
IMPROVED LIPID FORMULATION	Republic of Korea	Issued	10-2017- 7021633	Jun 10, 2010	10-1987962	Jun 4, 2019
IMPROVED LIPID FORMULATION	Republic of Korea	Pending	10-2019- 7015933	Jun 10, 2010		
IMPROVED LIPID FORMULATION	Republic of Korea	Pending	10-2020-700445	Jun 10, 2010		
LIPID FORMULATION	Lithuania	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Luxembourg	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Latvia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Monaco	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Fmr. Yug. Rep. of Macedonia	Issued	10786869.7	Jun 10, 2010	909196	Jul 18, 2018
IMPROVED LIPID FORMULATION	Macao	Issued	J/001862	Jun 10, 2010	J/001862	Jun 10, 2016
LIPID FORMULATION	Malta	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Mexico	Issued	MX/A/2011/013 320	Jun 10, 2010	313186	Sep 11, 2013
LIPID FORMULATION	Mexico	Issued	MX/A/2013/007 982	Jun 10, 2010	328550	Mar 17, 2015

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID FORMULATION	Mexico	Issued	MX/A/2015/003 232	Jun 10, 2009	342785	Oct 12, 2016
LIPID FORMULATION	Mexico	Issued	MX/a/2016/013 324	Jun 10, 2009	367665	Aug 30, 2019
LIPID FORMULATION	Mexico	Pending	MX/A/2019/010 340	Jun 10, 2009		
LIPID FORMULATION	Netherlands	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Norway	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	New Zealand	Issued	596958	Jun 10, 2010	596958	Aug 1, 2014
IMPROVED LIPID FORMULATION	New Zealand	Issued	622843	Jun 10, 2010	622843	Feb 2, 2016
IMPROVED LIPID FORMULATION	New Zealand	Issued	712719	Jun 10, 2010	712719	Jul 4, 2017
IMPROVED LIPID FORMULATION	New Zealand	Pending	763433	Jun 10, 2010		
LIPID FORMULATION	Poland	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Portugal	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	United States of America	Completed	61/185,800	Jun 10, 2009		
LIPID FORMULATION	United States of America	Completed	61/244,834	Sep 22, 2009		
LIPID FORMULATION	Romania	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Sweden	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
IMPROVED LIPID FORMULATION	Singapore	Issued	201109154-3	Jun 10, 2010	176786	Jul 15, 2014
IMPROVED LIPID FORMULATION	Singapore	Issued	10201403054S	Jun 10, 2010	10201403054S	Jun 25, 2020
IMPROVED LIPID FORMULATION	Singapore	Pending	10201912450X	Jun 10, 2010		
LIPID FORMULATION	Slovenia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Slovakia	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	San Marino	Issued	10786869.7	Jun 10, 2010	2440183	Jul 18, 2018
LIPID FORMULATION	Turkey	Issued	10786869.7	Jun 10, 2010	TR 2018/11076 T4	Jul 18, 2018
LIPID FORMULATION	United States of America	Issued	12/813,448	Jun 10, 2010	8,158,601	Apr 17, 2012
LIPID FORMULATION	United States of America	Issued	13/357,856	Jan 25, 2012	8,802,644	Aug 12, 2014
LIPID FORMULATIONS	United States of America	Issued	14/319,996	Jun 30, 2014	9,394,234	Jul 19, 2016
LIPID FORMULATION	PCT	Completed	PCT/US2010/03 8224	Jun 10, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Canada	Pending	2,799,091	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Pending	11731455.9	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Pending	13110605.1	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Pending	2020-117454	May 12, 2011		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/334,104	May 12, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/384,050	Sep 17, 2010		
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Pending	16/787,912	Feb 11, 2020		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
NOVEL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/GB2011/00 0723	May 12, 2011		
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/334,096	May 12, 2010		
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE	United States of America	Issued	13/696,999	May 12, 2011	10,077,232	Sep 18, 2018
NOVEL CYCLIC CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/GB2011/00 0722	May 12, 2011		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Canada	Pending	2,919,226	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Switzerland	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	China	Pending	201911293252.7	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Germany	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	European Patent Office	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	European Patent Office	Pending	19213048.2	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	France	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United Kingdom	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Hong Kong	Pending	16107813.2	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Hong Kong	Pending	42020013074.8	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Japan	Issued	2016-528634	Jul 22, 2014	6620093	Nov 22, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Japan	Pending	2019-207786	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Liechtenstein	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	Netherlands	Issued	14829948.0	Jul 22, 2014	3033325	Dec 4, 2019
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Completed	61/857,573	Jul 23, 2013		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Pending	14/907,181	Jul 22, 2014		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	PCT	Completed	PCT/IB2014/06 3289	Jul 22, 2014		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Austria	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Australia	Issued	2013222179	Feb 22, 2013	2013222179	Dec 7, 2017
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Belgium	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Bulgaria	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Brazil	Pending	BR11201402082 4-7	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Canada	Allowed	2,865,412	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Switzerland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	China	Pending	201910048388.5	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Cyprus	Issued	13709634.3	Feb 22, 2013	CY1121232	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Czech Republic	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Germany	Issued	13709634.3	Feb 22, 2013	602013044438.2	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Denmark	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	European Patent Office	Pending	18193953.9	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Spain	Issued	13709634.3	Feb 22, 2013	2702874	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Finland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	France	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United Kingdom	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Greece	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Issued	15103551.8	Feb 22, 2013	HK1202855	Jul 19, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hong Kong	Pending	19131449.1	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Croatia	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Hungary	Issued	13709634.3	Feb 22, 2013	E041494	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Indonesia	Issued	P-00201405729	Feb 22, 2013	IDP000058501	May 9, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Ireland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Israel	Issued	234266	Feb 22, 2013	234266	Dec 31, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Israel	Pending	276924	Feb 22, 2013		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	India	Issued	2018/KOLNP/2 014	Feb 22, 2013	312892	May 20, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Iceland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Italy	Issued	13709634.3	Feb 22, 2013	502018000038561	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Issued	2014-558898	Feb 22, 2013	6275655	Jan 19, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Issued	2017-236756	Feb 22, 2013	6789918	Nov 6, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Japan	Pending	2020-184356	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Republic of Korea	Issued	10-2014- 7026598	Feb 22, 2013	10-2075810	Feb 4, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Republic of Korea	Pending	10-2020- 7003227	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Liechtenstein	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Lithuania	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Luxembourg	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Monaco	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Malta	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Mexico	Issued	MX/A/2014/010 211	Feb 22, 2013	356904	Jun 7, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Mexico	Pending	MX/A/2018/006 897	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Netherlands	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Norway	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	New Zealand	Issued	700075	Feb 22, 2013	700075	Aug 30, 2016
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Philippines	Issued	1-2014-501901	Feb 22, 2013	1-2014-501901	May 29, 2017
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Poland	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Portugal	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Completed	61/602,990	Feb 24, 2012		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Romania	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Serbia	Issued	13709634.3	Feb 22, 2013	58077	Oct 3, 2018

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Russian Federation	Issued	2014138476	Feb 22, 2013	2718053	Mar 30, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Russian Federation	Pending	2020111326	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Sweden	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Singapore	Issued	11201405157P	Feb 22, 2013	11201405157P	Jun 24, 2016
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Slovenia	Issued	13709634.3	Feb 22, 2013	2817287	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Slovakia	Issued	13709634.3	Feb 22, 2013	E 29887	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Turkey	Issued	13709634.3	Feb 22, 2013	TR 2018 18796 T4	Oct 3, 2018
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	Ukraine	Issued	A201410393	Feb 22, 2013	120026	Sep 25, 2019
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Issued	14/380,536	Feb 22, 2013	9,352,042	May 31, 2016
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Issued	15/150,016	May 9, 2016	10561732	Feb 18, 2020
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	United States of America	Pending	16/776,950	Jan 30, 2020		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	PCT	Completed	PCT/US2013/02 7469	Feb 22, 2013		
TRIALKYL CATIONIC LIPIDS AND METHODS OF USE THEREOF	South Africa	Issued	2014/06896	Feb 22, 2013	2014/06896	May 25, 2016
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Completed	62/171,148	Jun 4, 2015		
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Issued	15/570,103	Jun 6, 2016	10626393	Apr 21, 2020
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	United States of America	Pending	16/819,766	Mar 16, 2020		
DELIVERING CRISPR THERAPEUTICS WITH LIPID NANOPARTICLES	PCT	Completed	PCT/US2016/03 6069	Jun 6, 2016		
Compositions and Methods for Delivering Messenger RNA	Australia	Pending	2017286980	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Canada	Pending	3,034,681	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	China	Pending	201780049850.2	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	European Patent Office	Pending	17740546.1	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Hong Kong	Pending	19123669.4	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Japan	Pending	2018-567951	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	Mexico	Pending	MX/a/2018/016 389	Jun 30, 2017		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
Compositions and Methods for Delivering Messenger RNA	United States of America	Completed	62/357,189	Jun 30, 2016		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Completed	62/375,292	Aug 15, 2016		
COMPOSITIONS AND METHODS FOR DELIVERING MESSENGER RNA	United States of America	Pending	16/312,162	Jun 30, 2017		
Compositions and Methods for Delivering Messenger RNA	PCT	Completed	PCT/US2017/04 0446	Jun 30, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Australia	Pending	2017379901	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Canada	Pending	3,047,326	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	European Patent Office	Pending	17884567.3	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Hong Kong	Pending	62020003825.0	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	Japan	Pending	2019-533337	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	United States of America	Completed	62/437,537	Dec 21, 2016		
METHODS FOR AMELIORATING INFUSION REACTIONS	United States of America	Pending	16/470,490	Dec 20, 2017		
METHODS FOR AMELIORATING INFUSION REACTIONS	PCT	Completed	PCT/US2017/06 7664	Dec 20, 2017		
TARGETING LIPIDS	Australia	Issued	2008340355	Dec 4, 2008	2008340355	May 7, 2015
TARGETING LIPIDS	Australia	Issued	2014277867	Dec 4, 2008	2014277867	Feb 16, 2017
TARGETING LIPIDS	Australia	Pending	2020200082	Dec 4, 2008		
TARGETING LIPIDS	Canada	Issued	2,708,173	Dec 4, 2008	2708173	Feb 2, 2016
TARGETING LIPIDS	Canada	Issued	2,910,760	Dec 4, 2008	2970760	Jul 9, 2019
TARGETING LIPIDS	Canada	Pending	3,043,911	Dec 4, 2008		
TARGETING LIPIDS	Germany	Issued	08865121.1	Dec 4, 2008	602008049529.9	Mar 29, 2017
TARGETING LIPIDS	European Patent Office	Issued	08865121.1	Dec 4, 2008	2231195	Mar 29, 2017
TARGETING LIPIDS	European Patent Office	Pending	16001284.5	Dec 4, 2008		
TARGETING LIPIDS	France	Issued	08865121.1	Dec 4, 2008	2231195	Mar 29, 2017
TARGETING LIPIDS	United Kingdom	Issued	08865121.1	Dec 4, 2008	2231195	Mar 29, 2017
TARGETING LIPIDS	India	Issued	4370/DELNP/20 10	Dec 4, 2008	303274	Nov 20, 2018
TARGETING LIPIDS	India	Pending	201618022317	Dec 4, 2008		
TARGETING LIPIDS	Japan	Issued	2010-537080	Dec 4, 2008	5635412	Oct 24, 2014
TARGETING LIPIDS	Japan	Pending	2020-175753	Dec 4, 2008		
TARGETING LIPIDS	United States of America	Issued	14/060,353	Oct 22, 2013	9814777	Nov 14, 2017
TARGETING LIPIDS	United States of America	Pending	15/729,236	Oct 10, 2017		
TARGETING LIPIDS	PCT	Completed	PCT/US2008/08 5582	Dec 4, 2008		

