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

FORM 8-K

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

Date of Report (Date of earliest event reported): December 12, 2017

CRISPR THERAPEUTICS AG
(Exact Name of Company as Specified in Charter)

Switzerland	**001-37923**	**Not Applicable**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

Baarerstrasse 14
6300 Zug
Switzerland
+41 61 228 7800
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Not applicable
(Former Name or Former Address, if Changed Since Last Report)

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

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Emerging growth company ☒

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

Item 1.01 Entry into a Material Definitive Agreement.

Joint Development and Commercialization Agreement.

On December 12, 2017, CRISPR Therapeutics AG, CRISPR Therapeutics, Inc., CRISPR Therapeutics Limited and TRACR Hematology Ltd (together, "CRISPR") and Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited (together, "Vertex") entered into a Joint Development and Commercialization Agreement (the "Joint Development Agreement").

The Joint Development Agreement includes, among other things, provisions relating to the following:

Governance. CRISPR and Vertex will form the following committees: (i) a joint steering committee to provide high-level oversight and decision making regarding the activities covered by the Joint Development Agreement, (ii) a joint development committee to provide oversight and decision making-making regarding development activities, (iii) a joint commercialization committee to provide oversight and decision-making regarding commercialization activities and (iv) a joint manufacturing committee to provide oversight and decision-making regarding manufacturing activities. Each of the committees will contain an equal number of representatives from each of CRISPR and Vertex.

Commercialization. The Joint Development Agreement provides that CRISPR will be the responsible for commercialization activities in the United States and Vertex will be responsible for commercialization activities outside of the United States.

Financial Terms. In connection with entering into the Joint Development Agreement, CRISPR will receive a $7.0 million up-front payment from Vertex and is eligible for a one-time low seven digit milestone payment upon the dosing of the second patient in a clinical trial with the initial product candidate. The net profits and net losses, as applicable, incurred under the Joint Development Agreement will be shared equally between CRISPR and Vertex.

Termination. Either party can terminate the Joint Development Agreement upon the other party's material breach, subject to specified notice and cure provisions, or, in the case of Vertex, in the event that CRISPR becomes subject to specified bankruptcy, winding up or similar circumstances. Either party may terminate the Joint Development Agreement in the event the other party commences or participates in any action or proceeding challenging the validity or enforceability of any patent that is licensed to such challenging party pursuant to the Joint Development Agreement. Vertex also has the right to terminate the Joint Development Agreement for convenience at any time after giving prior written notice.

If circumstances arise pursuant to which a party would have the right to terminate the Joint Development Agreement on account of an uncured material breach, such party may elect to keep the Joint Development Agreement in effect and cause such breaching party to be treated as if it had exercised its opt-out rights with respect to the products associated with such uncured material breach (described below) and the royalties payable to the breaching party would be reduced by a specified percentage.

Opt-Out Rights. Either party may opt of out of the development of a product candidate under the Joint Development Agreement after predetermined points in the development of the product candidate, on a candidate-by-candidate basis. In the event of such opt-out, the opting-out will no longer share in the net profits and net losses associated with such product candidate and, instead, the opting out party will be entitled to high single to mid- teen percentage royalties on the net sales of such product, if commercialized.

The full text of the press release announcing the Joint Development Agreement is furnished as Exhibit 99.1 to this Current Report on Form 8-K and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section.

Amendment No. 1 to Strategic Collaboration, Option and License Agreement

CRISPR and Vertex entered into the Joint Development Agreement pursuant to the terms of a Strategic Collaboration, Option and License Agreement (the "Collaboration Agreement"), dated October 26, 2015, by and among CRISPR and Vertex, pursuant to which, among other things, Vertex was granted the option to exclusively license treatments for up to six collaboration targets that emerge from the four-year research collaboration with CRISPR.

In connection with entering into the Joint Development Agreement, CRISPR and Vertex entered into Amendment No. 1 to the Collaboration Agreement (the "Amendment"). The Amendment, among other things, modified certain definitions and provisions of the Collaboration Agreement to make them consistent with the Joint Development Agreement and clarified how many options are exercised (or deemed exercised) in connection with certain targets specified under the Collaboration Agreement. The Amendment also amended other provisions of the Collaboration Agreement, including the expiration terms of the Collaboration Agreement.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

The following exhibits shall be deemed to be furnished, and not filed:

Exhibit No.	Description
10.1	Joint Development and Commercialization Agreement by and between, on the one hand, Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited, and on the other hand, CRISPR Therapeutics AG, CRISPR Therapeutics, Inc., CRISPR Therapeutics Limited and TRACR Hematology Ltd., dated as of December 12, 2017
10.2	Amendment No. 1 to the Strategic Collaboration, Option and License Agreement by and between, on the one hand, Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited, and on the other hand, CRISPR Therapeutics AG, CRISPR Therapeutics, Inc., CRISPR Therapeutics Limited and TRACR Hematology Ltd., dated as of December 12, 2017
99.1	Press Release by CRISPR Therapeutics AG, dated December 12, 2017

SIGNATURES

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

CRISPR THERAPEUTICS AG

Date: December 18, 2017

By: /s/ Rodger Novak
Rodger Novak, M.D.
President

Exhibit 10.1

JOINT DEVELOPMENT AND COMMERCIALIZATION AGREEMENT

BETWEEN

VERTEX PHARMACEUTICALS INCORPORATED

VERTEX PHARMACEUTICALS (EUROPE) LIMITED

AND

CRISPR THERAPEUTICS AG

CRISPR THERAPEUTICS LIMITED

CRISPR THERAPEUTICS, INC.

TRACR HEMATOLOGY LTD.

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TABLE OF CONTENTS

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JOINT DEVELOPMENT AND COMMERCIALIZATION AGREEMENT

This JOINT DEVELOPMENT AND COMMERCIALIZATION AGREEMENT (this "**Agreement**") is entered into as of December 12, 2017 (the "**Effective Date**") by and between, on the one hand, **VERTEX PHARMACEUTICALS INCORPORATED**, a corporation organized and existing under the laws of The Commonwealth of Massachusetts ("**Vertex Parent**"), and **VERTEX PHARMACEUTICALS (EUROPE) LIMITED**, a private limited liability company organized under the laws of England and Wales ("**Vertex UK**" and, together with Vertex Parent, "**Vertex**") and, on the other hand, **CRISPR THERAPEUTICS AG**, a corporation organized under the laws of Switzerland ("**CRISPR AG**"), **CRISPR THERAPEUTICS, INC.**, a corporation organized under the laws of the state of Delaware ("**CRISPR Inc.**"), **CRISPR THERAPEUTICS LIMITED**, a corporation organized under the laws of England and Wales ("**CRISPR UK**"), and **TRACR HEMATOLOGY LTD**, a UK limited company ("**Tracr**" and together with CRISPR AG, CRISPR Inc. and CRISPR UK, **CRISPR**"). Vertex and CRISPR each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**."

RECITALS

WHEREAS, the Parties and certain of their Affiliates (as defined below) have entered into that certain Strategic Collaboration, Option and License Agreement dated as of October 26, 2015, as amended by that certain Amendment No. 1 by and between the Parties dated as of the Effective Date (the "**Collaboration Agreement**");

WHEREAS, pursuant to the Collaboration Agreement, Vertex and CRISPR are conducting a strategic collaboration focused on exploring potential targets related to certain diseases and creating therapeutics using gene editing [***], including the CRISPR/Cas System, to treat such diseases, including the Products (as defined below);

WHEREAS, pursuant to Section 4.1.1 of the Collaboration Agreement, Vertex has obtained an Option (as defined therein) with respect to [***], and the execution of this Agreement constitutes the exercise by Vertex of the Option with respect to [***] that becomes a Collaboration Target;

WHEREAS, the Parties agree that [***] under the Collaboration Agreement; and

WHEREAS, the Parties desire to enter into this Agreement in accordance with Section 6.1.2(c) of the Collaboration Agreement in order for the Parties to jointly develop and commercialize the Shared Products and to conduct additional research with respect to the Follow-On Products (as defined below).

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NOW, THEREFORE, in consideration of the respective covenants, representations, warranties and agreements set forth herein, the Parties hereto agree as follows:

ARTICLE 1
DEFINITIONS

For purposes of this Agreement, the following capitalized terms will have the meanings set forth in this ARTICLE 1. Capitalized terms used but not defined herein will have their respective meanings set forth in the Collaboration Agreement.

1.1. "**Agreement**" has the meaning set forth in the Preamble.

1.2. "**Alliance Manager**" has the meaning set forth in Section 2.6.1.