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
CATIONIC LIPIDS CONTAINING SILICON	United States of America	Completed	62/758,108	Nov 9, 2018		
CATIONIC LIPIDS CONTAINING SILICON	PCT	Pending	PCT/US2019/06 0556	Nov 8, 2019		
NEGATIVELY CHARGED PEG- LIPID CONJUGATES	United States of America	Completed	62/758,099	Nov 9, 2018		
NEGATIVELY CHARGED PEG- LIPID CONJUGATES	PCT	Pending	PCT/US2019/06 0518	Nov 8, 2019		
LIPID NANOPARTICLE FORMULATIONS	United States of America	Completed	62/758,088	Nov 9, 2018		
LIPID NANOPARTICLE FORMULATIONS	PCT	Pending	PCT/US2019/06 0582	Nov 8, 2019		
LIPID NANOPARTICLE FORMULATIONS	United States of America	Completed	62/758,055	Nov 9, 2018		
LIPID NANOPARTICLE FORMULATIONS	PCT	Pending	PCT/US2019/06 0595	Nov 8, 2019		
LIPID NANOPARTICLES	United States of America	Pending	62/839,452	Apr 26, 2019		
LIPID NANOPARTICLES	United States of America	Pending	62/867,098	Jun 26, 2019		
LIPID NANOPARTICLES	PCT	Pending	PCT/US2020/02 9907	Apr 24, 2020		
CATIONIC LIPIDS FOR LIPID NANOPARTICLE DELIVERY OF THERAPEUTICS TO HEPATIC STELL...	United States of America	Pending		Feb 11, 2020		
CATIONIC LIPIDS FOR LIPID NANOPARTICLE DELIVERY OF THERAPEUTICS TO HEPATIC STELL...	United States of America	Pending		Mar 17, 2020		
LIPID NANOPARTICLES FOR DELIVERING THERAPEUTICS TO LUNG	United States of America	Pending		July 10, 2020		
PEG LIPIDS AND LIPID NANOPARTICLES	United States of America	Pending		Dec 18, 2020		

mRNA-LNP

Title	Country	Status	Serial No.	Filing Date	Patent No.	Issue Date
LIPID COMPOSITIONS FOR NUCLEIC ACID DELIVERY	United States of America	Issued	14/304,578	Jun 13, 2014	9,504,651	Nov 29, 2016
NUCLEIC ACID-LIPID PARTICLES COMPRISING INTERFERING RNA, COMPOSITIONS COMPRISING SAME AND USES THEREOF	Israel	Issued	237721	Jul 16, 2004	237721	May 29, 2018
LIPID ENCAPSULATED INTERFERING RNA	Singapore	Issued	201303316-2	Jul 16, 2004	190613	Nov 15, 2016
LIPID ENCAPSULATED INTERFERING RNA	Japan	Issued	2015-094544	Jul 16, 2004	5977394	Jul 29, 2016

La Jolla Institute for Allergy and Immunology - License Agreement - Standalone - January 06, 2021

**Appendix A
Licensed Patents**

Title	Filing Date	U.S. Application No.
CORONAVIRUS PROTEIN AND PEPTIDE SEQUENCES, EPITOPES, AND METHODS AND USES THEREOF	2/12/20	62/975,740
CORONAVIRUS PROTEIN AND PEPTIDE SEQUENCES, EPITOPES, AND METHODS AND USES THEREOF	3/5/20	62/985,526
CORONAVIRUS PROTEIN AND PEPTIDE SEQUENCES, EPITOPES, AND METHODS AND USES THEREOF	4/1/20	63/003,854
TARGETS OF T CELL RESPONSES TO SARS- COV-2 CORONAVIRUS IN HUMANS WITH COVID-19 DISEASE AND UNEXPOSED INDIVIDUALS	4/20/20	63/012,902
CORONAVIRUS PROTEIN AND PEPTIDE SEQUENCES, EPITOPES, AND METHODS AND USES THEREOF	5/4/20	63/019,895
TARGETS OF T CELL RESPONSES TO SARS- COV-2 CORONAVIRUS	5/13/20	63/024,356
TARGETS OF T CELL RESPONSES TO SARS- COV-2 CORONAVIRUS	5/22/20	63/029,336
IMMUNOGENIC COMPOSITIONS, VACCINES, AND METHODS OF TREATING SARS-COV-2 CORONAVIRUS AND ASSOCIATED DISORDERS	6/18/2020	63/040,749
TARGETS OF T CELL RESPONSES TO SARS- COV-2 CORONAVIRUS AND COMMON COLD CORONAVIRUSES	7/11/20	63/050,776
TARGETS OF T CELL RESPONSES TO SARS- COV-2 CORONAVIRUS AND COMMON COLD CORONAVIRUSES	8/4/2020	63/061,145
SARS-CoV-2 CORONAVIRUS EPITOPES	10/30/2020	63/108,281
CORONAVIRUS PEPTIDE POOLS	11/11/2020	63/124,164
T CELL IMMUNODOMINANCE AND IMMUNOPREVALENCE OF SARS-CoV-2 EPITOPES	12/11/2020	63/124,127

La Jolla Institute for Allergy and Immunology - License Agreement - Standalone - January 06, 2021

Option Exercised for LJI New Technology

Title	Filing Date	U.S. Application No.
Coronavirus T Cell Epitopes and Uses Thereof	4/12/21	63/173,634
Coronavirus and Coronavirus Variant T Cell Epitopes, Megapools and Uses Thereof	5/13/21	63/188,220
Coronavirus and Coronavirus Variant T Cell Epitopes, Megapools, and Methods and Uses Thereof	12/6/21	63/286,537
Coronavirus T Cell Epitopes, Megapools, and Methods and Uses Thereof	12/23/21	63/293,229
Coronavirus T Cell Epitopes and Uses Thereof	4/11/2022	PCT/US22/24256
Coronavirus T Cell Epitopes, Megapools and Uses Thereof	5/12/22	PCT/US22/28982

Schedule 1

Name of Licensee: Gritstone bio, Inc.

Registered Address: 5959 Horton Street, Suite 300, Emeryville, CA 94608, USA

Title of Technology: Codon optimization tool (the "TOOL")

Description of Technology:

TOOL: The multi-parametric codon optimization computational framework is a tool that can optimize any given coding DNA sequence to achieve high expression levels in vivo. The codon optimization algorithm can optimize any DNA sequence by systematically altering the codons used for gene expression, resulting in an optimal DNA sequence with a codon arrangement that can allow efficient expression of the protein product with modulated immune response.

Field of Use: DNA and/or mRNA-based vaccine development

Type of License: Non-exclusive

Term of License: One (1) year, renewable upon written notice by Licensee for additional one (1) year terms.

Schedule 5.10(a)(i)(A) Current Company IP Enforceability

1. Moderna Inc. challenged the validity of three Arbutus patents by filing petitions for *inter partes* review by the PTAB. The three challenged patents were U.S. Patent Nos. 8,058,069, 9,364,435 and 9,404,127. The PTAB upheld all the challenged claims of 8,058,069 and certain challenged claims of 9,364,435 while invalidating others, and invalidating the challenged claims of 9,404,127.

Schedule 5.10(d) Matters Relating to current Material Agreements

None.

Schedule 5.10(f) Enforceability, Entitlement and Exploitation of Current Company IP

None.

Schedule 5.10(i) Claims of Infringement on Third Party IP By Current Company IP

None.

Schedule 5.10(k) Obligations Relating to Company IP

None.

Schedule 5.10(l) Third Party Infringements of Company IP

None.

Schedule 5.10(o) Intellectual Property

None.

Schedule 5.11 Borrower Products

None.

Schedule 5.14 Subsidiaries

Subsidiary	Parent	Ownership Percentage
Gritstone Biopharmaceuticals UK Ltd	Gritstone bio, Inc.	100%

EXHIBIT B
TO
ADDENDUM TO PROOF OF CLAIM

Account Control Agreements

[See attached]

CONTROL AGREEMENT

This Control Agreement (the “Agreement”) is among GRITSTONE BIO, INC., a corporation organized under the laws of the State of Delaware (“Pledgor”); HERCULES CAPITAL, INC., a Maryland corporation, as administrative agent and collateral agent (in such capacities, “Secured Party”); and U.S. Bank National Association, a national banking association organized under the laws of the United States with offices in Minneapolis, Minnesota (“Intermediary”).

WHEREAS, Pledgor and Intermediary are the only parties to a fully-executed custody agreement, as may be amended from time to time, pursuant to which Intermediary maintains U.S. Bank Custody Account No. 001050993430 entitled GRITSTONE BIO, INC. for Pledgor’s assets (the “Account”) (such agreement, the “Custody Agreement”);

WHEREAS, Pledgor hereby directs Intermediary to enter into this Agreement;

NOW, THEREFORE, the parties hereby agree as follows:

1. **Collateral; Account Control.** Pledgor and Secured Party hereby represent and warrant that they are parties to that certain Loan and Security Agreement, dated as of July [_19_], 2022 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Loan and Security Agreement”), by and among Pledgor, Secured Party, and the lenders from time to time party thereto, pursuant to which Pledgor has granted to Secured Party a security interest in all of Pledgor’s right, title and interest in, to, and with respect to any assets held as of the date of this Agreement or hereafter in the Account, together with any securities, instruments, financial assets, investment property, and any other property issued in replacement of or in substitution or exchange for any of the foregoing, any securities entitlements in and to any of the foregoing, any books and records relating thereto, and any proceeds of the foregoing (including any cash interest, income, or dividends with respect to the foregoing) (collectively, the “Collateral”).

2. **UCC.** Intermediary is a “*securities intermediary*” with respect to the Account, and the Account is a “*securities account*”, within the meaning of Uniform Commercial Code Article 8 as adopted in Minnesota, Minn. Stat. Ch. 336, Article 8 (“Article 8”). Notwithstanding anything in this Agreement to the contrary, (i) Minnesota is Intermediary’s jurisdiction for the purposes of Article 8 and (ii) nothing in this Agreement will constitute a waiver of any of Intermediary’s rights as a securities intermediary under Minn. Stat. Section 336.9-206.

3. **Assets Held in the Account.** Intermediary’s official statement of the Account (an “Account Statement”) is not attached as an **exhibit** hereto. Intermediary does not hereby confirm that any assets are held in the Account as of the date of this Agreement.

4. **Certain Assets Not Collateral.** Notwithstanding anything herein to the contrary, the following assets are not Collateral (even if they are included in an Account Statement), and Intermediary hereby makes no confirmation, covenant, representation, or warranty with respect thereto:

4.1. Any assets that are neither registered in the name of Intermediary or Intermediary’s nominee nor maintained by Intermediary at any central securities depository (such as the Depository Trust Company) or Federal Reserve Bank or with a sub-custodian nor held by Intermediary in unregistered or bearer form or in such form as will pass title by delivery.

4.2. Any global securities maintained by Intermediary with a sub-custodian.

4.3. Any contract, declaration of trust, document of title, general intangible, lease, limited liability company interest, loan agreement, note, offering memorandum, partnership interest, security certificate, subscription agreement, or other instrument which may establish rights to income, principal, or other distributions on an asset.

4.4. Any units resulting from Intermediary's provision of unitized accounting services under the Custody Agreement and reflecting assets not held in the Account.

4.5. Real estate.

4.6. Any securities which are "*control securities*" or "*restricted securities*" within the meaning of Rule 144 under the Securities Exchange Act of 1934, as amended, or are subject to other marketability limitations.

4.7 Any asset that is not a "*financial asset*" within the meaning of Article 8.

4.8. Any such "*financial asset*" in the physical possession of Intermediary that is registered in the name of, payable to the order of, or specially indorsed to anyone other than Intermediary and has not been indorsed to Intermediary or in blank.

Pledgor hereby covenants not to deliver, or cause to be delivered, any of the foregoing to the Account.

5. **Secured Party's Power to Direct Intermediary.**

5.1. Pledgor and Secured Party hereby direct Intermediary to comply with all directions, instructions, or entitlement orders concerning the Collateral originated by Secured Party without further consent by Pledgor. Intermediary will comply with all directions, instructions, or entitlement orders concerning the Collateral originated by Secured Party without further consent by Pledgor. Pledgor hereby agrees that Intermediary's obligation to act on Secured Party's directions, instructions, or entitlements orders is unconditional. Intermediary will have no duty, obligation, or authority to determine whether Secured Party is acting properly, even if Pledgor objects or directs Intermediary not to follow Secured Party's directions, instructions, or entitlement orders. Secured Party hereby instructs Intermediary and Intermediary agrees that unless and until Intermediary receives a Notice of Exclusive Control, Intermediary shall honor all directions, instructions, or entitlement orders concerning the Collateral received from the Pledgor. Subject to Section 10 hereof, if Intermediary receives from Secured Party a written notice that Secured Party is exercising exclusive control over the Collateral substantially in the form of **Exhibit A (Notice of Exclusive Control)** attached hereto (the "Notice of Exclusive Control"), then Intermediary will, in reliance upon such Notice of Exclusive Control, stop complying with directions, instructions, or entitlement orders concerning the Collateral originated by Pledgor. Secured Party agrees that it shall not deliver a Notice of Exclusive Control to the Intermediary unless an Event of Default (as defined in the Loan and Security Agreement) has occurred and is continuing. Intermediary will have no duty, obligation, or authority to determine whether Secured Party's delivery of the Notice of Exclusive Control (or the terms thereof) is proper, even if Pledgor objects or directs Intermediary not to honor the Notice of Exclusive Control.

6. **Withdrawal or Transfer (Part 1).** Unless and until Intermediary receives a **Notice of Exclusive Control**, Secured Party hereby consents to Pledgor's withdrawal or transfer of the Collateral, including Pledgor's instructions to Intermediary to that effect.

7. **Withdrawal or Transfer (Part 2).** Notwithstanding anything herein to the contrary, any limits on Pledgor's withdrawal or transfer of the Collateral do not apply to cash interest, income, and dividends.

8. **Trading or Substitution.** Unless and until Intermediary receives a **Notice of Exclusive Control**, Secured Party hereby consents to Pledgor's trading or substituting the Collateral, including Pledgor's instructions to Intermediary to that effect, so long as the proceeds resulting from such trading or substituting remain in the Account. Pledgor will not, and hereby covenants not to, trade for the Account on margin.

9. **Trade, Substitute, Withdraw, or Transfer.** As used herein, the words "trade" and "substitute" and words derived therefrom refer to deliveries out of the Account for counter-value, whereas the words "withdraw" and "transfer" and words derived therefrom refer to deliveries out of the Account not for counter-value.

10. **Effectiveness of Notice of Exclusive Control.** Any Notice of Exclusive Control provided to Intermediary will only be binding after (a) Intermediary receives such Notice of Exclusive Control and (b) Intermediary has had a reasonable opportunity to act upon such Notice of Exclusive Control not to exceed two business days after received at the address for Intermediary listed below.

11. **No Other Security Interest; Ownership of Collateral.**

11.1. Pledgor hereby represents and warrants that (i) Pledgor has not granted a security interest in the Collateral to any person or entity other than Secured Party and Intermediary, and (ii) Pledgor is the sole beneficial owner of the Collateral (except for Secured Party's interest and Intermediary's interest).

11.2. Intermediary's records show that Pledgor is the sole owner of the Collateral and that Intermediary has not received notice of any levy, security interest, or other claim in or to the Collateral other than this Agreement ("Adverse Claim"). If Intermediary receives notice of an Adverse Claim, then Intermediary will promptly notify Pledgor and Secured Party thereof.

11.3. Intermediary is not presently obligated to comply with transfer or withdrawal orders from any person other than Pledgor with respect to the Collateral. After the execution of this Agreement, without Secured Party's prior written consent, Intermediary will not enter into any agreements by which Intermediary agrees to comply with transfer or withdrawal orders of any person other than Secured Party with respect to the Collateral.

12. **Limited Subordination.**

12.1. Intermediary hereby subordinates to Secured Party's security interests all of Intermediary's present and future liens, security interests, rights of set-off, claims, and other rights and interests relating to the Collateral, except for those resulting from any (i) advance of funds or securities in furtherance of settling securities transactions and other financial-market transactions under the Custody Agreement ("Settlement Claims") or (ii) outstanding compensation, expenses, fees, costs, or other charges incurred by Intermediary in providing services under this Agreement or the Custody Agreement.

12.2. Intermediary hereby represents and warrants that no Settlement Claims are past due as of the date of this Agreement.

12.3. Except to the extent allowed under this Section, Intermediary will not execute or exercise any of Intermediary's present or future liens, security interests, rights of set-off, claims, or other rights or interests relating to the Collateral.

13. **Limited Responsibility of Intermediary.**

13.1. Intermediary will be fully protected in acting in accordance with any direction, instruction, or entitlement order provided pursuant to this Agreement, and Intermediary has no duty to (i) solicit or confirm directions, instructions, or entitlement orders; (ii) notify Pledgor of receiving any direction, instruction, or entitlement order originated by Secured Party or Notice of Exclusive Control; (iii) select a broker in furtherance of complying with a direction, instruction, or entitlement order or take any action that would require Intermediary to register as a broker; or (iv) question whether any direction, instruction, or entitlement order received under this Agreement by email or any financial-messaging system, network, or service acceptable to Intermediary, such as the Society for Worldwide Interbank Financial Telecommunication messaging system (“Messaging System”), or entered into Pledgor’s or Secured Party’s account in Intermediary’s on-line portal, is unreliable or has been compromised, such as by identity theft.

13.2. Other than the obligation to provide Account Statements as set forth herein, Intermediary will have no responsibility or liability to Secured Party with respect to the value of the Collateral.

13.3. Intermediary will have no duty to investigate or make any determination or provide any notice as to (i) whether Secured Party has “*control*” of the Collateral within the meaning of Article 8; (ii) the suitability or value of any asset held as Collateral or any decrease in such value; (iii) the purpose of any direction, instruction, or entitlement order provided pursuant to this Agreement; or (iv) whether a default exists under any other agreement.

13.4. The duties of Intermediary will be strictly limited to those set forth in this Agreement, and no implied covenants, duties, responsibilities, representations, warranties, or obligations will be read into this Agreement against Intermediary.

13.5. Notwithstanding anything to the contrary, Intermediary makes no representation or warranty with regard to the enforceability of any security interest described herein.

14. **Indemnification; *Force Majeure*; Damages.**

14.1. **Indemnification.**

14.1.1. “Indemnified Person” means Intermediary and its affiliates, and their officers, directors, employees, agents, successors, and assigns. “Harm” means claims, costs, damages, delayed payment or non-payment on assets sold, expenses (including reasonable and documented attorneys’ fees of outside counsel), fines, interest, liabilities, losses, penalties, stockholders’ assessments (asserted on account of asset registration), and taxes.

14.1.2. Pledgor hereby agrees to indemnify, defend, and save harmless each Indemnified Person from and against any Harm that may be imposed on, incurred by, or asserted against an Indemnified Person by reason of the Indemnified Person’s action or omission in connection with this Agreement or the Account (including, but not limited to, an action or omission that is consistent with directions provided under this Agreement), except to the extent that a court of competent jurisdiction has made a final judgment that the Harm resulted directly from the Indemnified Person’s willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.3. Secured Party agrees to indemnify, defend and save harmless each Indemnified Person from and against any Harm that may be imposed on, incurred by, or asserted against an Indemnified Person (a) by reason of the Indemnified Person’s action or omission relating to a direction or instruction from Secured Party, or (b) at any time after receipt by Intermediary of a Notice of Exclusive Control (including, but not limited to, an action or omission that is consistent with directions provided under this Agreement), except to the extent that a court of competent jurisdiction has made a final judgment that the

Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.4 Pledgor and Secured Party hereby release each Indemnified Person from any Harm, except to the extent that a court of competent jurisdiction has made a final judgment that the Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.5. The foregoing provisions will survive the Indemnified Person's termination as such and the termination of this Agreement.

14.2. **Force Majeure.** No party is liable for any delay or failure in performing its obligations under this Agreement caused by wars (whether declared or not and including existing wars), revolutions, insurrections, riots, civil commotion, acts of God, accidents, fires, explosions; stoppages of labor, strikes, or other differences with employees (other than Intermediary's disputes with its employees); laws, regulations, orders, or other acts of any governmental authority; or any other circumstances beyond its reasonable control. Nor will any such failure or delay give any party the right to terminate this Agreement.

14.3. **Damages.** No party hereto is liable for any indirect, incidental, special, punitive, or consequential damages arising out of or in any way related to this Agreement or the performance of its obligations under this Agreement. This limitation applies even if the party has been advised of, or is aware of, the possibility of such damages.

15. **Tax Reporting.** All reports relating to the Collateral to federal, state, and local tax authorities will be made under the name and tax identification number of Pledgor.

16. **Termination of Agreement.** Intermediary may terminate this Agreement by notice to Pledgor and Secured Party, and such termination will be effective thirty (30) calendar days after delivery of the notice. Secured Party may terminate this Agreement by notice to Intermediary, and such termination will be effective upon delivery. Any other termination of this Agreement shall be effected solely by an instrument in writing executed by all the parties hereto.

17. **Account Statements.** Intermediary will send duplicate copies of any Account Statements and confirmations of transactions involving Collateral to Secured Party at its address set forth below.

18. **Authorized Persons; Delivery of Directions.**

18.1. **Authorized Persons.** With respect to this Agreement:

18.1.1. Pledgor will notify Intermediary of the identity of each (i) employee of Pledgor who is authorized to act on Pledgor's behalf, (ii) third-party agent that is authorized to act on Pledgor's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement to terminate this Agreement.

18.1.2. Secured Party will notify Intermediary of the identity of each (i) employee of Secured Party who is authorized to act on Secured Party's behalf, (ii) third-party agent that is authorized to act on Secured Party's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement or to terminate this Agreement.

18.1.3. Intermediary may assume that any such employee or agent of Pledgor continues to be so authorized, until Intermediary receives notice to the contrary from Pledgor (or, with respect to any

such employee of any such agent, from such agent). Intermediary may assume that any such employee or agent of Secured Party continues to be so authorized, until Intermediary receives notice to the contrary from Secured Party (or, with respect to any such employee of any such agent, from such agent).

18.1.4. Pledgor hereby represents and warrants that any such employee or agent of Pledgor was duly appointed and is appropriately monitored and covenants that Pledgor will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Pledgor. Pledgor hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Pledgor as if Pledgor had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.1.5. Secured Party hereby represents and warrants that any such employee or agent of Secured Party was duly appointed and is appropriately monitored and covenants that Secured Party will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Secured Party. Secured Party hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Secured Party as if Secured Party had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.2. Delivery of Directions.

18.2.1. Any direction, notice, or other communication to or from Pledgor provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Pledgor's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.2. Any direction, notice, or other communication to or from Secured Party provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Secured Party's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.3. Any direction received from Pledgor under this Agreement by email or Messaging System, or entered into Pledgor's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Pledgor. Pledgor hereby represents and warrants that Pledgor maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Pledgor hereby assumes all risk to the Account of such unauthorized access. Pledgor hereby acknowledges that Pledgor is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Pledgor and Pledgor's agents.

18.2.4. Any direction received from Secured Party under this Agreement by email or Messaging System, or entered into Secured Party's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Secured Party. Secured Party hereby represents and warrants that Secured Party maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Secured Party hereby assumes all risk to the Account of such unauthorized access. Secured Party hereby acknowledges that Secured Party is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Secured Party and Secured Party's agents.

19. **Freedom to Deal with Third Parties.** Intermediary is free to render services to others, whether similar to those services rendered under this Agreement or of a different nature.

20. **Binding Obligations.** Pledgor, Secured Party, and Intermediary each hereby represent and warrant that (i) it has the power and authority to transact the business in which it is engaged and to execute, deliver, and perform this Agreement and has taken all action necessary to execute, deliver, and perform this Agreement and (ii) this Agreement constitutes its legal, valid, and binding obligation enforceable according to the terms hereof.

21. **Complete Agreement; Amendment; Prevalence.**

21.1. **Complete Agreement.** This Agreement contains a complete statement of all the arrangements between the parties with respect to its subject matter and supersedes any existing agreements between them concerning the subject. This Agreement and any administrative form under this Agreement may be proved either by a signed original or by a reproduced copy thereof (including, not by way of limitation, a microfiche copy or an electronic file copy).

21.2. **Amendment.** This Agreement may be amended at any time, in whole or in part, by a written instrument signed by Pledgor, Secured Party, and Intermediary.

21.3. **Prevalence.** Pledgor and Intermediary hereby acknowledge and agree that, in the event of any inconsistency between this Agreement and the Custody Agreement regarding the Collateral, this Agreement prevails with respect to the Collateral.

22. **Governing Law; Venue.** This Agreement will be governed, enforced, and interpreted according to the laws of the State of Minnesota without regard to conflicts of laws, except where pre-empted by federal law. All legal actions or other proceedings directly or indirectly relating to this Agreement will be brought in federal court (or, if unavailable, state court) sitting in the State of Minnesota. The parties submit to the jurisdiction of any such court in any such action or proceeding and waive any immunity from suit in such court or execution, attachment (whether before or after judgment), or other legal process in or by such court.

23. **Successors and Assigns.**

23.1. This Agreement binds, and inures to the benefit of, Pledgor, Secured Party, Intermediary, and their respective successors and assigns; provided, however, that Pledgor will have no right to assign any rights with respect to Collateral, except as specifically permitted in this Agreement.

23.2. No party may assign any of its rights under this Agreement without the consent of each other party, which consent will not be unreasonably withheld. Pledgor hereby acknowledges that Intermediary will withhold consent unless and until (a) Intermediary verifies Pledgor's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Pledgor hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request and (b) Secured Party consents in writing to such assignment. Secured Party hereby acknowledges that Intermediary will withhold consent unless and until Intermediary verifies Secured Party's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Secured Party hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request. No consent is required if a party merges with, consolidates with, or sells substantially all of its assets to another entity, provided that such other entity assumes without delay, qualification, or limitation all obligations of that party under this Agreement by operation of law or by

contract. Furthermore, no consent is required with respect to any transfer by Secured Party of its rights and duties under this Agreement to (i) a transferee to which, by contract or operation of law, Secured Party transfers substantially all of its rights and duties under the financing or other arrangements between Secured Party and Pledgor, or (ii) if Secured Party is acting as a representative in whose favor a security interest is created or provided for, a transferee that is a successor representative; in such case, Secured Party will not be released from its obligations to Intermediary under this Agreement unless and until Intermediary receives any such transferee's binding written agreement to assume all of Secured Party's obligations hereunder.

24. **Severability.** The provisions of this Agreement are severable. The invalidity of a provision herein will not affect the validity of any other provision.

25. **No Third-Party Beneficiaries.** This Agreement is made solely for the benefit of the parties. No person other than such parties has any rights or remedies under this Agreement.

26. **[Reserved].**

27. **Legal Advice.** Pledgor and Secured Party hereby acknowledge that they (i) did not receive legal advice from Intermediary concerning this Agreement, (ii) had an adequate opportunity to consult attorneys of their choice before executing this Agreement, and (iii) executed this Agreement upon their own judgment and, if sought, the advice of such attorneys.

28. **Waiver of Jury Trial.** Each party hereby irrevocably waives all right to a trial by jury in any action, proceeding, claim, or counterclaim (whether based on contract, tort, or otherwise) directly or indirectly arising out of or relating to this Agreement.