1.3. "[***] **Arbitration**" means [***] style arbitration in accordance with the arbitration procedure set forth on Schedule A.

1.4. [***].

1.5. [***].

1.6. "**[***] Third Party Agreement**" has the meaning set forth in Section 10.7.2.

1.7. [***].

1.8. [***].

1.9. "**Calendar Quarter**" means the respective periods of three consecutive calendar months ending on March 31, June 30, September 30 or December 31, during the Co-Co Agreement Term, or the applicable part thereof during the first or last calendar quarter of the Co-Co Agreement Term.

1.10. "**Calendar Year**" means any calendar year ending on December 31, or the applicable part thereof during the first or last year of the Co-Co Agreement Term.

1.11. "**Challenging Party**" has the meaning set forth in Section 14.2.3.

1.12. "**Clinical Operations Study Lead**" has the meaning set forth in Section 3.2.2.

1.13. "**CMO**" means contract manufacturing organization.

1.14. "**CRO**" means contract research organization.

1.15. "**Co-Co Agreement Term**" means the period commencing on the Effective Date and ending on the expiration of this Agreement pursuant to Section 14.1, unless terminated earlier as provided herein.

1.16. "**Collaboration Agreement**" has the meaning set forth in the Recitals.

1.17. "**Combination Product**" has the meaning set forth in Section 1.82.

1.18. "**Commercialization Costs**" [***]:

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1.18.1. [***];

1.18.2. [***];

1.18.3. [***];

1.18.4. [***];

1.18.5. [***];

1.18.6. [***];

1.18.7. [***];

1.18.8. [***];

1.18.9. [***].

Commercialization Costs will exclude all of the payments set forth in Section 7.1 of the Collaboration Agreement, Research Costs, Development Costs, Manufacturing Costs, Medical Affairs Costs, Quality Costs, Other Out-of-Pocket Costs and Expenses attributable to general corporate activities, executive management, investor relations, treasury services, business development, corporate government relations, external financial reporting and other overhead activities.

1.19. "**Competitive Program**" has the meaning set forth in Section 1.20.

1.20. "**Competitor**" means any pharmaceutical company that is conducting a research, development or commercial program for a product that is intended to (a) [***], (b) [***] or (c) [***] (each of (a)-(c), a "**Competitive Program**")[***].

1.21. "**CRISPR**" has the meaning set forth in the Preamble.

1.22. "**CRISPR Background Know-How**" means any Know-How, other than Joint Program Know-How and CRISPR Program Know-How, that (a) [***] and (b) [***].

1.23. "**CRISPR Background Patents**" means any Patent, other than a Joint Program Patent, CRISPR Program Patent or CRISPR Platform Technology Patent that (a) [***] and (b) [***].

1.24. "**CRISPR In-License Agreements**" means CRISPR's or its Affiliates' agreements with Third Party licensors or sellers listed on Schedule E, which Schedule shall be updated upon the designation of any Follow-On Product as a Shared Product under this Agreement, to include any agreements pursuant to which CRISPR or its Affiliates have in-licensed or acquired any Licensed CRISPR Technology with respect to such Shared Product.

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1.25. "**CTA**" means a clinical trial application submitted to a Regulatory Authority, the submission and approval of which is necessary to initiate or conduct clinical testing of a pharmaceutical product in humans in the jurisdiction of such Regulatory Authority.

1.26. "**Development Budget**" has the meaning set forth in Section 3.1.1.

1.27. "**Development Costs**" [***]:

1.27.1. [***];

1.27.2. [***];

1.27.3. [***];

1.27.4. [***];

1.27.5. [***];

1.27.6. [***].

[***].

1.28. "**Distributor**" means a Third Party to whom either Party grants a right to sell or distribute a Shared Product, which Third Party does not make payments to the granting Party that are calculated on the basis of a percentage of, or profit share on, such Third Party's sales of Shared Products.

1.29. "**Dollar**" means the United States Dollar.

1.30. "**Effective Date**" has the meaning set forth in the Preamble.

1.31. "**Exclusive License**" has the meaning set forth in Section 10.2.1.

1.32. "**Executive Officers**" means the Chief Executive Officer of CRISPR, initially Samarth Kulkarni, and the Chief Operating Officer of Vertex, initially Ian Smith.

1.33. "**Expenses**" means Out-of-Pocket Costs and FTE Costs.

1.34. "**Follow-On Agent**" means a product comprising (a) [***], or (b) [***].

1.35. "**Follow-On Product**" means any pharmaceutical product, medical therapy, preparation, substance, or formulation comprising or employing, in whole or in part, a Follow-On Agent, but excluding the Initial Shared Product.

1.36. "**Follow-On Research Plan**" has the meaning set forth in Section 3.1.2.

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1.37. "**FTE**" means one employee full-time for one year or more than one person working the equivalent of a full-time person, working directly on performing activities under the Global Development Plan, the Follow-On Research Plan, the Medical Affairs Plan, the Manufacturing Plan, the Quality Agreement, any Global Commercialization Plan or any Regional Commercialization Plan, as applicable, where "full-time" is considered [***] hours for one Calendar Year. No additional payment will be made with respect to any individual who works more than [***] hours per Calendar Year and any individual who devotes less than [***] hours per Calendar Year will be treated as an FTE on a pro rata basis based upon the actual number of hours worked divided by [***].

1.38. "**FTE Costs**" means the product of (a) the number of FTEs (proportionately, on a per-FTE basis) used by a Party or its Affiliates in directly performing activities assigned to such Party under and in accordance with the Global Development Plan, the Follow-On Research Plan, the Medical Affairs Plan, the Manufacturing Plan, the Quality Agreement, any Global Commercialization Plan or any Regional Commercialization Plan, as applicable, and (b) the FTE Rate.

1.39. "**Global Brand Strategy**" has the meaning set forth in Section 5.3.1.

1.40. "**Global Commercialization Budget**" has the meaning set forth in Section 5.2.

1.41. "**Global Commercialization Plan**" has the meaning set forth in Section 5.2.

1.42. "**Global Communication Strategy**" has the meaning set forth in Section 5.3.2.

1.43. "**Global Development Plan**" has the meaning set forth in Section 3.1.1.

1.44. "**Global Manufacturing Plan**" has the meaning set forth in Section 6.2.

1.45. "**Global Market Access and Value Strategy**" has the meaning set forth in Section 5.3.3.

1.46. "**Global Pricing Strategy**" has the meaning set forth in Section 5.3.4.

1.47. "**Global Safety Database**" has the meaning set forth in Section 8.2.

1.48. [***].

1.49. [***].

1.50. [***].

1.51. "**ICH**" means The International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use.

1.52. "[***]**Agreement**" means [***], as originally executed and as the same may be amended, restated or modified from time to time in accordance with its terms.

1.53. "**IND Transfer Date**" has the meaning set forth in Section 3.3.1(b).

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1.54. "**Initial Clinical Trials**" means the first-in-human study of the Initial Shared Product in subjects with beta-thalassemia and the first-in-human study of the Initial Shared Product in subjects with sickle cell disease.

1.55. "**Initial Shared Product**" means the [***].

1.56. "**Integrated Budget**" means the annual overall budget for activities performed under this Agreement, which shall include the amounts set forth in each of the Research Budget, the Development Budget, the Global Commercialization Budget, the Medical Affairs Budget and the Manufacturing Budget for the applicable Calendar Year.

1.57. "**JCC**" has the meaning set forth in Section 2.4.1.

1.58. "**JDC**" has the meaning set forth in Section 2.3.1.

1.59. "**JMC**" has the meaning set forth in Section 2.5.1.

1.60. "**JSC**" has the meaning set forth in Section 2.1.1.

1.61. "**Knowledge**" means the [***] of [***] after [***].

1.62. "**Lead Commercialization Party**" has the meaning set forth in Section 5.1.

1.63. "**Licensed CRISPR Know-How**" means (a) CRISPR Background Know-How, (b) CRISPR Program Know-How and (c) CRISPR's interest in the Joint Program Know-How.

1.64. "**Licensed CRISPR Patents**" means (a) CRISPR Background Patents, (b) CRISPR Platform Technology Patents, (c) CRISPR Program Patents and (d) CRISPR's interest in the Joint Program Patents.

1.65. "**Licensed CRISPR Technology**" means, subject to Section 10.2.3 and Section 10.7.2, any and all Licensed CRISPR Patents and Licensed CRISPR Know-How.

1.66. "**Licensed Vertex Know-How**" means (a) any [***] that (i) [***] and (ii) [***], (b) [***] and (c) the [***].