29. **Legal Action.** If Intermediary is served with any freeze order, garnishment, levy, restraining order, search warrant, subpoena, writ of attachment or execution, or similar order relating to the Account (each, a "Legal Action"), then Intermediary will, to the extent permitted by law, use commercially reasonable efforts to notify Pledgor and Secured Party of such service. If Pledgor notifies Intermediary that Pledgor is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Pledgor's request and sole cost and expense. If Secured Party notifies Intermediary that Secured Party is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Secured Party's request and sole cost and expense. In any event, Intermediary may comply with the Legal Action at any time, except to the extent Intermediary has received a protective order that prevents Intermediary from complying.

30. **[Reserved].**

31. **[Reserved].**

32. **Publicity.** No party will disclose the existence of this Agreement or any terms thereof in advertising, promotional, or marketing materials without obtaining, in each case, the prior written consent of each other party.

33. **Counterparts and Duplicates.** This Agreement may be executed in any number of counterparts, each of which will be considered an original, but all of which together will constitute the same instrument.

34. **Effective Date.** This Agreement will become effective when all parties have signed it. The date of this Agreement will be the date this Agreement is signed by the last party to sign it (as indicated by the date associated with that party's signature).

[Signature Page Follows]

IN WITNESS WHEREOF, an authorized officer of each party hereby executes this Agreement on the date stated beneath that party's signature.

GRITSTONE BIO. INC.

By: _____

(Signature)

Name: James Cho

Its: Authorized Officer

Dated: 7/21/2022 | 7:18:00 AM PDT _____

U.S. Mail Address:

Email Address:

_____jcho@gritstone.com_____

HERCULES CAPITAL, INC.

By: _____

(Signature)

Name: Zhou Huang

Its: Associate General Counsel

Dated: 7/21/2022 | 8:55:21 AM PDT

U.S. Mail Address:

HERCULES CAPITAL, INC.

Legal Department

Attention: Chief Legal Officer and Cristy Barnes

400 Hamilton Avenue, Suite 310

Palo Alto, CA 94301

Email Address:

legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com;

hballa@htgc.com

U.S. BANK NATIONAL ASSOCIATION

By: _____

Name: Nichole Janson

Its: Investment Svcs Account Manager; AVP

Dated: 7/21/2022 | 11:23:35 AM CDT

U.S. Mail Address:

_____ 425 Walnut St _____
_____ Cincinnati, OH 45202 _____

Email Address:

_____ nichole.janson@usbank.com _____

CONTROL AGREEMENT

Exhibit A

Notice of Exclusive Control

[Drafting note: To be provided on letterhead of Secured Party]

Date: _____

To: U.S. Bank National Association
c/o _____, Vice President and Relationship Manager
(U.S. Mailing Address)
(U.S. Mailing Address)

Re: Agreement entitled “Control Agreement” among GRITSTONE BIO, INC. (“Pledgor”);
HERCULES CAPITAL, INC., as agent (“Secured Party”); and U.S. Bank National
Association (“Intermediary”) and dated [____], 2022 (the “Control Agreement”)

Secured Party hereby (i) notifies Intermediary that Secured Party is exercising exclusive control over the Collateral (as defined in the Control Agreement); (ii) instructs Intermediary to stop complying with directions, instructions, or entitlement orders concerning the Collateral originated by Pledgor; and (iii) represents and warrants to Intermediary that this Notice of Exclusive Control is lawful and authorized by the applicable agreement between Pledgor and Secured Party. Intermediary has no duty, obligation, or authority to determine whether Secured Party’s delivery of this Notice of Exclusive Control (or the terms hereof) is proper, even if Pledgor objects or directs Intermediary not to honor this Notice of Exclusive Control.

SECURED PARTY (AS DEFINED ABOVE)

By: _____
(Signature of Secured Party’s authorized officer)

(Printed name of Secured Party’s authorized officer)

Its: _____
(Title of Secured Party’s authorized officer)

Dated: _____



Certificate Of Completion

Envelope Id: F2712F911FE6449F85B5B6AC017459C5

Status: Completed

Subject: Please DocuSign: Hercules Gritstone (USB Legal redline) 7-12-22 (003) personal.docx

Source Envelope:

Document Pages: 14

Signatures: 3

Envelope Originator:

Certificate Pages: 3

Initials: 0

Nichole Janson

AutoNav: Enabled

615 East Michigan St

Envelopeld Stamping: Enabled

Milwaukee, WI 53202

Time Zone: (UTC-06:00) Central Time (US & Canada)

nichole.janson@usbank.com

IP Address: 170.135.241.45

Record Tracking

Status: Original

Holder: Nichole Janson

Location: DocuSign

7/20/2022 9:22:46 AM

nichole.janson@usbank.com

Signer Events

Signature

Timestamp

James Cho

jcho@gritstone.com

Vice President, Finance

Gritstone Oncology, Inc.

Security Level: Email, Account Authentication
(Optional)



Signature Adoption: Pre-selected Style
Using IP Address: 24.5.171.241

Sent: 7/20/2022 9:25:19 AM

Viewed: 7/21/2022 9:17:45 AM

Signed: 7/21/2022 9:18:00 AM

Electronic Record and Signature Disclosure:

Accepted: 7/21/2022 9:17:45 AM

ID: 70880308-45ad-4d60-a730-e192196fae6c

Zhou Huang

dhuang@htgc.com

Associate General Counsel

Security Level: Email, Account Authentication
(Optional)



Signature Adoption: Pre-selected Style
Using IP Address: 12.86.199.166

Sent: 7/21/2022 9:18:02 AM

Viewed: 7/21/2022 10:55:05 AM

Signed: 7/21/2022 10:55:21 AM

Electronic Record and Signature Disclosure:

Accepted: 7/21/2022 10:55:05 AM

ID: 6f1ba092-1e2d-4692-a7ad-193191976eb1

Nichole Janson

nichole.janson@usbank.com

U.S. Global Fund Services

Security Level: Email, Account Authentication
(Optional)



Signature Adoption: Pre-selected Style
Using IP Address: 10.138.254.71

Sent: 7/21/2022 10:55:22 AM

Viewed: 7/21/2022 11:23:22 AM

Signed: 7/21/2022 11:23:35 AM

Electronic Record and Signature Disclosure:

Accepted: 7/21/2022 11:23:22 AM

ID: e992791c-430e-4a9c-ad83-4e006ee29dff

In Person Signer Events

Signature

Timestamp

Editor Delivery Events

Status

Timestamp

Agent Delivery Events

Status

Timestamp

Intermediary Delivery Events

Status

Timestamp

Certified Delivery Events

Status

Timestamp

Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	7/20/2022 9:25:19 AM
Certified Delivered	Security Checked	7/21/2022 11:23:22 AM
Signing Complete	Security Checked	7/21/2022 11:23:35 AM
Completed	Security Checked	7/21/2022 11:23:35 AM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

Electronic Document Consent

We need your permission before we can provide you with electronic versions of the documents that are required to be provided to you in connection with establishing your relationship at U.S. Bank National Association and its affiliates. This consent only applies to the documents associated with establishing your relationship and has no impact on any prior or future consent for electronic delivery you provide.

Method of delivery

Electronic versions of your documents will be presented to you within the document delivery platform – please save or print your electronic documents for future reference.

Requesting paper copies

You have the right to receive paper versions of the documents provided electronically. Contact us as described below to request a copy of any documentation that is presented electronically – a fee may apply for paper copies.

Electronic Signatures

You acknowledge that it is your intent to use electronic signatures in place of a handwritten signatures and you agree that the electronic record may not be denied legal effect, validity, or enforceability solely because it is in electronic form.

System Requirements

Your Access Device (defined as the electronic device you use to access your account and view electronic documents) must meet the following minimum system requirements:

- Operating system actively supported by the manufacturer.
- Internet access.
- Software capable of displaying PDF files.

This consent applies to all Access Devices you use to view electronic documents. If you change Access Devices (or use multiple Access Devices), it is your responsibility to ensure that the other Access Device meets these system requirements and that you are still able to access and view your electronic documents.

Withdrawal of consent

You have the right to establish your relationship using paper documents and handwritten signatures – do not provide consent if you want to proceed with a traditional paper process. Contact us as described below if you wish to withdraw your consent and revert to a paper process.

If you do not provide consent, or you otherwise withdraw your consent, you will need to establish your relationship with paper documents and handwritten signatures – this will increase the time it takes to complete the process.

Need help?

Contact us by phone or email if you have problems viewing your electronic documents. You may also contact us to request paper copies, manage your delivery preferences, or withdraw your consent. Please reference the email you received from us for our phone number or email address.

CONTROL AGREEMENT

This Control Agreement (the “Agreement”) is among **GRITSTONE ONOLOGY, INC.** now known as **GRITSTONE BIO, INC.**, a corporation organized under the laws of the State of Delaware (“Pledgor”); HERCULES CAPITAL, INC., a Maryland corporation, as administrative agent and collateral agent (in such capacities, “Secured Party”); and U.S. Bank National Association, a national banking association organized under the laws of the United States with offices in Minneapolis, Minnesota (“Intermediary”).

WHEREAS, Pledgor and Intermediary are the only parties to a fully-executed custody agreement, as may be amended from time to time, pursuant to which Intermediary maintains U.S. Bank Custody Account No. 19-520710 entitled GRITSTONE BIO, INC. for Pledgor’s assets (the “Account”) (such agreement, the “Custody Agreement”);

WHEREAS, Pledgor hereby directs Intermediary to enter into this Agreement;

NOW, THEREFORE, the parties hereby agree as follows:

1. **Collateral; Account Control.** Pledgor and Secured Party hereby represent and warrant that they are parties to that certain Loan and Security Agreement, dated as of July 19, 2022 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Loan and Security Agreement”), by and among Pledgor, Secured Party, and the lenders from time to time party thereto, pursuant to which Pledgor has granted to Secured Party a security interest in all of Pledgor’s right, title and interest in, to, and with respect to any assets held as of the date of this Agreement or hereafter in the Account, together with any securities, instruments, financial assets, investment property, and any other property issued in replacement of or in substitution or exchange for any of the foregoing, any securities entitlements in and to any of the foregoing, any books and records relating thereto, and any proceeds of the foregoing (including any cash interest, income, or dividends with respect to the foregoing) (collectively, the “Collateral”).
2. **UCC.** Intermediary is a “*securities intermediary*” with respect to the Account, and the Account is a “*securities account*”, within the meaning of Uniform Commercial Code Article 8 as adopted in Minnesota, Minn. Stat. Ch. 336, Article 8 (“Article 8”). Notwithstanding anything in this Agreement to the contrary, (i) Minnesota is Intermediary’s jurisdiction for the purposes of Article 8 and (ii) nothing in this Agreement will constitute a waiver of any of Intermediary’s rights as a securities intermediary under Minn. Stat. Section 336.9-206.
3. **Assets Held in the Account.** Intermediary’s official statement of the Account (an “Account Statement”) is not attached as an **exhibit** hereto. Intermediary does not hereby confirm that any assets are held in the Account as of the date of this Agreement.
4. **Certain Assets Not Collateral.** Notwithstanding anything herein to the contrary, the following assets are not Collateral (even if they are included in an Account Statement), and Intermediary hereby makes no confirmation, covenant, representation, or warranty with respect thereto:
 - 4.1. Any assets that are neither registered in the name of Intermediary or Intermediary’s nominee nor maintained by Intermediary at any central securities depository (such as the Depository Trust Company) or Federal Reserve Bank or with a sub-custodian nor held by Intermediary in unregistered or bearer form or in such form as will pass title by delivery.
 - 4.2. Any global securities maintained by Intermediary with a sub-custodian.

4.3. Any contract, declaration of trust, document of title, general intangible, lease, limited liability company interest, loan agreement, note, offering memorandum, partnership interest, security certificate, subscription agreement, or other instrument which may establish rights to income, principal, or other distributions on an asset.

4.4. Any units resulting from Intermediary's provision of unitized accounting services under the Custody Agreement and reflecting assets not held in the Account.

4.5. Real estate.

4.6. Any securities which are "*control securities*" or "*restricted securities*" within the meaning of Rule 144 under the Securities Exchange Act of 1934, as amended, or are subject to other marketability limitations.

4.7 Any asset that is not a "*financial asset*" within the meaning of Article 8.

4.8. Any such "*financial asset*" in the physical possession of Intermediary that is registered in the name of, payable to the order of, or specially indorsed to anyone other than Intermediary and has not been indorsed to Intermediary or in blank.

Pledgor hereby covenants not to deliver, or cause to be delivered, any of the foregoing to the Account.