1.67. "**Licensed Vertex Patents**" means (a) [***] that (i) [***] and (ii) [***], (b) the [***] and (c) the [***].

1.68. "**Licensed Vertex Technology**" means, subject to Section 10.3.3 and Section 10.7.2, any and all Licensed Vertex Patents and Licensed Vertex Know-How.

1.69. "**Major [***] Countries**" means the [***].

1.70. "**Manufacture**", "**Manufactured**" or "**Manufacturing**" means activities directed to making, having made, producing, manufacturing, processing, filling, finishing, packaging, labeling, quality control testing and quality assurance release, shipping or storage of a Product (including any [***] that comprise such Product).

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1.71. "**Manufacturing Budget**" has the meaning set forth in Section 6.2.

1.72. "**Manufacturing Costs**" means [***]

1.73. "[***]" has the meaning set forth in Section 6.1.

1.74. "**Manufacturing Working Group**" has the meaning set forth in Section 6.2.

1.75. "**Medical Affairs Activities**" means responding to external inquiries or complaints, the planning for and conduct of investigator sponsored Clinical Trials not included in the Global Development Plan, medical education, speaker programs, advisory boards, thought leader activities, educational grants and fellowships, local country government affairs, phase 3b Clinical Trials, phase IV/post-Regulatory Approval Clinical Trials, generating health economics and outcomes research data from patient reported outcomes, prospective observational studies and retrospective observational studies, and economic models and reimbursement dossiers, deployment of MSLs, medical affairs clinical trial management, doctors in field (other than MSLs), scientific publications and medical communications.

1.76. "**Medical Affairs Budget**" has the meaning set forth in ARTICLE 4.

1.77. "**Medical Affairs Costs**" means all Expenses incurred by the Parties in connection with the conduct of Medical Affairs Activities in accordance with the Medical Affairs Plan and the Medical Affairs Budget.

1.78. "**Medical Affairs Plan**" has the meaning set forth in ARTICLE 4.

1.79. "**MSL**" means medical science liaisons.

1.80. "**Net Loss**" means, for a given period, Net Sales in the Territory plus Sublicense Revenue less Program Expenses, where the result is a negative number.

1.81. "**Net Profit**" means, for a given period, Net Sales in the Territory plus Sublicense Revenue less Program Expenses, where the result is a positive number.

1.82. "**Net Sales**" means the gross invoiced price for Shared Products sold by a Party or its Affiliates (the "**Selling Party**") to Third Parties, less the following deductions from such gross amounts:

(a) [***];

(b) [***];

(c) [***];

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(d) [***] ;

(e) [***].

Generally, only items that are deducted from the Selling Party's gross invoiced sales price of Shared Product(s), as included in the Selling Party's published financial statements and that are in accordance with GAAP, applied on a consistent basis, will be deducted from such gross invoiced sales price for purposes of the calculation of Net Sales. However, compulsory payments required by federal or state governments based upon sales volume or market share of Shared Products (but for clarity excluding taxes on the Selling Party's net income), to the extent borne by the Selling Party, will be deducted from "Net Sales" regardless of its classification in the Selling Party's published financial statements; *provided* that any such deduction will be limited to that share of such compulsory payment proportional to the share of the total sales volume or market share of the Selling Party used to compute the compulsory payment represented by applicable Net Sales of Shared Products.

A qualifying amount may be deducted only once regardless of the number of the preceding categories that describe such amount. If a Selling Party makes any adjustment to such deductions after the associated Net Sales have been reported pursuant to this Agreement, the adjustments will be reported with the next Summary Statement. Sales between or among a Party, its Affiliates and Sublicensees will be excluded from the computation of Net Sales if such sales are not intended for end use, but Net Sales will include the subsequent final sales to Third Parties by a Party or any such Affiliates or Sublicensees. A Shared Product will not be deemed to be sold if the Shared Product is provided free of charge to a Third Party in reasonable quantities as a sample consistent with industry standard promotional and sample practices. [***].

If a sale, transfer or other disposition with respect to Shared Products involves consideration other than cash or is not at arm's length, then the Net Sales from such sale, transfer or other disposition will be calculated on the [***].

Solely for purposes of calculating Net Sales, if a Party or its Affiliates or any permitted Sublicensee sells a Shared Product in the form of a combination product containing a Shared Product and one or more other therapeutically or prophylactically active ingredients or delivery devices (whether combined in a single formulation or package, as applicable, or formulated separately but packaged under a single label approved by a Regulatory Authority and sold together for a single price) (a "**Combination Product**"), Net Sales of such Combination Product will be calculated by multiplying actual Net Sales of such Combination Product as determined in the first paragraph of the definition of "Net Sales" by the fraction A/(A+B) where [***]. The weighted average invoice prices referenced above will be calculated with reference to the prevailing prices during the applicable Calendar Quarter in those top selling countries that equate to [***]% of Net Sales of the applicable Shared Product in the Territory, with the

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prices weighted in the calculation to reflect the actual relative sales value of the Shared Product in each of the countries to which the calculation relates. If it is not possible to determine the fraction A/(A+B) based on the criteria specified in the preceding sentence (*e.g.*, if a Shared Product component is not sold separately), the Parties shall determine Net Sales for the Shared Product in such Combination Product in good faith by mutual agreement [***].

1.83. "**Non-Challenging Party**" has the meaning set forth in Section 14.2.3.

1.84. "**Opt-Out**" has the meaning set forth in Section 14.3.1.

1.85. "**Opt-Out Product**" has the meaning set forth in Section 14.3.1.

1.86. "**Opt-Out Royalties**" has the meaning set forth in Section 14.3.1.

1.87. "**Other Out-of-Pocket Costs**" means:

1.87.1. [***];

1.87.2. [***];

1.87.3. [***];

1.87.4. [***].

1.88. "**Party**" or "**Parties**" has the meaning set forth in the Preamble.

1.89. "**Patent Challenge**" has the meaning set forth in Section 14.2.3.

1.90. "**Patent Costs**" means all Expenses reasonably allocated to the Shared Products for the prosecution, maintenance and enforcement of Patents that Cover the Shared Products.

1.91. "**Pharmacovigilance Agreement**" has the meaning set forth in Section 8.1.

1.92. "**Physician Lead**" has the meaning set forth in Section 3.2.2.

1.93. "**Product**" means a Shared Product or a Follow-On Product.

1.94. "[***] **Claim**" means a claim in any Patent that [***].

1.95. "**Program Expenses**" [***]

1.96. "**Project Team**" has the meaning set forth in Section 3.2.1.

1.97. "**Quality Agreement**" has the meaning set forth in Section 3.3.6.

1.98. "**Quality Costs**" mean all Expenses incurred by the Parties and their respective Affiliates in conducting the activities set forth in the Quality Agreement.

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1.99. "**Reconciliation Report**" has the meaning set forth in Section 7.6.

1.100. "**Regional Commercialization Plan**" has the meaning set forth in Section 5.2.

1.101. "**Research Budget**" has the meaning set forth in Section 3.1.2.

1.102. "**Research Costs**" [***].

1.103. "[***]" has the meaning set forth in Section 6.1.

1.104. "[***]" has the meaning set forth in Section 6.1.

1.105. **"**[***]" has the meaning set forth in Section 12.6.

1.106. "**Selling Party**" has the meaning set forth in Section 1.82.

1.107. "**Shared Product**" means (a) the Initial Shared Product and (b) if any Follow-On Product is deemed to be a Shared Product pursuant to Section 3.5, such Follow-On Product.

1.108. "**Shared Target**" means (a) [***], (b) [***], (c) the [***], (d) [***] and (e) [***] [***] Target added as a Collaboration Target under the Collaboration Agreement.

1.109. "**Specified Regulatory Activities**" [***].

1.110. "**Subcontract**" has the meaning set forth in ARTICLE 9.

1.111. "**Subcontractor**" has the meaning set forth in ARTICLE 9.

1.112. "**Sublicense Revenue**" [***].

1.113. "**Sublicensee**" means an Affiliate or Third Party, other than a Distributor, to whom either Party (or a Sublicensee or Affiliate) licenses or sublicenses such Party's rights under the Licensed CRISPR Technology or the Licensed Vertex Technology, in each case, with respect to a Shared Product during the Co-Co Agreement Term.

1.114. "**Summary Statement**" has the meaning set forth in Section 7.5.

1.115. "**Terminated Product**" has the meaning set forth in Section 14.4.

1.116. "**Third Party Obligations**" means any non-financial encumbrances, obligations, restrictions, or limitations imposed by a [***] that are required to be passed through to a sublicensee of the [***], as applicable, and relate to a Product or a Shared Target, including field or territory restrictions, covenants, diligence obligations or limitations pertaining to enforcement of intellectual property rights.