5. Secured Party's Power to Direct Intermediary.

5.1. Pledgor and Secured Party hereby direct Intermediary to comply with all directions, instructions, or entitlement orders concerning the Collateral originated by Secured Party without further consent by Pledgor. Intermediary will comply with all directions, instructions, or entitlement orders concerning the Collateral originated by Secured Party without further consent by Pledgor. Pledgor hereby agrees that Intermediary's obligation to act on Secured Party's directions, instructions, or entitlements orders is unconditional. Intermediary will have no duty, obligation, or authority to determine whether Secured Party is acting properly, even if Pledgor objects or directs Intermediary not to follow Secured Party's directions, instructions, or entitlement orders. Secured Party hereby instructs Intermediary and Intermediary agrees that unless and until Intermediary receives a Notice of Exclusive Control, Intermediary shall honor all directions, instructions, or entitlement orders concerning the Collateral received from the Pledgor. Subject to Section 10 hereof, if Intermediary receives from Secured Party a written notice that Secured Party is exercising exclusive control over the Collateral substantially in the form of **Exhibit A (Notice of Exclusive Control)** attached hereto (the "Notice of Exclusive Control"), then Intermediary will, in reliance upon such Notice of Exclusive Control, stop complying with directions, instructions, or entitlement orders concerning the Collateral originated by Pledgor. Secured Party agrees that it shall not deliver a Notice of Exclusive Control to the Intermediary unless an Event of Default (as defined in the Loan and Security Agreement) has occurred and is continuing. Intermediary will have no duty, obligation, or authority to determine whether Secured Party's delivery of the Notice of Exclusive Control (or the terms thereof) is proper, even if Pledgor objects or directs Intermediary not to honor the Notice of Exclusive Control.

6. **Withdrawal or Transfer (Part 1).** Unless and until Intermediary receives a **Notice of Exclusive Control**, Secured Party hereby consents to Pledgor's withdrawal or transfer of the Collateral, including Pledgor's instructions to Intermediary to that effect.

7. **Withdrawal or Transfer (Part 2).** Notwithstanding anything herein to the contrary, any limits on Pledgor's withdrawal or transfer of the Collateral do not apply to cash interest, income, and dividends.

8. **Trading or Substitution.** Unless and until Intermediary receives a **Notice of Exclusive Control**, Secured Party hereby consents to Pledgor's trading or substituting the Collateral, including Pledgor's instructions to Intermediary to that effect, so long as the proceeds resulting from such trading or substituting remain in the Account. Pledgor will not, and hereby covenants not to, trade for the Account on margin.

9. **Trade, Substitute, Withdraw, or Transfer.** As used herein, the words "trade" and "substitute" and words derived therefrom refer to deliveries out of the Account for counter-value, whereas the words "withdraw" and "transfer" and words derived therefrom refer to deliveries out of the Account not for counter-value.

10. **Effectiveness of Notice of Exclusive Control.** Any Notice of Exclusive Control provided to Intermediary will only be binding after (a) Intermediary receives such Notice of Exclusive Control and (b) Intermediary has had a reasonable opportunity to act upon such Notice of Exclusive Control not to exceed two business days after received at the address for Intermediary listed below.

11. **No Other Security Interest; Ownership of Collateral.**

11.1. Pledgor hereby represents and warrants that (i) Pledgor has not granted a security interest in the Collateral to any person or entity other than Secured Party and Intermediary, and (ii) Pledgor is the sole beneficial owner of the Collateral (except for Secured Party's interest and Intermediary's interest).

11.2. Intermediary's records show that Pledgor is the sole owner of the Collateral and that Intermediary has not received notice of any levy, security interest, or other claim in or to the Collateral other than this Agreement ("Adverse Claim"). If Intermediary receives notice of an Adverse Claim, then Intermediary will promptly notify Pledgor and Secured Party thereof.

11.3. Intermediary is not presently obligated to comply with transfer or withdrawal orders from any person other than Pledgor with respect to the Collateral. After the execution of this Agreement, without Secured Party's prior written consent, Intermediary will not enter into any agreements by which Intermediary agrees to comply with transfer or withdrawal orders of any person other than Secured Party with respect to the Collateral.

12. **Limited Subordination.**

12.1. Intermediary hereby subordinates to Secured Party's security interests all of Intermediary's present and future liens, security interests, rights of set-off, claims, and other rights and interests relating to the Collateral, except for those resulting from any (i) advance of funds or securities in furtherance of settling securities transactions and other financial-market transactions under the Custody Agreement ("Settlement Claims") or (ii) outstanding compensation, expenses, fees, costs, or other charges incurred by Intermediary in providing services under this Agreement or the Custody Agreement.

12.2. Intermediary hereby represents and warrants that no Settlement Claims are past due as of the date of this Agreement.

12.3. Except to the extent allowed under this Section, Intermediary will not execute or exercise any of Intermediary's present or future liens, security interests, rights of set-off, claims, or other rights or interests relating to the Collateral.

13. **Limited Responsibility of Intermediary.**

13.1. Intermediary will be fully protected in acting in accordance with any direction, instruction, or entitlement order provided pursuant to this Agreement, and Intermediary has no duty to (i) solicit or confirm directions, instructions, or entitlement orders; (ii) notify Pledgor of receiving any direction, instruction, or entitlement order originated by Secured Party or Notice of Exclusive Control; (iii) select a broker in furtherance of complying with a direction, instruction, or entitlement order or take any action that would require Intermediary to register as a broker; or (iv) question whether any direction, instruction, or entitlement order received under this Agreement by email or any financial-messaging system, network, or service acceptable to Intermediary, such as the Society for Worldwide Interbank Financial Telecommunication messaging system (“Messaging System”), or entered into Pledgor’s or Secured Party’s account in Intermediary’s on-line portal, is unreliable or has been compromised, such as by identity theft.

13.2. Other than the obligation to provide Account Statements as set forth herein, Intermediary will have no responsibility or liability to Secured Party with respect to the value of the Collateral.

13.3. Intermediary will have no duty to investigate or make any determination or provide any notice as to (i) whether Secured Party has “*control*” of the Collateral within the meaning of Article 8; (ii) the suitability or value of any asset held as Collateral or any decrease in such value; (iii) the purpose of any direction, instruction, or entitlement order provided pursuant to this Agreement; or (iv) whether a default exists under any other agreement.

13.4. The duties of Intermediary will be strictly limited to those set forth in this Agreement, and no implied covenants, duties, responsibilities, representations, warranties, or obligations will be read into this Agreement against Intermediary.

13.5. Notwithstanding anything to the contrary, Intermediary makes no representation or warranty with regard to the enforceability of any security interest described herein.

14. Indemnification; *Force Majeure*; Damages.

14.1. Indemnification.

14.1.1. “Indemnified Person” means Intermediary and its affiliates, and their officers, directors, employees, agents, successors, and assigns. “Harm” means claims, costs, damages, delayed payment or non-payment on assets sold, expenses (including reasonable and documented attorneys’ fees of outside counsel), fines, interest, liabilities, losses, penalties, stockholders’ assessments (asserted on account of asset registration), and taxes.

14.1.2. Pledgor hereby agrees to indemnify, defend, and save harmless each Indemnified Person from and against any Harm that may be imposed on, incurred by, or asserted against an Indemnified Person by reason of the Indemnified Person’s action or omission in connection with this Agreement or the Account (including, but not limited to, an action or omission that is consistent with directions provided under this Agreement), except to the extent that a court of competent jurisdiction has made a final judgment that the Harm resulted directly from the Indemnified Person’s willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.3. Secured Party agrees to indemnify, defend and save harmless each Indemnified Person from and against any Harm that may be imposed on, incurred by, or asserted against an Indemnified Person (a) by reason of the Indemnified Person’s action or omission relating to a direction or instruction from Secured Party, or (b) at any time after receipt by Intermediary of a Notice of Exclusive Control (including, but not limited to, an action or omission that is consistent with directions provided under this Agreement), except to the extent that a court of competent jurisdiction has made a final judgment that the

Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.4 Pledgor and Secured Party hereby release each Indemnified Person from any Harm, except to the extent that a court of competent jurisdiction has made a final judgment that the Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.5. The foregoing provisions will survive the Indemnified Person's termination as such and the termination of this Agreement.

14.2. **Force Majeure.** No party is liable for any delay or failure in performing its obligations under this Agreement caused by wars (whether declared or not and including existing wars), revolutions, insurrections, riots, civil commotion, acts of God, accidents, fires, explosions; stoppages of labor, strikes, or other differences with employees (other than Intermediary's disputes with its employees); laws, regulations, orders, or other acts of any governmental authority; or any other circumstances beyond its reasonable control. Nor will any such failure or delay give any party the right to terminate this Agreement.

14.3. **Damages.** No party hereto is liable for any indirect, incidental, special, punitive, or consequential damages arising out of or in any way related to this Agreement or the performance of its obligations under this Agreement. This limitation applies even if the party has been advised of, or is aware of, the possibility of such damages.

15. **Tax Reporting.** All reports relating to the Collateral to federal, state, and local tax authorities will be made under the name and tax identification number of Pledgor.

16. **Termination of Agreement.** Intermediary may terminate this Agreement by notice to Pledgor and Secured Party, and such termination will be effective thirty (30) calendar days after delivery of the notice. Secured Party may terminate this Agreement by notice to Intermediary, and such termination will be effective upon delivery. Any other termination of this Agreement shall be effected solely by an instrument in writing executed by all the parties hereto.

17. **Account Statements.** Intermediary will send duplicate copies of any Account Statements and confirmations of transactions involving Collateral to Secured Party at its address set forth below.

18. **Authorized Persons; Delivery of Directions.**

18.1. **Authorized Persons.** With respect to this Agreement:

18.1.1. Pledgor will notify Intermediary of the identity of each (i) employee of Pledgor who is authorized to act on Pledgor's behalf, (ii) third-party agent that is authorized to act on Pledgor's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement to terminate this Agreement.

18.1.2. Secured Party will notify Intermediary of the identity of each (i) employee of Secured Party who is authorized to act on Secured Party's behalf, (ii) third-party agent that is authorized to act on Secured Party's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement or to terminate this Agreement.

18.1.3. Intermediary may assume that any such employee or agent of Pledgor continues to be so authorized, until Intermediary receives notice to the contrary from Pledgor (or, with respect to any

such employee of any such agent, from such agent). Intermediary may assume that any such employee or agent of Secured Party continues to be so authorized, until Intermediary receives notice to the contrary from Secured Party (or, with respect to any such employee of any such agent, from such agent).

18.1.4. Pledgor hereby represents and warrants that any such employee or agent of Pledgor was duly appointed and is appropriately monitored and covenants that Pledgor will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Pledgor. Pledgor hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Pledgor as if Pledgor had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.1.5. Secured Party hereby represents and warrants that any such employee or agent of Secured Party was duly appointed and is appropriately monitored and covenants that Secured Party will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Secured Party. Secured Party hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Secured Party as if Secured Party had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.2. Delivery of Directions.

18.2.1. Any direction, notice, or other communication to or from Pledgor provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Pledgor's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.2. Any direction, notice, or other communication to or from Secured Party provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Secured Party's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.3. Any direction received from Pledgor under this Agreement by email or Messaging System, or entered into Pledgor's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Pledgor. Pledgor hereby represents and warrants that Pledgor maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Pledgor hereby assumes all risk to the Account of such unauthorized access. Pledgor hereby acknowledges that Pledgor is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Pledgor and Pledgor's agents.

18.2.4. Any direction received from Secured Party under this Agreement by email or Messaging System, or entered into Secured Party's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Secured Party. Secured Party hereby represents and warrants that Secured Party maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Secured Party hereby assumes all risk to the Account of such unauthorized access. Secured Party hereby acknowledges that Secured Party is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Secured Party and Secured Party's agents.

19. **Freedom to Deal with Third Parties.** Intermediary is free to render services to others, whether similar to those services rendered under this Agreement or of a different nature.

20. **Binding Obligations.** Pledgor, Secured Party, and Intermediary each hereby represent and warrant that (i) it has the power and authority to transact the business in which it is engaged and to execute, deliver, and perform this Agreement and has taken all action necessary to execute, deliver, and perform this Agreement and (ii) this Agreement constitutes its legal, valid, and binding obligation enforceable according to the terms hereof.

21. **Complete Agreement; Amendment; Prevalence.**

21.1. **Complete Agreement.** This Agreement contains a complete statement of all the arrangements between the parties with respect to its subject matter and supersedes any existing agreements between them concerning the subject. This Agreement and any administrative form under this Agreement may be proved either by a signed original or by a reproduced copy thereof (including, not by way of limitation, a microfiche copy or an electronic file copy).

21.2. **Amendment.** This Agreement may be amended at any time, in whole or in part, by a written instrument signed by Pledgor, Secured Party, and Intermediary.

21.3. **Prevalence.** Pledgor and Intermediary hereby acknowledge and agree that, in the event of any inconsistency between this Agreement and the Custody Agreement regarding the Collateral, this Agreement prevails with respect to the Collateral.

22. **Governing Law; Venue.** This Agreement will be governed, enforced, and interpreted according to the laws of the State of Minnesota without regard to conflicts of laws, except where pre-empted by federal law. All legal actions or other proceedings directly or indirectly relating to this Agreement will be brought in federal court (or, if unavailable, state court) sitting in the State of Minnesota. The parties submit to the jurisdiction of any such court in any such action or proceeding and waive any immunity from suit in such court or execution, attachment (whether before or after judgment), or other legal process in or by such court.

23. **Successors and Assigns.**

23.1. This Agreement binds, and inures to the benefit of, Pledgor, Secured Party, Intermediary, and their respective successors and assigns; provided, however, that Pledgor will have no right to assign any rights with respect to Collateral, except as specifically permitted in this Agreement.