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1.117. "**Trademark**" means all trademarks, service marks, trade names, brand names, sub-brand names, trade dress rights, product configuration rights, certification marks, collective marks, logos, taglines, slogans, designs or business symbols and all words, names, symbols, colors, shapes, designations or any combination thereof that function as an identifier of source or origin or quality, whether or not registered, and all statutory and common law rights therein, and all registrations and applications therefor, together with all goodwill associated with, or symbolized by, any of the foregoing.

1.118. "**Vertex**" has the meaning set forth in the Preamble.

1.119. "**Vertex In-License Agreements**" means Vertex's or its Affiliates' agreements with Third Party licensors or sellers listed on Schedule F, which Schedule shall be updated upon the designation of any Follow-On Product as a Shared Product under this Agreement, to include any agreements pursuant to which Vertex or its Affiliates have in-licensed or acquired any Licensed Vertex Technology with respect to such Shared Product.

1.120. "**Vertex Parent**" has the meaning set forth in the Preamble.

1.121. "**Vertex UK**" has the meaning set forth in the Preamble.

ARTICLE 2
GOVERNANCE

2.1. **Joint Steering Committee**.

2.1.1. **Formation**. Within [***] Business Days after the Effective Date, the Parties will establish a joint steering committee (the "**JSC**") to provide high-level oversight and decision-making regarding the activities of the Parties under this Agreement. The JSC will be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The JSC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JSC will meet at least once each Calendar Quarter, or as otherwise mutually agreed by the Parties in writing, on such dates and at such times and places as agreed to by the members of the JSC, and will use good faith efforts to conduct any such meeting in person. The purpose of the JSC will be to provide the members periodic updates regarding progress of activities pursuant to this Agreement and to address the matters set forth in Section 2.1.2. Each Party will be responsible for its own expenses relating to attendance at or participation in JSC meetings.

2.1.2. **Responsibilities**. The JSC will:

(a) review and oversee the overall global Development, Manufacture and Commercialization of the Shared Products and the Research of the Follow-On Products in the Field;

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(b) oversee the JDC, JCC, JMC, Patent Coordinators, the Parties' commercial representatives prior to the establishment of the JCC, and any other committees and working groups established with respect to the Products and resolving matters on which the JDC, JCC, JMC, Patent Coordinators, commercial representatives or such committees and working groups are unable to reach consensus;

(c) review and discuss any amendments or updates to the Global Development Plan submitted by the JDC;

(d) review and discuss the initial Follow-On Research Plan, and any amendments or updates thereto, submitted by the JRC;

(e) review and discuss any amendments or updates to the Global Manufacturing Plan submitted by the JMC;

(f) review and discuss the initial Global Commercialization Plan for each Shared Product and any amendments or updates thereto submitted by the JCC;

(g) upon recommendation by the JRC, and in consultation with the JDC, determine whether each Follow-On Product will be designated as a Shared Product under this Agreement;

(h) review and attempt to resolve any disputes regarding [***];

(i) compile, discuss and approve the Integrated Budget no later than [***] of each Calendar Year; and

(j) perform such other duties as are specifically assigned to the JSC under this Agreement.

2.2. **Joint Research Committee**.

2.2.1. **Generally**. The JRC established under the Collaboration Agreement will, in addition to its obligations under the Collaboration Agreement, provide oversight and decision-making regarding the Research activities of the Parties with respect to Follow-On Products under this Agreement. The provisions of Section 3.1.1 of the Collaboration Agreement will apply with respect to meetings of the JRC. For clarity, any decisions to be made by the JRC under this Agreement will be subject to Section 2.8 of this Agreement, and not Section 3.1.3 of the Collaboration Agreement.

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2.2.2. **Responsibilities**. The JRC will:

(a) oversee the Research of the Follow-On Products by the Parties in the Field in the Territory;

(b) prepare, discuss and approve, in consultation with the JDC, the initial Follow-On Research Plan (including the Research Budget) and any amendments or updates thereto, and submit such initial Follow-On Research Plan and such amendments or updates to the JSC for review and discussion;

(c) submit the approved updated Research Budget for the subsequent Calendar Year to the JSC for inclusion in the Integrated Budget no later than [***] of each Calendar Year;

(d) review and attempt to resolve any disputes regarding the protocol for any non-clinical study conducted under the Global Development Plan or the Follow-On Research Plan;

(e) submit recommendations to the JSC regarding the advisability of designating a Follow-On Product as a Shared Product under this Agreement;

(f) review, discuss and approve any proposed use of a Subcontractor to conduct a Party's activities under the Follow-On Research Plan, where the applicable Subcontract is anticipated to entail payments in excess of $[***], as set forth in ARTICLE 9; and

(g) perform such other duties as are specifically assigned to the JRC under this Agreement or as may be delegated to the JRC by the JSC.

2.2.3. **Discontinuation of the JRC**. Notwithstanding anything to the contrary in the Collaboration Agreement, the JRC will disband with respect to this Agreement upon mutual agreement of the Parties following the completion of all substantive Research activities with respect to the Follow-On Products under this Agreement, but shall be reestablished if either or both Parties desires to engage in additional Research activities with respect to any Follow-On Product.

2.3. **Joint Development Committee**.

2.3.1. **Formation**. Within [***] Business Days after the Effective Date, the Parties will establish a joint development committee (the "**JDC**") to provide oversight and decision-making regarding the Development activities of the Parties under this Agreement. The JDC will be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The JDC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JDC will meet at least once each

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Calendar Quarter, or as otherwise mutually agreed by the Parties, on such dates and at such times and places as agreed to by the members of the JDC, and will use good faith efforts to conduct any such meeting in person. The purpose of the JDC will be to facilitate and provide the members periodic updates regarding progress of Development activities pursuant to this Agreement and to address the matters set forth in Section 2.3.2. Each Party will be responsible for its own expenses relating to attendance at or participation in JDC meetings.

2.3.2. **Responsibilities**. The JDC will:

(a) oversee the Development of the Shared Products and the Research strategy for the Follow-On Products by the Parties in the Field in the Territory;

(b) review, discuss and approve the initial Global Development Plan (including the Development Budget) and any updates or amendments thereto proposed by the Project Team, and submit such Global Development Plan, updates or amendments to the JSC for review and discussion;

(c) submit the approved updated Development Budget for the subsequent Calendar Year to the JSC for inclusion in the Integrated Budget no later than [***] of each Calendar Year;

(d) oversee the Project Team and attempt to resolve any matters on which the Project Team is unable to reach consensus;

(e) review, discuss and approve clinical and regulatory strategic options for the Shared Products as proposed by the Project Team;

(f) review, discuss and approve the first IND for the Initial Shared Product to be submitted to the applicable Regulatory Authorities in accordance with Section 3.3.1(c);

(g) review and consult with the JRC regarding the initial Follow-On Research Plan and any updates or amendments thereto proposed by the JRC;

(h) inform and provide guidance to the JSC regarding any quality or compliance-related risks with respect to the Development of the Products;

(i) provide guidance to the Project Team with respect to pre-clinical and clinical quality matters for the Products;

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(j) review, discuss and approve regulatory activities for the Shared Products proposed by the Project Team, including determining the strategy with respect to each material Regulatory Filing or material regulatory interaction with respect to the Shared Products;

(k) allocate responsibilities for the conduct of Clinical Trials under the Global Development Plan to the Parties, which allocation will be consistent with Section 3.2 and Section 3.3.2;

(l) review, discuss and approve changes to the Project Team membership in accordance with Section 3.2;

(m) review and attempt to resolve any disputes regarding the protocol or statistical analysis plan for any Clinical Trial conducted under the Global Development Plan;

(n) provide guidance to the JSC regarding the advisability of designating a Follow-On Product as a Shared Product under this Agreement;

(o) develop and agree upon the Medical Affairs Plan for the Shared Products and determine the number of MSLs to be deployed in each jurisdiction in the Territory;

(p) consult with the JMC in connection with its oversight of the Manufacturing Working Group with respect to matters relating to the pre-clinical or clinical Manufacture of the Products;

(q) consult with the JMC in connection with its oversight of the pre-clinical and clinical Manufacture of the Products in the Field in the Territory;

(r) consult with the JMC in connection with its review and discussion of any updates to the Global Manufacturing Plan, including the Manufacturing Budget, proposed by the Manufacturing Working Group;

(s) consult with the JMC in connection with its review, discussion and approval of the Manufacturing process, and any changes thereto, for each Shared Product;

(t) consult with the JMC and the Manufacturing Working Group in connection with their review of Manufacturing quality matters for the Products and its oversight of Manufacturing quality matters set forth in the Quality Agreement;

(u) consult with the JMC in connection with its review of the results of regulatory and environmental, health and safety inspections and audits related to the Manufacture of the Products and its review and discussions of steps taken by CRISPR to address any deficiencies noted;

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(v) review, discuss and approve any proposed use of a Subcontractor to conduct a Party's activities under the Global Development Plan or the Quality Agreement, where the applicable Subcontract is anticipated to entail payments in excess of $[***], as set forth in ARTICLE 9; and

(w) perform such other duties as are specifically assigned to the JDC under this Agreement or as may be delegated to the JDC by the JSC.

2.3.3. **Discontinuation of the JDC**. The JDC will disband upon mutual agreement of the Parties following the completion of all substantive Research and Development activities under this Agreement, but shall be reestablished if either or both Parties desires to engage in additional Research or Development activities with respect to any Product.

2.4. **Joint Commercialization Committee**.

2.4.1. **Formation**. Within [***] days following Establishment of POC for a Shared Product, the Parties will establish a joint commercialization committee (the "**JCC**") to provide oversight and decision-making regarding the Commercialization activities of the Parties under this Agreement, *provided* that, prior to establishment of the JCC, commercial representatives of the Parties will meet on an *ad hoc* basis, as reasonably requested by either Party, to discuss commercial matters for the Shared Products; and *provided*, *further*, that any dispute between such commercial representatives with regard to any commercial matter for a Shared Product shall be referred to the JSC for resolution. The JCC will be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The JCC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JCC will meet at least once each Calendar Quarter, or as otherwise mutually agreed by the Parties, on such dates and at such times and places as agreed to by the members of the JCC, and will use good faith efforts to conduct any such meeting in person. The purpose of the JCC will be to facilitate and provide the members periodic updates regarding progress of Commercialization activities pursuant to this Agreement and to address the matters set forth in Section 2.4.2. Each Party will be responsible for its own expenses relating to attendance at or participation in JCC meetings.

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2.4.2. **Responsibilities**. The JCC will:

(a) oversee the Commercialization of the Shared Products by the Parties in the Field in the Territory;

(b) develop and approve a Global Commercialization Plan for each Shared Product and submit such Global Commercialization Plan to the JSC for review and discussion;

(c) amend the Global Commercialization Plan for each Shared Product on an annual basis (or more frequently as needed), approve such amendments and submit such updated Global Commercialization Plans to the JSC for review and discussion;

(d) review, discuss and approve the initial Regional Commercialization Plans for each Shared Product and any amendments or updates thereto submitted by Parties;

(e) select product Trademarks for each Shared Product throughout the world consistent with the Global Brand Strategy;

(f) advise the JMC in connection with its oversight of the Manufacturing Working Group with respect to matters relating to the commercial Manufacture of the Shared Products;

(g) advise the JMC in connection with its oversight of the commercial Manufacture of the Shared Products in the Field in the Territory;

(h) advise the JMC in connection with its review and discussion of any updates to the Global Manufacturing Plan, including the Manufacturing Budget, proposed by the Manufacturing Working Group;

(i) submit the approved updated Global Commercialization Budget for the subsequent Calendar Year to the JSC for inclusion in the Integrated Budget no later than [***] of each Calendar Year;

(j) advise the JMC in connection with its review, discussion and approval of the Manufacturing process, and any changes thereto, for each Shared Product;

(k) review, discuss and approve any proposed use of a Subcontractor to conduct a Party's activities under a Global Commercialization Plan, where the applicable Subcontract is anticipated to entail payments in excess of $[***], as set forth in ARTICLE 9; and

(l) perform such other duties as are specifically assigned to the JCC under this Agreement or as may be delegated to the JCC by the JSC.

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2.5. **Joint Manufacturing Committee**.

2.5.1. **Formation**. Within [***] Business Days after the Effective Date, the Parties will establish a joint manufacturing committee (the "**JMC**") to provide oversight and decision-making regarding the Manufacture of pre-clinical, clinical and commercial supply of the Products under this Agreement. The JMC will be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The JMC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JMC will meet on a [***] basis for the first [***] after the Effective Date, or as otherwise mutually agreed by the Parties, and, thereafter, at least once each Calendar Quarter, or as otherwise mutually agreed by the Parties, on such dates and at such times and places as agreed to by the members of the JMC, and will use good faith efforts to conduct any such meeting in person. The purpose of the JMC will be to facilitate and provide the members periodic updates regarding progress of Manufacturing activities pursuant to this Agreement and to address the matters set forth in Section 2.5.2. Each Party will be responsible for its own expenses relating to attendance at or participation in JMC meetings.

2.5.2. **Responsibilities**. The JMC will:

(a) consistent with the provisions of Section 6.2, designate the team leader and other members of the Manufacturing Working Group, which team leader and members shall be chosen from among the personnel of the Parties having relevant experience, and allocate the respective roles on the Manufacturing Working Group among such members;

(b) review on a periodic basis and make any necessary changes to the team leader and other members of the Manufacturing Working Group, or the allocation of roles among such members;

(c) oversee the Manufacturing Working Group, in consultation with the JDC, with respect to matters relating to the pre-clinical or clinical Manufacture of the Products;

(d) oversee the Manufacturing Working Group, in consultation with the JCC, with respect to matters relating to the commercial Manufacture of the Products;

(e) oversee the Manufacturing Working Group, in consultation with the JDC, with respect to Manufacturing quality matters for the Products;

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(f) oversee the Manufacturing Working Group, in consultation with the JDC, with respect to the review of the results of regulatory and environmental, health and safety inspections and audits related to the Manufacture of the Products and the review and discussion of steps taken by CRISPR to address any deficiencies noted;

(g) oversee the Manufacture of the Products in the Field in the Territory, in consultation with the JDC or JCC, as applicable;

(h) allocate responsibilities for Manufacturing activities with respect to the Products in the Field in the Territory between the Parties;

(i) review, discuss and approve, in consultation with the JDC or the JCC, as applicable, the initial Global Manufacturing Plan, including the Manufacturing Budget, and any updates or amendments thereto proposed by the Manufacturing Working Group, and submit such Global Manufacturing Plan, updates or amendments to the JSC for review and discussion;

(j) submit the approved updated Manufacturing Budget for the subsequent Calendar Year to the JSC for inclusion in the Integrated Budget no later than [***] of each Calendar Year;

(k) review, discuss and approve the Manufacturing process for each Shared Product proposed by the Manufacturing Working Group, and review, discuss and approve any changes to such Manufacturing process proposed by the Manufacturing Working Group, in each case, in consultation with the JDC or JCC, as applicable;

(l) review, discuss and approve any recommendations of the Manufacturing Working Group regarding capacity planning, supply plans and supply continuity planning for the Products;

(m) select and approve each CMO and contract testing facility to be engaged with respect to each phase of the Manufacture of any Product [***];

(n) determine whether any Manufacturing technology transfer between the Parties is necessary;

(o) review, discuss and approve any proposed use of a Subcontractor to conduct a Party's activities under the Global Manufacturing Plan, where the applicable Subcontract is anticipated to entail payments in excess of $[***], as set forth in ARTICLE 9; and

(p) perform such other duties as are specifically assigned to the JMC under this Agreement or as may be delegated to the JMC by the JSC.

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2.6. **Alliance Managers**.

2.6.1. **Appointment**. Each Party will appoint a representative of such Party to act as its alliance manager under this Agreement (each, an "**Alliance Manager**"). Each Party may replace its Alliance Manager at any time by written notice to the other Party.

2.6.2. **Specific Responsibilities**. The Alliance Managers will serve as the primary contact point between the Parties for the purpose of providing each Party with information regarding the other Party's activities pursuant to this Agreement and will have the following responsibilities:

(a) schedule meetings of the JSC, JDC, JCC, and JMC and circulate draft written minutes from each meeting within 14 days after each such meeting to the applicable committee, all other committees and the Project Team;

(b) facilitate the flow of information and otherwise promote communication, coordination and collaboration between the Parties;

(c) coordinate the various functional representatives of each Party, as appropriate, in developing and executing strategies and plans for the Products;

(d) provide a single point of communication for seeking consensus both internally within the respective Party's organization and between the Parties regarding key strategy and planning issues;

(e) coordinate and facilitate budget, finance and billing activities as overseen by the JSC, JDC, JCC, and JMC; and

(f) perform such other functions as requested by the JSC, JDC, JCC, or JMC.