23.2. No party may assign any of its rights under this Agreement without the consent of each other party, which consent will not be unreasonably withheld. Pledgor hereby acknowledges that Intermediary will withhold consent unless and until (a) Intermediary verifies Pledgor's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Pledgor hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request and (b) Secured Party consents in writing to such assignment. Secured Party hereby acknowledges that Intermediary will withhold consent unless and until Intermediary verifies Secured Party's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Secured Party hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request. No consent is required if a party merges with, consolidates with, or sells substantially all of its assets to another entity, provided that such other entity assumes without delay, qualification, or limitation all obligations of that party under this Agreement by operation of law or by

contract. Furthermore, no consent is required with respect to any transfer by Secured Party of its rights and duties under this Agreement to (i) a transferee to which, by contract or operation of law, Secured Party transfers substantially all of its rights and duties under the financing or other arrangements between Secured Party and Pledgor, or (ii) if Secured Party is acting as a representative in whose favor a security interest is created or provided for, a transferee that is a successor representative; in such case, Secured Party will not be released from its obligations to Intermediary under this Agreement unless and until Intermediary receives any such transferee's binding written agreement to assume all of Secured Party's obligations hereunder.

24. **Severability.** The provisions of this Agreement are severable. The invalidity of a provision herein will not affect the validity of any other provision.

25. **No Third-Party Beneficiaries.** This Agreement is made solely for the benefit of the parties. No person other than such parties has any rights or remedies under this Agreement.

26. **[Reserved].**

27. **Legal Advice.** Pledgor and Secured Party hereby acknowledge that they (i) did not receive legal advice from Intermediary concerning this Agreement, (ii) had an adequate opportunity to consult attorneys of their choice before executing this Agreement, and (iii) executed this Agreement upon their own judgment and, if sought, the advice of such attorneys.

28. **Waiver of Jury Trial.** Each party hereby irrevocably waives all right to a trial by jury in any action, proceeding, claim, or counterclaim (whether based on contract, tort, or otherwise) directly or indirectly arising out of or relating to this Agreement.

29. **Legal Action.** If Intermediary is served with any freeze order, garnishment, levy, restraining order, search warrant, subpoena, writ of attachment or execution, or similar order relating to the Account (each, a "Legal Action"), then Intermediary will, to the extent permitted by law, use commercially reasonable efforts to notify Pledgor and Secured Party of such service. If Pledgor notifies Intermediary that Pledgor is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Pledgor's request and sole cost and expense. If Secured Party notifies Intermediary that Secured Party is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Secured Party's request and sole cost and expense. In any event, Intermediary may comply with the Legal Action at any time, except to the extent Intermediary has received a protective order that prevents Intermediary from complying.

30. **[Reserved].**

31. **[Reserved].**

32. **Publicity.** No party will disclose the existence of this Agreement or any terms thereof in advertising, promotional, or marketing materials without obtaining, in each case, the prior written consent of each other party.

33. **Counterparts and Duplicates.** This Agreement may be executed in any number of counterparts, each of which will be considered an original, but all of which together will constitute the same instrument.

34. **Effective Date.** This Agreement will become effective when all parties have signed it. The date of this Agreement will be the date this Agreement is signed by the last party to sign it (as indicated by the date associated with that party's signature).

[Signature Page Follows]

IN WITNESS WHEREOF, an authorized officer of each party hereby executes this Agreement on the date stated beneath that party's signature.

GRITSTONE BIO, INC.

DocuSigned by:
By: James Cho
(Signature) A18275C856864DF...

Name: ~~Printed Name~~ [Printed Name of Pledgor's authorized officer]

Its: ~~Title of Pledgor's authorized officer~~ [Title of Pledgor's authorized officer]

Dated: 7/20/2022

U.S. Mail Address:

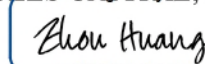
Gritstone bio, Inc.
5959 Horton Street, Suite 300
Emeryville, CA 94608

Email Address:

jcho@gritstone.com

HERCULES CAPITAL, INC.

By:


4A38234DA40C437...
(Signature)

Name: Zhou Huang

Its: [Associate General Counsel]

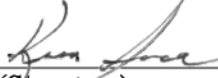
Dated: 7/20/2022

U.S. Mail Address:
HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Cristy Barnes
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Email Address:
legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com;
hballa@htgc.com

U.S. BANK NATIONAL ASSOCIATION

By:


(Signature)

Name: Kevin Isawa

Its: Vice President and Relationship Manager

Dated: 8/22/2022

U.S. Mail Address:

One California Street

Suite 1000

San Francisco, CA 94111

Email Address:

Kevin.isawa@usbank.com

CONTROL AGREEMENT

Exhibit A

Notice of Exclusive Control

[Drafting note: To be provided on letterhead of Secured Party]

Date: _____

To: U.S. Bank National Association
c/o _____, Vice President and Relationship Manager
(U.S. Mailing Address)
(U.S. Mailing Address)

Re: Agreement entitled “Control Agreement” among GRITSTONE BIO, INC. (“Pledgor”);
HERCULES CAPITAL, INC., as agent (“Secured Party”); and U.S. Bank National
Association (“Intermediary”) and dated [____], 2022 (the “Control Agreement”)

Secured Party hereby (i) notifies Intermediary that Secured Party is exercising exclusive control over the Collateral (as defined in the Control Agreement); (ii) instructs Intermediary to stop complying with directions, instructions, or entitlement orders concerning the Collateral originated by Pledgor; and (iii) represents and warrants to Intermediary that this Notice of Exclusive Control is lawful and authorized by the applicable agreement between Pledgor and Secured Party. Intermediary has no duty, obligation, or authority to determine whether Secured Party’s delivery of this Notice of Exclusive Control (or the terms hereof) is proper, even if Pledgor objects or directs Intermediary not to honor this Notice of Exclusive Control.

SECURED PARTY (AS DEFINED ABOVE)

By: _____
(Signature of Secured Party’s authorized officer)

(Printed name of Secured Party’s authorized officer)

Its: _____
(Title of Secured Party’s authorized officer)

Dated: _____

Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.4 Pledgor and Secured Party hereby release each Indemnified Person from any Harm, except to the extent that a court of competent jurisdiction has made a final judgment that the Harm resulted directly from the Indemnified Person's willful misconduct, gross negligence, bad faith, or material breach of this Agreement.

14.1.5. The foregoing provisions will survive the Indemnified Person's termination as such and the termination of this Agreement.

14.2. **Force Majeure.** No party is liable for any delay or failure in performing its obligations under this Agreement caused by wars (whether declared or not and including existing wars), revolutions, insurrections, riots, civil commotion, acts of God, accidents, fires, explosions; stoppages of labor, strikes, or other differences with employees (other than Intermediary's disputes with its employees); laws, regulations, orders, or other acts of any governmental authority; or any other circumstances beyond its reasonable control. Nor will any such failure or delay give any party the right to terminate this Agreement.

14.3. **Damages.** No party hereto is liable for any indirect, incidental, special, punitive, or consequential damages arising out of or in any way related to this Agreement or the performance of its obligations under this Agreement. This limitation applies even if the party has been advised of, or is aware of, the possibility of such damages.

15. **Tax Reporting.** All reports relating to the Collateral to federal, state, and local tax authorities will be made under the name and tax identification number of Pledgor.

16. **Termination of Agreement.** Intermediary may terminate this Agreement by notice to Pledgor and Secured Party, and such termination will be effective thirty (30) calendar days after delivery of the notice. Secured Party may terminate this Agreement by notice to Intermediary, and such termination will be effective upon delivery. Any other termination of this Agreement shall be effected solely by an instrument in writing executed by all the parties hereto.

17. **Account Statements.** Intermediary will send duplicate copies of any Account Statements and confirmations of transactions involving Collateral to Secured Party at its address set forth below.

18. **Authorized Persons; Delivery of Directions.**

18.1. **Authorized Persons.** With respect to this Agreement:

18.1.1. Pledgor will notify Intermediary of the identity of each (i) employee of Pledgor who is authorized to act on Pledgor's behalf, (ii) third-party agent that is authorized to act on Pledgor's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement to terminate this Agreement.

18.1.2. Secured Party will notify Intermediary of the identity of each (i) employee of Secured Party who is authorized to act on Secured Party's behalf, (ii) third-party agent that is authorized to act on Secured Party's behalf, and (iii) employee of each third-party agent who is authorized to act on such agent's behalf. In no event is any such agent authorized to amend this Agreement or to terminate this Agreement.

18.1.3. Intermediary may assume that any such employee or agent of Pledgor continues to be so authorized, until Intermediary receives notice to the contrary from Pledgor (or, with respect to any

such employee of any such agent, from such agent). Intermediary may assume that any such employee or agent of Secured Party continues to be so authorized, until Intermediary receives notice to the contrary from Secured Party (or, with respect to any such employee of any such agent, from such agent).

18.1.4. Pledgor hereby represents and warrants that any such employee or agent of Pledgor was duly appointed and is appropriately monitored and covenants that Pledgor will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Pledgor. Pledgor hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Pledgor as if Pledgor had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.1.5. Secured Party hereby represents and warrants that any such employee or agent of Secured Party was duly appointed and is appropriately monitored and covenants that Secured Party will furnish such employee or agent with a copy of this Agreement, as amended from time to time, and with a copy of any communications given under this Agreement to Secured Party. Secured Party hereby acknowledges that (i) such employee's or agent's actions or omissions are binding upon Secured Party as if Secured Party had taken such actions or made such omissions itself and (ii) Intermediary is indemnified, released, and held harmless accordingly.

18.2. Delivery of Directions.

18.2.1. Any direction, notice, or other communication to or from Pledgor provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Pledgor's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.2. Any direction, notice, or other communication to or from Secured Party provided for in this Agreement will be given in writing and (i) unless the recipient has timely delivered a superseding address under this Agreement, addressed as provided under this Agreement, (ii) entered into Secured Party's account in Intermediary's on-line portal, or (iii) sent to Intermediary by Messaging System.

18.2.3. Any direction received from Pledgor under this Agreement by email or Messaging System, or entered into Pledgor's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Pledgor. Pledgor hereby represents and warrants that Pledgor maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Pledgor hereby assumes all risk to the Account of such unauthorized access. Pledgor hereby acknowledges that Pledgor is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Pledgor and Pledgor's agents.

18.2.4. Any direction received from Secured Party under this Agreement by email or Messaging System, or entered into Secured Party's account in Intermediary's on-line portal, is deemed to be given in a writing signed by Secured Party. Secured Party hereby represents and warrants that Secured Party maintains commercially reasonable security measures for preventing unauthorized access to its portal account; to the email accounts of its employees, agents, and agents' employees; and to any Messaging System used by its employees, agents, and agents' employees, and Secured Party hereby assumes all risk to the Account of such unauthorized access. Secured Party hereby acknowledges that Secured Party is fully informed of the protections and risks associated with the various methods of transmitting directions to Intermediary and that there may be more secure methods of transmitting directions than the methods selected by Secured Party and Secured Party's agents.

19. **Freedom to Deal with Third Parties.** Intermediary is free to render services to others, whether similar to those services rendered under this Agreement or of a different nature.

20. **Binding Obligations.** Pledgor, Secured Party, and Intermediary each hereby represent and warrant that (i) it has the power and authority to transact the business in which it is engaged and to execute, deliver, and perform this Agreement and has taken all action necessary to execute, deliver, and perform this Agreement and (ii) this Agreement constitutes its legal, valid, and binding obligation enforceable according to the terms hereof.

21. **Complete Agreement; Amendment; Prevalence.**

21.1. **Complete Agreement.** This Agreement contains a complete statement of all the arrangements between the parties with respect to its subject matter and supersedes any existing agreements between them concerning the subject. This Agreement and any administrative form under this Agreement may be proved either by a signed original or by a reproduced copy thereof (including, not by way of limitation, a microfiche copy or an electronic file copy).

21.2. **Amendment.** This Agreement may be amended at any time, in whole or in part, by a written instrument signed by Pledgor, Secured Party, and Intermediary.

21.3. **Prevalence.** Pledgor and Intermediary hereby acknowledge and agree that, in the event of any inconsistency between this Agreement and the Custody Agreement regarding the Collateral, this Agreement prevails with respect to the Collateral.

22. **Governing Law; Venue.** This Agreement will be governed, enforced, and interpreted according to the laws of the State of Minnesota without regard to conflicts of laws, except where pre-empted by federal law. All legal actions or other proceedings directly or indirectly relating to this Agreement will be brought in federal court (or, if unavailable, state court) sitting in the State of Minnesota. The parties submit to the jurisdiction of any such court in any such action or proceeding and waive any immunity from suit in such court or execution, attachment (whether before or after judgment), or other legal process in or by such court.

23. **Successors and Assigns.**

23.1. This Agreement binds, and inures to the benefit of, Pledgor, Secured Party, Intermediary, and their respective successors and assigns; provided, however, that Pledgor will have no right to assign any rights with respect to Collateral, except as specifically permitted in this Agreement.