2.7. **Other Committees**. The Parties may, by mutual agreement, form such other committees or working groups as may be necessary or desirable to facilitate the activities under this Agreement.

2.8. **Decision-Making**. The JSC, JDC, JCC, JMC, JRC and all other committees and working groups will operate by consensus with the goal being to leverage capabilities, minimize cost and maximize the chance of successfully Developing and Commercializing each Shared Product throughout the Territory in a commercially reasonable manner consistent with Applicable Laws and this Agreement. Disputes arising out of the JDC, JCC, JMC, JRC or any other committee or working group will be escalated to the JSC for resolution. Disputes arising at the JSC will be referred to the Executive Officers for resolution, whereupon the Executive Officers will meet in person if requested by either such

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Executive Officer and attempt in good faith to resolve such dispute by negotiation and consultation for a [***]-day period following such referral. If the Executive Officers do not resolve such dispute within such [***]-day period, such dispute shall be [***] Notwithstanding anything to the contrary, none of the JSC, JDC, JCC, JMC, JRC or any other committee or working group will have the authority to amend or waive compliance with any of the terms of this Agreement. For clarity, with respect to the Global Development Plan, the Medical Affairs Plan, Global Manufacturing Plan or any Global Commercialization Plan or Regional Commercialization Plan, each Party shall have decision-making authority regarding its implementation of such Global Development Plan, Medical Affairs Plan, Global Manufacturing Plan, Global Commercialization Plan or Regional Commercialization Plan in its respective territory, in such Party's sole discretion, *provided* that such implementation is consistent with the then-approved applicable plan and budget, and any such implementation decision shall not be subject to dispute resolution by any committee or working group, escalation to the Executive Officers [***] pursuant to this Section 2.8.

ARTICLE 3
DEVELOPMENT

3.1. **Research and Development Plans**.

3.1.1. **Global Development Plan**. The JDC will oversee the Development of the Shared Products and the Research of Follow-On Products by the Parties in the Field in the Territory. The Shared Products will be Developed in accordance with a global development plan (the "**Global Development Plan**"), which will include the Development Budget (as defined below), which will be prepared by the Project Team within [***] days after the Effective Date and shall be approved by the JDC thereafter. Unless otherwise agreed by the Parties in writing, the Global Development Plan will at all times include a plan for the Development of the Shared Products in the Territory through Regulatory Approval, including a regulatory strategy, high-level study design criteria, an allocation of responsibilities between the Parties, timelines and a budget for activities conducted under the Global Development Plan (the "**Development Budget**"). Until such time as the initial Development Budget has been established in accordance with this Agreement, each Party will incur Program Expenses in a manner substantially consistent with the plans and budgets previously discussed by the Parties and such Program Expenses will be shared as provided in ARTICLE 7. On [***] basis (or more frequently as needed), the Project Team will update the Global Development Plan and will submit the updated Global Development Plan to the JDC for review and discussion. The JDC will review and discuss the updated Global Development Plan and submit such updated Global Development Plan to the JSC for review, discussion and approval.

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3.1.2. **Follow-On Research Plan**. The Parties will conduct Research activities with respect to the Follow-On Products in accordance with a Follow-On research plan (the "**Follow-On Research Plan**"), including a budget for activities conducted under the Follow-On Research Plan (the "**Research Budget**"), the initial version of which will be prepared by the JRC in consultation with the JDC promptly following the Effective Date and submitted to the JSC for review, discussion and approval. In addition[***] basis (or more frequently as needed), the JRC in consultation with the JDC will update the Follow-On Research Plan and will submit the updated Follow-On Research Plan to the JSC for review, discussion and approval. For clarity, all Research Costs with respect to the Follow-On Products shall be treated under this Agreement as part of Program Expenses, and not under Section 2.10 or Section 7.4 of the Collaboration Agreement.

3.2. **Project Team**.

3.2.1. **Formation; Responsibilities**. The Parties will establish a project team (the "**Project Team**") to oversee and coordinate activities under the Global Development Plan. The Project Team will include members from each function identified on Schedule C-1. The initial Project Team members are set forth on Schedule C-2. If a Project Team member is no longer available to serve on the Project Team, the Parties will meet and discuss an appropriate replacement for such Project Team member from either Party, taking into account each Party's expertise and resources in the relevant functional area. The appointment of the replacement Project Team member will require the JDC's approval. Any member of the Project Team who is not dedicated to the Products under this Agreement on a full-time basis must be sufficiently dedicated to such Products to permit such person to be reasonably and consistently available to participate in the activities of the Project Team. The Project Team will be responsible for: (i) defining clinical and regulatory strategic options for recommendation to the JDC; (ii) providing guidance on regulatory activities for recommendation to the JDC; (iii) preparing joint deliverables, including updates to the Global Development Plan for submission to the JDC; (iv) preparing study protocols and statistical analysis plans for approval in accordance with Section 3.3.2(b); (v) preparing regulatory documentation for recommendation to the JDC; (vi) proposing goals, budgets and timelines for joint Development activities to the JDC; (vii) driving execution and ensuring the progress of Development activities in accordance with the Global Development Plan; and (viii) such additional matters as may be determined by the JDC. The Project Team shall act by consensus, with each Party's representatives on the Project Team having collectively one vote. If the Project Team cannot reach consensus, the matter will be referred to the JDC for resolution.

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3.2.2. **Physician Leads and Clinical Operations Study Leads**. Each Party will be responsible for designating its own physician leads (each, a "**Physician Lead**") and clinical operations study leads (each, a "**Clinical Operations Study Lead**"), subject to the approval of the JDC. [***] will initially appoint the Physician Lead for each Initial Clinical Trial; *provided* that (i) with respect to the Initial Clinical Trial for sickle cell disease, the Physician Lead appointed by [***] shall be responsible for such Initial Clinical [***], and (ii) the Physician Leads for each Initial Clinical Trial will at all times cooperate to share information and oversee both Initial Clinical Trials in a collaborative manner. [***] will appoint the Clinical Operations Study Lead for the Initial Clinical Trial for beta-thalassemia and [***] will appoint the Clinical Operations Study Lead for the Initial Clinical Trial for sickle cell disease. With respect to each Clinical Trial other than an Initial Clinical Trial, the JDC will determine the roles and responsibilities of the Parties' respective Physician Leads and Clinical Operations Study Leads.

3.2.3. **Clinical Pharmacology**. [***] will be responsible for all clinical pharmacology matters with respect to the Shared Products, as further detailed in the Global Development Plan.

3.2.4. **Biostatistics**. [***] will initially be responsible for biostatistics matters with respect to the Shared Products including the performance of the biostatistics activities set forth in the Global Development Plan in accordance with the Global Development Plan. [***] upon [***], as determined by the JDC [***]

3.2.5. **Conduct; Reporting**. The Project Team will conduct its responsibilities under the Global Development Plan in good faith and with reasonable care and diligence. The Project Team will provide the JDC with periodic updates (but no less than quarterly) regarding the progress of activities pursuant to the Global Development Plan.

3.3. **Development Activities**.

3.3.1. **Regulatory Matters**.

(a) Regulatory activities will be jointly carried out by the Parties and the Project Team under the guidance of the JDC in accordance with this Section 3.3.1. The Party responsible for regulatory activities under this Section 3.3.1 will be responsible for keeping the Project Team apprised as to the status of such activities and consulting with the Project Team as provided herein and the Project Team will be responsible for keeping the JDC apprised as to the status of such activities and consulting with the JDC as provided herein. All regulatory activities will be conducted using [***] standard regulatory operating procedures and systems.

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(b) All Regulatory Filings and Regulatory Approvals that relate to the Shared Products shall be filed by and held in the name of [***] or its designated Affiliates, *except* that: (i) [***] shall initially hold the [***] CTAs submitted for the first Shared Product for beta-thalassemia to Regulatory Authorities in the [***] in the name of [***] or its designated Affiliates, and, unless the JDC otherwise determines that the transfer of such CTAs to [***] as provided herein [***], shall initiate transfer of such CTAs to [***] within [***] days after approval or rejection of such CTAs in any [***], and thereafter, unless otherwise agreed by the Parties in writing, such CTAs, and any subsequent CTA for a Shared Product, shall be held in the name of [***] or its designated Affiliate and [***] shall be the sponsor for the Initial Clinical Trials; (ii) [***] shall initially hold the first IND submitted for the first Shared Product to the FDA in the name of [***] or its designated Affiliates, and, unless the JDC otherwise determines that the transfer of such IND to [***] as provided herein [***], shall initiate transfer of such IND to [***] no later than [***] after such IND becomes effective or the FDA places a hold on such IND (the "**IND Transfer Date**"), and thereafter, unless otherwise agreed by the Parties in writing, such IND, and any subsequent IND for a Shared Product, shall be held in the name of [***] or its designated Affiliate; and (iii) [***] or its designated Affiliate, and thereafter [***] or its designated Affiliate. Each Party agrees to take such further actions as may be reasonably necessary to effect the transfers set forth in this Section 3.3.1(b). The Project Team will oversee, monitor and manage the transfers contemplated by this Section 3.3.1(b). A transfer initiated under this Section 3.3.1(b) will proceed without undue delay and shall not be halted, delayed or paused after it has been so initiated and each Party will use Commercially Reasonable Efforts to effectuate such transfer as soon as possible. Prior to the transfer of any Regulatory Filing to [***] under this Section 3.3.1(b), [***] will provide [***] with copies of all source documents related to such first three CTAs or such IND, and any updates thereto.

(c) The Parties acknowledge that, prior to the Effective Date, [***] submitted the [***] for the Initial Shared Product for beta-thalassemia to Regulatory Authorities in [***] in the name of [***] or its designated Affiliate, and the Parties acknowledge and agree that, after the Effective Date, [***] will submit a [***] for the Initial Shared Product for beta-thalassemia in [***] in the name of [***] or its designated Affiliate, in substantially the same form as the [***] such CTAs. With respect to the first IND for the Initial Shared Product to be submitted by [***] after the Effective Date as provided in Section 3.3.1(b), [***], in

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consultation with the Project Team and in accordance with the strategy approved by the JDC, will prepare such IND, and provide [***] with advance drafts of such IND, and any related regulatory submissions or correspondence, that [***] plans to submit to the applicable Regulatory Authority as drafts are prepared and in all cases sufficiently in advance so as to afford [***] a meaningful opportunity to review such IND. [***] may provide comments regarding such IND, and related regulatory submissions or correspondence, prior to their submission, and [***] will incorporate any such comments. [***] will file such IND, and submit such related regulatory submissions or correspondence, only in the final form approved by the JDC. Thereafter, until such time that such CTAs and such IND are transferred to [***], [***] will oversee, monitor and manage all regulatory interactions and communications with Regulatory Authorities. [***] may provide comments regarding such interactions and correspondence, and [***] will incorporate any such comments. [***] will also provide [***] with final copies of all material submissions it makes to, and all material correspondence it receives from, a Regulatory Authority pertaining to such CTAs and such IND for the Initial Shared Product, within [***] Business Days after such submission or receipt. After [***] transfers such CTAs and IND to [***], [***] shall be responsible for all communications and correspondence with applicable Regulatory Authorities, consistent with Section 3.3.1(d).

(d) Following transfer of the [***]CTAs in beta-thalassemia and the first IND for the Initial Shared Product to [***], [***] shall use Commercially Reasonable Efforts, in consultation with [***], to seek to obtain Regulatory Approvals for the Shared Products in the Field and to maintain such Regulatory Approvals outside of the [***]. [***], [***] shall use Commercially Reasonable Efforts, in consultation with [***], to [***]. Subject to the terms of this Agreement, [***], in consultation with the Project Team and in accordance with the strategy approved by the JDC, will lead all regulatory activities, including all regulatory interactions and communications and determining the labeling strategy for the Shared Product, and will prepare and submit all Regulatory Filings with respect to the Shared Products to the appropriate Regulatory Authorities in the Territory, *provided* that [***] may review and comment on such strategies and submissions, which comments [***] will consider in good faith (and the Parties will discuss any material comments that are not incorporated or otherwise reflected in any of the foregoing), *provided, further,* that [***], in consultation with the Project Team and in accordance with the strategy approved by the JDC, will oversee,

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monitor and manage any such regulatory interactions, communications and filings [***]. [***] will provide [***] with advance drafts of any material documents or other material correspondence pertaining to the Shared Products that [***] plans to submit to any Regulatory Authority as drafts are prepared and in all cases sufficiently in advance so as to afford [***] a meaningful opportunity to review such drafts. [***] may provide comments regarding such documents and other correspondence prior to their submission, which comments [***] will consider in good faith (and the Parties will discuss any material comments that are not incorporated or otherwise reflected in any of the foregoing); *provided that*, notwithstanding anything to the contrary set forth in this Agreement, with respect to any Specified Regulatory Activities to be performed by or on behalf of [***], unless otherwise required by Applicable Law [***] will not perform, and will prevent others from performing, any Specified Regulatory Activities [***]. Notwithstanding the foregoing, [***], in consultation with the Project Team and in accordance with the strategy approved by the JDC, will control all regulatory activities with respect [***] for each Shared Product [***] in accordance with the strategy approved by the JDC. [***] will provide [***] with advance drafts of any material documents or other material correspondence pertaining to the Shared Products that [***] plans to submit to any Regulatory Authority with respect [***] as drafts are prepared and in all cases sufficiently in advance so as to afford [***] a meaningful opportunity to review such drafts. [***] may provide comments regarding such documents and other correspondence prior to their submission, which comments [***] will consider in good faith (and the Parties will discuss any material comments that are not incorporated or otherwise reflected in any of the foregoing); *provided that*, notwithstanding anything to the contrary set forth in this Agreement, with respect to any Specified Regulatory Activities to be performed by or on behalf of [***], unless otherwise required by Applicable Law [***], [***] will not perform, and will prevent others from performing, any Specified Regulatory Activities [***]. Each Party will provide the other Party with copies of all material submissions it makes to, and material correspondence it receives from, a Regulatory Authority pertaining to a Regulatory Approval of the Shared Products within [***] Business Days after such submission or receipt. To the extent practicable, each Party will provide the other Party with reasonable advance notice of any meeting or teleconference with any Regulatory Authority with respect to the Shared Products. Subject to Applicable Law, the other Party will have the right to send [***] plus up to [***] additional representatives

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of such Party to participate as observers in all material meetings, conferences and discussions by the responsible Party with Regulatory Authorities pertaining to Development of the Shared Products or Regulatory Approval of the Shared Products. Each Party shall promptly respond (and in no event later than [***] Business Days) to any request from the other Party for additional information arising from, relating to or otherwise in connection with any of the regulatory matters described or contemplated in this Section 3.3.1.

3.3.2. **Clinical Trials**.

(a) The JDC will allocate responsibility between the Parties for the conduct of Clinical Trials and the various other Development activities addressed in the Global Development Plan, which allocation will be consistent with this Section 3.3.2 and Section 3.2. From and after the effective time of the transfer of the [***] Agreement to [***] contemplated by Section 3.3.2(h), all Clinical Trials will be conducted using [***] standard Clinical Trial operating procedures and systems.

(b) The Parties will cooperate to develop the protocol and statistical analysis plan for each Clinical Trial under the Global Development Plan and submit each such protocol and statistical analysis plan for review and approval by [***] internal joint protocol peer review committee, and a representative of [***] shall serve as co-chair of any such committee (or any sub-committee thereof) and shall have the right to fully participate in any such review and approval process and such co-chair shall have the right to invite a reasonable number of [***] representatives to participate in the activities of any such committee. Each protocol and statistical analysis plan will be deemed to be final following approval by [***] internal joint protocol peer review committee (as so described) with [***] consent. In the event of any dispute regarding any such protocol or statistical analysis plan, the Parties may submit such dispute to the JDC for resolution. [***].

(c) The Party whose representative is the Clinical Operations Study Lead for a Clinical Trial will have the responsibility for directing the packaging and labeling of clinical drug supplies for such Clinical Trial, unless otherwise agreed by the Parties in writing. In furtherance of the forgoing, the Clinical Operations Study Lead will coordinate with the Clinical Operations Program Lead and the Project Team when directing such labeling.

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(d) The Parties will determine by mutual agreement how to implement and carry out the day-to-day operations with respect to Clinical Trials, including staffing, timelines, number and location of Clinical Trial sites, *provided* that such determinations shall at all times be consistent with the Global Development Plan (including the Development Budget) and this Agreement. The Clinical Operations Program Lead will oversee, manage and direct the day-to-day operations of the applicable Clinical Trial(s), consistent with the applicable Global Development Plan (including the Development Budget) and this Agreement. Without limiting the generality of the foregoing, the Clinical Operations Program Lead can direct employees, consultants and service providers of either Party and its Affiliates to perform day-to-day Clinical Trial activities consistent with the applicable Global Development Plan (including the Development Budget) and in accordance with approved processes, GCP and ICH requirements. In furtherance of the foregoing, each Party will support the authority of the Clinical Operations Program Lead by cause its employees, consultants and service providers to cooperate with the Clinical Operations Program Lead and act consistently with the Clinical Operations Program Lead's directions with respect to day-to-day Clinical Trial activities.