23.2. No party may assign any of its rights under this Agreement without the consent of each other party, which consent will not be unreasonably withheld. Pledgor hereby acknowledges that Intermediary will withhold consent unless and until (a) Intermediary verifies Pledgor's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Pledgor hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request and (b) Secured Party consents in writing to such assignment. Secured Party hereby acknowledges that Intermediary will withhold consent unless and until Intermediary verifies Secured Party's assignee's identity according to Intermediary's Customer Identification Program and, to that end, Secured Party hereby agrees to notify Intermediary of such assignment and provide Intermediary with the assignee's name, physical address, EIN, organizational documents, certificate of good standing, and license to do business, as well as other information that Intermediary may request. No consent is required if a party merges with, consolidates with, or sells substantially all of its assets to another entity, provided that such other entity assumes without delay, qualification, or limitation all obligations of that party under this Agreement by operation of law or by

contract. Furthermore, no consent is required with respect to any transfer by Secured Party of its rights and duties under this Agreement to (i) a transferee to which, by contract or operation of law, Secured Party transfers substantially all of its rights and duties under the financing or other arrangements between Secured Party and Pledgor, or (ii) if Secured Party is acting as a representative in whose favor a security interest is created or provided for, a transferee that is a successor representative; in such case, Secured Party will not be released from its obligations to Intermediary under this Agreement unless and until Intermediary receives any such transferee's binding written agreement to assume all of Secured Party's obligations hereunder.

24. **Severability.** The provisions of this Agreement are severable. The invalidity of a provision herein will not affect the validity of any other provision.

25. **No Third-Party Beneficiaries.** This Agreement is made solely for the benefit of the parties. No person other than such parties has any rights or remedies under this Agreement.

26. **[Reserved].**

27. **Legal Advice.** Pledgor and Secured Party hereby acknowledge that they (i) did not receive legal advice from Intermediary concerning this Agreement, (ii) had an adequate opportunity to consult attorneys of their choice before executing this Agreement, and (iii) executed this Agreement upon their own judgment and, if sought, the advice of such attorneys.

28. **Waiver of Jury Trial.** Each party hereby irrevocably waives all right to a trial by jury in any action, proceeding, claim, or counterclaim (whether based on contract, tort, or otherwise) directly or indirectly arising out of or relating to this Agreement.

29. **Legal Action.** If Intermediary is served with any freeze order, garnishment, levy, restraining order, search warrant, subpoena, writ of attachment or execution, or similar order relating to the Account (each, a "Legal Action"), then Intermediary will, to the extent permitted by law, use commercially reasonable efforts to notify Pledgor and Secured Party of such service. If Pledgor notifies Intermediary that Pledgor is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Pledgor's request and sole cost and expense. If Secured Party notifies Intermediary that Secured Party is seeking a protective order to resist the Legal Action, then Intermediary will provide reasonable cooperation at Secured Party's request and sole cost and expense. In any event, Intermediary may comply with the Legal Action at any time, except to the extent Intermediary has received a protective order that prevents Intermediary from complying.

30. **[Reserved].**

31. **[Reserved].**

32. **Publicity.** No party will disclose the existence of this Agreement or any terms thereof in advertising, promotional, or marketing materials without obtaining, in each case, the prior written consent of each other party.


33. **Counterparts and Duplicates.** This Agreement may be executed in any number of counterparts, each of which will be considered an original, but all of which together will constitute the same instrument.

34. **Effective Date.** This Agreement will become effective when all parties have signed it. The date of this Agreement will be the date this Agreement is signed by the last party to sign it (as indicated by the date associated with that party's signature).

[Signature Page Follows]

IN WITNESS WHEREOF, an authorized officer of each party hereby executes this Agreement on the date stated beneath that party's signature.

GRITSTONE BIO, INC.

By: _____
(Signature)

Name: ~~James Chan~~ [Printed Name of Pledgor's authorized officer]

Its: ~~Chief Executive Officer~~ [Title of Pledgor's authorized officer]

Dated: 7/20/2022_____

U.S. Mail Address:

Gritstone bio, Inc._____
5959 Horton Street, Suite 300_____
Emeryville, CA 94608_____

Email Address:

jcho@gritstone.com_____

HERCULES CAPITAL, INC.

By:

(Signature)

Name: Zhou Huang

Its: Associate General Counsel

Dated: 7/20/2022

U.S. Mail Address:

HERCULES CAPITAL, INC.

Legal Department

Attention: Chief Legal Officer and Cristy Barnes

400 Hamilton Avenue, Suite 310

Palo Alto, CA 94301

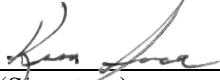
Email Address:

legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com;

hballa@htgc.com

U.S. BANK NATIONAL ASSOCIATION

By:


(Signature)

Name: Kevin Isawa

Its: Vice President and Relationship Manager

Dated: 8/22/2022

U.S. Mail Address:

One California Street

Suite 1000

San Francisco, CA 94111

Email Address:

Kevin.isawa@usbank.com

CONTROL AGREEMENT

Exhibit A

Notice of Exclusive Control

[Drafting note: To be provided on letterhead of Secured Party]

Date: _____

To: U.S. Bank National Association
c/o _____, Vice President and Relationship Manager
(U.S. Mailing Address)
(U.S. Mailing Address)

Re: Agreement entitled “Control Agreement” among GRITSTONE BIO, INC. (“Pledgor”);
HERCULES CAPITAL, INC., as agent (“Secured Party”); and U.S. Bank National
Association (“Intermediary”) and dated [____], 2022 (the “Control Agreement”)

Secured Party hereby (i) notifies Intermediary that Secured Party is exercising exclusive control over the Collateral (as defined in the Control Agreement); (ii) instructs Intermediary to stop complying with directions, instructions, or entitlement orders concerning the Collateral originated by Pledgor; and (iii) represents and warrants to Intermediary that this Notice of Exclusive Control is lawful and authorized by the applicable agreement between Pledgor and Secured Party. Intermediary has no duty, obligation, or authority to determine whether Secured Party’s delivery of this Notice of Exclusive Control (or the terms hereof) is proper, even if Pledgor objects or directs Intermediary not to honor this Notice of Exclusive Control.

SECURED PARTY (AS DEFINED ABOVE)

By: _____
(Signature of Secured Party’s authorized officer)

(Printed name of Secured Party’s authorized officer)

Its: _____
(Title of Secured Party’s authorized officer)

Dated: _____

BLOCKED ACCOUNT CONTROL AGREEMENT SHIFTING CONTROL

V1.7_08_24_21

BLOCKED ACCOUNT CONTROL AGREEMENT (as amended, restated, supplemented or otherwise modified from time to time, this "**Agreement**") dated as of July 21, 2022, by and among the company entities listed on Schedule 1 attached hereto and incorporated herein by reference (individually and collectively "**Company**"), Hercules Capital, Inc., a Maryland corporation, in its capacity as administrative agent and collateral agent (together with its permitted successors and assigns, "**Secured Party**") and JPMorgan Chase Bank, N.A. ("**Bank**" and together with Company and Secured Party, "**Parties**" and each of the Parties in its individual capacity, "**Party**").

The Parties refer to those account numbers listed on Schedule 1 attached hereto in the name of the corresponding Company maintained at Bank (individually and collectively, the "**Account**") and hereby agree as follows:

1. (a) Company and Secured Party notify Bank that by separate agreement Company has granted Secured Party a security interest in the Account and all funds on deposit from time to time therein. Bank acknowledges being so notified.

(b) Bank hereby confirms that the Account is a demand deposit account maintained by Company with Bank in Bank's ordinary course of business and that Bank is a national banking association. Each party confirms that it intends that this Agreement constitute an "authenticated record" as defined in Article 9 of the Uniform Commercial Code as in effect in the State of New York from time to time ("UCC"). As of the effective date of this Agreement, Bank confirms that except for this Agreement and the applicable Account Documentation, (i) Bank is not currently entered into any agreement with any person or entity pursuant to which Bank is obligated to comply with instructions as to the disposition of funds from the Account and (ii) for the duration of the Agreement Bank shall not, without the prior written consent of Secured Party, enter into any agreement with any other person or entity pursuant to which Bank is obligated to comply with instructions as to the disposition of funds from the Account.
2. (a) It is the intent of the Parties that Secured Party has control over the Account within the meaning of Section 9-104 of the UCC. Bank agrees that it shall follow the Instructions (as defined below) of Secured Party concerning the Account without further consent of Company. Secured Party hereby instructs Bank that prior to the Effective Time (as defined below) Bank shall honor all withdrawal, payment, transfer or other fund disposition or other instructions (collectively, "**Instructions**") which Company is entitled to give under the Account Documentation (as defined below) received from Company (but not those from Secured Party) concerning the Account. On and after the Effective Time (and without Company's consent), Bank shall honor all written Instructions received from Secured Party (but not those from Company) concerning the Account and Company shall have no right to issue Instructions or any other right or ability to access or withdraw or transfer funds from the Account.

(b) The "**Effective Time**" shall be the opening of business on the second Business Day following the Business Day on which a notice purporting to be signed by Secured Party in substantially the same form as Exhibit A, with a copy of this Agreement attached to such notice (a "**Shifting Control Notice**"), is actually received by the unit of Bank to whom the notice is required to be addressed; provided, however, that if any such notice is so received after 12:00 noon, Eastern time, on any Business Day, the Effective Time shall be the opening of business on the third Business Day following the Business Day on which such receipt occurs. A "**Business Day**" is any day other than a Saturday, Sunday or other day on which Bank is or is authorized or required by law to be closed.

(c) Notwithstanding the foregoing: (i) all transactions involving or resulting in a transaction involving the Account duly commenced by Bank or any affiliate prior to the Effective Time and consummated or processed thereafter shall be deemed not to constitute a violation of this Agreement; and (ii) Bank and/or any affiliate may (at its discretion and without any obligation to do so) (x) cease honoring Company's Instructions and/or commence honoring solely Secured Party's Instructions concerning the Account at any time or from time to time after it becomes aware that Secured Party has sent to it a Shifting Control Notice but prior to the Effective Time (including without limitation halting, reversing or redirecting any transaction referred to in clause (i) above), or (y) deem a Shifting Control Notice to be received by it, for purposes of the foregoing paragraph, prior to the specified unit's actual receipt if otherwise actually received by Bank (or if such Shifting Control Notice does not substantially comply with the form attached as Exhibit A or does not attach an appropriate copy of this Agreement), with no liability whatsoever to Company for doing so.
3. This Agreement supplements, rather than replaces, Bank's deposit account agreement, terms and conditions and other standard documentation in effect from time to time with respect to the Account or services provided in connection with the Account (the "**Account Documentation**"), which Account Documentation will continue to apply to the Account and such services, and the respective rights, powers, duties, obligations, liabilities and responsibilities of the parties to such Account Documentation and this Agreement, to the extent not expressly conflicting with the provisions of this Agreement (however, in the event of any such conflict, the provisions of this Agreement shall control). Prior to issuing any Instructions on or after the Effective Time, Secured Party shall provide Bank with such documentation as Bank may reasonably request to establish the identity and authority of the individuals issuing Instructions on behalf of Secured Party. Secured Party may request Bank to provide other services (such as automatic daily transfers) with respect to the Account on or after the Effective Time; however, if such services are not authorized or otherwise covered under the Account Documentation, Bank's decision to provide any such services shall be made in its sole discretion (including without limitation being subject to Company and/or Secured Party executing such Account Documentation or other documentation as Bank may require).
4. Bank agrees not to exercise or claim any right of offset, banker's lien or other like right against the Account for so long as this Agreement is in effect except with respect to (i) returned or charged-back items, reversals or cancellations of payment orders and other electronic fund transfers or other corrections or adjustments to the Account or transactions therein, (ii) overdrafts in the Account or (iii) Bank's customary charges, fees and documented expenses with respect to the Account or the services provided hereunder.
5. Notwithstanding anything to the contrary in this Agreement: (i) Bank shall have only the duties and responsibilities with respect to the matters set forth in writing in this Agreement and shall not be deemed to be an agent, bailee or fiduciary for any Party (ii) Bank shall be fully protected in acting or refraining from acting in good faith without investigation on any notice (including without limitation a Shifting Control Notice), Instruction or request

purportedly furnished to it by Company or Secured Party in accordance with the terms of this Agreement, in which case the Parties agree that Bank has no duty to make any further inquiry whatsoever; (iii) it is hereby acknowledged and agreed that Bank has no knowledge of (and is not required to know) the terms and provisions of the separate agreement referred to in Section 1 above or any other related documentation or whether any actions by Secured Party (including without limitation the sending of a Shifting Control Notice), Company or any other person or entity are permitted under, constitutes a breach of, or is consistent or inconsistent with such separate agreement, (iv) Bank shall not be liable to Company or Secured Party or any other person for any action or failure to act under or in connection with this Agreement or the Account, except to the extent such conduct constitutes its own willful misconduct or gross negligence (and to the maximum extent permitted by law, shall under no circumstances be liable for any incidental, indirect, special, consequential or punitive damages); and (v) Bank shall not be liable for losses or delays caused by force majeure, interruption or malfunction of computer, transmission or communications facilities, labor difficulties, court order or decree, the commencement of bankruptcy or other similar proceedings or other matters beyond Bank's reasonable control.

6. (a) Company agrees to indemnify, defend and save harmless Bank against any loss, liability or expense (including reasonable fees and disbursements of outside counsel) (collectively, "**Covered Items**") incurred (i) in connection with this Agreement or the Account (except to the extent due to Bank's willful misconduct or gross negligence) or any related interpleader proceeding, or (ii) as a result of following Company's direction or Instructions.

(b) To the extent Bank is not indemnified by Company pursuant to the preceding sentence, Secured Party agrees to indemnify, defend and save harmless Bank against any Covered Items incurred (i) on or after the Effective Time in connection with this Agreement or the Account (except to the extent due to Bank's willful misconduct or gross negligence) or any related interpleader proceeding, (ii) as a result of following Secured Party's direction or Instructions (including without limitation Bank's honoring of a Shifting Control Notice) or (iii) due to any claim by Secured Party of an interest in the Account or the funds on deposit therein.

7. (a) Bank may terminate this Agreement (i) in its discretion upon the sending of at least thirty (30) calendar days advance written notice to Company and Secured Party or (ii) because of a material breach by Company or Secured Party of any of the terms of this Agreement or the Account Documentation, upon the sending of at least five (5) Business Days advance written notice to Company and Secured Party.

(b) Secured Party may terminate this Agreement in its discretion upon the sending of at least three (3) Business Days advance written notice ("**Termination Delivery Requirement**") in substantially the same form as Exhibit B, with a copy of the Agreement attached thereto (a "**Secured Party Termination Notice**") to Bank and Company, provided that Bank may shorten or waive the Termination Delivery Requirement and any such shortening or waiver shall be binding on the Parties.

(c) Any other termination, any amendment or waiver of this Agreement shall be effected solely by an instrument in writing executed by all the Parties. The provisions of Sections 5 and 6 above shall survive any termination of this Agreement.

8. Company shall compensate Bank for the opening and administration of the Account and services provided hereunder in accordance with Bank's customary fee schedules from time to time in effect. Payment will be effected by a direct debit to the Account or as otherwise agreed to between Company and Bank; however, Bank retains the right to debit the Account for any fees that are not paid when due.

9. (a) No Party may assign or transfer its rights or obligations under this Agreement to any person or entity without the prior written consent of the other Parties; provided, however, that no consent will be required if the assignment or transfer takes place as part of a merger, acquisition or corporate reorganization affecting Bank; and provided further that only Bank's prior written consent is required for an assignment by Secured Party. A failure to comply with the assignment requirements referenced under this section shall result in such assignment being null and void.

(b) Notwithstanding the foregoing, Secured Party may transfer its rights and obligations under this Agreement (i) to an assignee to which, by contract or operation of law, Secured Party transfers substantially all of its rights and obligations under the financing arrangement with Company or (ii) to a successor representative, if Secured Party is acting as a representative in whose favor a security interest is provided for or created; provided as between Bank and Secured Party, Secured Party will not be released from its obligations under this Agreement unless and until an Assignment Notice is actually received by the unit of Bank to whom notice is required to be addressed. An "**Assignment Notice**" is a notice purporting to be signed by Secured Party and assignee in which assignee agrees to assume all of Secured Party's obligations under this Agreement substantially in the same form as Exhibit C, with a copy of this Agreement to be attached to the notice.

10. Upon Secured Party's request and at Company's sole expense, Bank will provide Bank's standard bank statements covering deposits to and withdrawals from the Account. Bank may disclose to Secured Party such other information concerning the Account as Secured Party may from time to time reasonably request.


11. This Agreement: (i) may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures were upon the same instrument; (ii) shall become effective when counterparts have been signed and delivered by the Parties, and (iii) may be executed using Electronic Signatures, which the Parties agree are intended to authenticate this writing and to have the same force and effect as manual signatures. "**Electronic Signature**" means any electronic sound, symbol, or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record, including facsimile or email electronic signatures. Each Party represents and warrants on a continuous basis that (i) any Electronic Signature on this Agreement constitutes valid execution of this Agreement by a duly authorized signer in accordance with applicable law and, as applicable, its constitutional documents and (ii) this Agreement constitutes its valid, legal, enforceable and binding obligation. Each Party confirms that the others have relied on the foregoing representations and warranties when accepting an Electronic Signature on this Agreement. Each Party confirms that this Agreement constitutes an electronic record established and maintained in the ordinary course of business and an original written record when printed from electronic files. Such printed copies will be treated to the same extent and under the same conditions as other original business records created and maintained in documentary form. All notices under this Agreement shall be in writing and sent (including via emailed pdf or similar file or facsimile transmission) to the Parties at their respective addresses,

email addresses or fax numbers set forth below (or to such other address, email address or fax number as any such Party shall designate in writing to the other Parties from time to time).

- 12.** This Agreement and all claims, disputes or causes of action (whether in contract, tort or statute) that may be based upon, arise out of or relate to this Agreement, or the negotiation, execution or performance of this Agreement, will be governed by, and enforced in accordance with, the internal laws of the State of New York without regard to conflict of law principles. Regardless of any provision in any other separate agreement, the State of New York shall be deemed to be Bank's "jurisdiction" for purposes of Section 9-304 of the UCC. The Parties intend that New York's periods of limitations govern the aforementioned causes of action irrespective of any otherwise applicable statute. **All Parties hereby waive all rights to a trial by jury in any action or proceeding relating to the Account or this Agreement.**

[Signatures on following page]

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

GRITSTONE BIO, INC.		
By:		Date: 07/21/2022
Name:	James Cho	
Title:	Vice President	
Address for Notices:	Gritstone bio, Inc. Attention: Celia Economides; Rahsaan Thompson 5959 Horton Street, Suite 300 Emeryville, CA 94608	
Telephone:	(510) 871-6100	
Email Address:	jcho@gritstone.com	

HERCULES CAPITAL, INC., as administrative agent and collateral agent		
By:		Date: 07/19/2022
Name:	Zhou Huang	
Title:	Associate General Counsel	
Address for Notices:	HERCULES CAPITAL, INC. Legal Department Attention: Chief Legal Officer and Cristy Barnes 400 Hamilton Avenue, Suite 310 Palo Alto, CA 94301	
Telephone:	650-289-3060	
Email Address:	legal@htgc.com; cbarnes@htgc.com; bgironda@htgc.com; hballa@htgc.com	

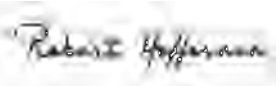
JPMorgan Chase Bank, N.A.		
By:		Date: 07/19/2022
Name:	Robert Heffernan	
Title:	Authorized Signer	
Address for Instructions and other Notices:	JPMorgan Chase Bank, N.A. Attn: Nailah N Jordan 3 Park Plz, Floor 09 Irvine, CA, 92614-8505 Email: nailah.jordan@jpmorgan.com Fax: +1-949-257-4913	
Address for Assignment, Shifting Control and Termination Notices:	JPMorgan Chase Bank, N.A. Attn: Blocked Account Contracts Team Email: blocked.account.contracts@jpmchase.com	

Exhibit A | Shifting Control Notice

Date: _____

JPMorgan Chase Bank, N.A.

Attention: Blocked Account Contracts Team

Email : blocked.account.contracts@jpmchase.com

Re: Blocked Account Control Agreement dated as of July 21, 2022, (the “**Agreement**”), by and among the company entities listed in Schedule 1 (individually and collectively, “**Company**”), Hercules Capital, Inc., a Maryland corporation, in its capacity as administrative agent and collateral agent (“**Secured Party**”) and JPMorgan Chase Bank, N.A. (“**Bank**”) relating to the account numbers listed in Schedule 1 (individually and collectively, “**Account**”).

Ladies and Gentlemen:

This constitutes a Shifting Control Notice as referred to in Section 2 of the Agreement, a copy of which is attached hereto.

HERCULES CAPITAL, INC., as administrative agent and collateral agent		
By:		Date:
Name:		
Title:		

ATTACHMENT: Blocked Account Control Agreement

Exhibit B | Secured Party Termination Notice

Date: _____

JPMorgan Chase Bank, N.A.

Attention: Blocked Account Contracts Team

Email : blocked.account.contracts@jpmchase.com

GRITSTONE BIO, INC.

Address: _____

Attention: _____

Re: Blocked Account Control Agreement dated as of July 21, 2022, (the "**Agreement**"), by and among the company entities listed in Schedule 1 (individually and collectively, "**Company**"), Hercules Capital, Inc., a Maryland corporation, in its capacity as administrative agent and collateral agent ("**Secured Party**") and JPMorgan Chase Bank, N.A. ("**Bank**") relating to the account numbers listed in Schedule 1 (individually and collectively, "**Account**").

Ladies and Gentlemen:

This constitutes a Secured Party Termination Notice as referred to in section 7(b) of the Agreement, a copy of which is attached hereto.

HERCULES CAPITAL, INC. , as administrative agent and collateral agent		
By:		Date:
Name:		
Title:		

ATTACHMENT: Blocked Account Control Agreement

Exhibit C | Assignment Notice

Date: _____

JPMorgan Chase Bank, N.A.

Attention: Blocked Account Contracts Team

Email : blocked.account.contracts@jpmchase.com

Re: Blocked Account Control Agreement dated as of July 21, 2022, (the "**Agreement**"), by and among the company entities listed in Schedule 1 (individually and collectively, "**Company**"), Hercules Capital, Inc., a Maryland corporation, in its capacity as administrative agent and collateral agent ("**Secured Party**") and JPMorgan Chase Bank, N.A. ("**Bank**") relating to the account numbers listed in Schedule 1 (individually and collectively, "**Account**").

Ladies and Gentlemen:

This constitutes an Assignment Notice as referred to in Section 9 of the Agreement, a copy of which is attached hereto.

[NAME OF ASSIGNEE] ("**Assignee**") agrees to assume all of Secured Party's obligations under the Agreement.

Please select the appropriate response below indicating if Assignee is an existing client of Bank.

_____ Assignee is an existing client of Bank

_____ Assignee is not a client of Bank

(Note: Additional documentation may be required by Bank in order to satisfy its know your customer policies and its due diligence requirements to qualify the assignee as a customer)

The Assignee's address for notices is as follows.

Address: _____

Attention: _____

Email: _____

Fax No.: _____

HERCULES CAPITAL, INC., as administrative agent and collateral agent		
By:		Date:
Name:		
Title:		

Assignee		
By:		Date:
Name:		
Title:		

ATTACHMENT: Blocked Account Control Agreement

Schedule 1 | List of Company Entities and Accounts

Company	Account
GRITSTONE BIO, INC.	855920182
GRITSTONE BIO, INC.	3623962959

EXHIBIT C
TO
ADDENDUM TO PROOF OF CLAIM

UCC-1 Financing Statement

[See attached]

UCC FINANCING STATEMENT

FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional) UCC FILING DEPARTMENT 800-828-0938	
B. E-MAIL CONTACT AT FILER (optional) ALB.UCC.FILINGS@COGENCYGLOBAL.COM	
C. SEND ACKNOWLEDGMENT TO: (Name and Address) COGENCY GLOBAL INC. 194 WASHINGTON AVENUE SUITE 310 ALBANY, NY 12210	

Delaware Department of State
U.C.C. Filing Section
Filed: 04:15 PM 07/19/2022
U.C.C. Initial Filing No: 2022 6033310

Service Request No: 20223030231

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

1. DEBTOR'S NAME: Provide only one Debtor name (1a or 1b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 1b, leave all of item 1 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

1a. ORGANIZATION'S NAME GRITSTONE BIO, INC.			
OR			
1b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX
1c. MAILING ADDRESS 5959 HORTON ST #300			
CITY EMERYVILLE	STATE CA	POSTAL CODE 94608	COUNTRY US

2. DEBTOR'S NAME: Provide only one Debtor name (2a or 2b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 2b, leave all of item 2 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

2a. ORGANIZATION'S NAME			
OR			
2b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX
2c. MAILING ADDRESS			
CITY	STATE	POSTAL CODE	COUNTRY

3. SECURED PARTY'S NAME (or NAME of ASSIGNEE of ASSIGNOR SECURED PARTY): Provide only one Secured Party name (3a or 3b)

3a. ORGANIZATION'S NAME HERCULES CAPITAL, INC., AS AGENT			
OR			
3b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX
3c. MAILING ADDRESS 400 HAMILTON AVENUE, SUITE 310			
CITY PALO ALTO	STATE CA	POSTAL CODE 94301	COUNTRY US

4. COLLATERAL: This financing statement covers the following collateral:

All assets of the Debtor, wherever located and whether now existing or hereafter acquired, including any proceeds thereof.

5. Check only if applicable and check only one box: Collateral is ☐ held in a Trust (see UCC1Ad, item 17 and Instructions) ☐ being administered by a Decedent's Personal Representative

6a. Check only if applicable and check only one box:

☐ Public-Finance Transaction ☐ Manufactured-Home Transaction ☐ A Debtor is a Transmitting Utility

6b. Check only if applicable and check only one box:

☐ Agricultural Lien ☐ Non-UCC Filing

7. ALTERNATIVE DESIGNATION (if applicable): ☐ Lessee/Lessor ☐ Consignee/Consignor ☐ Seller/Buyer ☐ Bailee/Bailor ☐ Licensee/Licenser

8. OPTIONAL FILER REFERENCE DATA:

FILED WITH: DE - SECRETARY OF STATE

International Association of Commercial Administrators