(e) With respect to each Initial Clinical Trial, and any subsequent Clinical Trial for which a Party engages a CRO, the other Party will have the right to review and approve all clinical trial agreement templates, confidential disclosure agreement templates and any other site-facing templates used by the applicable CRO in contracting with clinical trial sites, and any modifications or updates thereto, as well as any revisions thereto proposed by the applicable clinical trial sites. The Party engaging a CRO shall ensure that such CRO uses only clinical trial agreement templates, confidential disclosure agreement templates and other site-facing templates that have been reviewed and approved by the other Party in their final form. Any such clinical trial agreement template, confidentiality agreement template or other site-facing template shall provide that such clinical trial agreement is fully assignable to the other Party or its Affiliate without consent of the clinical trial site. In addition, prior to the commencement of each Initial Clinical Trial, each Party will obtain and provide to the other Party for review a copy of each clinical trial site's insurance policy with respect to such Initial Clinical Trial. Notwithstanding anything to the contrary, each Party will provide to the other Party with all standard operating procedures, audit results and other information received by such Party under any CRO agreement, to the extent related to the Shared Products.

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(f) [***] will be solely responsible for management of all Clinical Trial data with respect to the Shared Products, *provided* that [***] shall provide [***] and its designees with access to all Clinical Trial data as follows: (i) upon [***] reasonable request, provide [***] with [***] from [***] operational clinical database within [***] Business Day of generation of such reports (but in no event later than [***] Business Days after the date of [***] request); (ii) [***], in each case, [***] by [***] clinical management; (iii) [***]; (iv) access [***]; (v) an electronic copy of [***]; and (vi) [***] will provide [***], upon [***] reasonable request, [***] will provide [***] with [***] from [***] within [***] Business Day of [***] (but in no event later than [***] Business Days after the date of [***] request).

(g) The sponsor for each Clinical Trial under the Global Development Plan will be responsible for ensuring compliance with all Applicable Law.

(h) Promptly following the [***] under the first CTA and IND for the Initial Shared Products, [***] shall transfer and assign to [***] the [***] Agreement. Following such transfer, [***] may elect, subject to the terms hereof, to terminate the [***] Agreement and utilize [***] for the Initial Clinical Trial for beta-thalassemia unless the JDC determines that [***] then-existing internal clinical operations staff (or, if applicable, the clinical operations staff of [***] or the [***] Agreement would [***] will determine in its sole discretion whether the Initial Clinical Trial for sickle cell[***]disease will be conducted under the [***] Agreement or [***].

(i) Each Party shall promptly respond (and in no event later than [***] Business Days) to any request from the other Party for additional information arising from, relating to or otherwise in connection with any of the clinical trial matters (including Clinical Trial data) described or contemplated in this Section 3.3.2.

3.3.3. **Non-Clinical Studies**. [***] will be responsible for conducting all non-clinical studies and other Research with respect to the Products, in accordance with the Global Development Plan and the Follow-On Research Plan, as applicable, subject to the oversight of the JDC in accordance with Section 2.3.2(a). The Parties will cooperate to develop the protocol for each non-clinical study under the Global Development Plan or the Follow-On Research Plan, as applicable, and submit each such protocol for review and approval pursuant to each Party's internal review process. Each protocol will be deemed to be final following approval under each Party's internal review process. The Parties shall

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coordinate to ensure that the same version of each protocol is approved by both Parties. In the event of any dispute regarding any such protocol, the Parties may submit such dispute to the JRC for resolution. [***] shall provide to [***] any interim or final data or results from each non-clinical study of a Product promptly following [***] receipt thereof.

3.3.4. **Independent Activities**. Each Party shall have the right to propose additional Clinical Trials for inclusion in the Global Development Plan. A Party proposing an additional Clinical Trial shall provide to the other Party, through the JDC, a summary and rationale for such additional Clinical Trial. If the other Party does not agree to include such additional Clinical Trial in the Global Development Plan, (a) [***] and (b) [***]; *provided* that neither Party may conduct any Clinical Trial that [***]. The non-requesting Party will not have the right to use the data resulting from any Clinical Trial conducted by one Party outside of the Global Development Plan as permitted under this Section 3.3.4 in a substantive manner as the basis for obtaining new or expanded Regulatory Approval for a Shared Product in the Field or for post-marketing Regulatory Filings or commercial purposes for a Shared Product in the Field; *provided* that, if such Party desires to use the data resulting from such Clinical Trial in a substantive manner as the basis for obtaining new or expanded Regulatory Approval for a Shared Product in the Field or for commercial purposes for a Shared Product in the Field, such Party shall so inform the requesting Party and shall reimburse the requesting Party for [***]% of the Expenses of such Clinical Trial that would, if such Clinical Trial were included in the Global Development Plan, have constituted Development Costs. If [***] is the non-requesting Party, following such reimbursement, [***] shall have the right to use the data resulting from such Clinical Trial for such purposes. If [***] is the non-requesting party, following such reimbursement, [***] shall have the right to direct [***] to use the data resulting from such Clinical Trial for such purposes in conducting its activities in accordance with Section 3.3.1, [***], to utilize such data in post-marketing Regulatory Filings. Upon the request of the Party conducting an additional Clinical Trial as permitted under this Section 3.3.4, the Manufacturing Working Group shall use Commercially Reasonable Efforts to Manufacture or have Manufactured, at the requesting Party's expense, clinical supplies for the additional Clinical Trial, but in any event, the Manufacturing Working Group shall not be required to supply clinical supplies for any Clinical Trial being conducted pursuant to this Section 3.3.4 [***].

3.3.5. **Briefing the JDC**. At each scheduled meeting of the JDC, each Party will provide detailed progress updates on activities conducted under the Global Development Plan and the Follow-On Research Plan, along with a summary of data associated with such activities, which updates and summaries will be provided to JDC members at least [***] days in advance of any JDC meeting. Such updates and summaries will be provided in a format mutually agreed to by the Parties.

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3.3.6. **Quality Agreement**. As promptly as possible, but no later than [***] days after the Effective Date and in any case prior to the transfer of the first CTA for the Initial Shared Product to [***], the Parties will negotiate in good faith and agree on a quality agreement for the Products, including quality analysis and control criteria for the Manufacture of the Products, electronic system compliance, responsibilities for managing Clinical Trials and pre-clinical studies, and joint decision-making criteria (the "**Quality Agreement**"). The Quality Agreement will be consistent with the relevant provisions of the Pharmacovigilance Agreement.

3.4. **Diligence**. Each Party will use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, the activities assigned to it in the Global Development Plan and the Follow-On Research Plan, and to cooperate with the other Party in carrying out the Global Development Plan and the Follow-On Research Plan in accordance with the timelines therein. Each Party and its Affiliates will conduct its Research and Development activities in good scientific manner and in compliance with Applicable Law. Notwithstanding anything to the contrary contained herein, a Party or its Affiliates will not be obligated to undertake or continue any Research or Development activities with respect to any Product if such Party (or any of its Affiliates) reasonably determines that performance of such Research or Development activity would violate Applicable Law or infringe or misappropriate a Third Party's intellectual property.

3.5. **Follow-On Products**. At any time during the Co-Co Agreement Term, either Party may propose to the other Party, through the JRC, to designate a Follow-On Product as an additional Shared Product under this Agreement. The JSC, taking into consideration the recommendations of the JRC and in consultation with the JDC, shall discuss and determine whether to designate such Follow-On Product as an additional Shared Product under this Agreement. Effective as of any such determination by the JSC, such Follow-On Product shall be deemed a Shared Product for all purposes under this Agreement. Notwithstanding anything to the contrary in this Agreement, any decision to designate a Follow-On Product as an additional Shared Product under this Agreement shall be made only by mutual agreement of the Parties through the JSC, and shall not be subject to any Third Party dispute resolution.

3.6. **Additional [***] Targets**. This Agreement constitutes the Joint Development and Commercialization Agreement for each of [***]. The Parties shall conduct Research activities with respect to each of [***] [***] [***] Target that is included as a Collaboration Target in accordance with the Follow-On Research Plan.

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ARTICLE 4
MEDICAL AFFAIRS ACTIVITIES.

The Parties, acting through the JDC, will develop and agree upon a global medical affairs plan for the Shared Products that describes the Medical Affairs Activities to be conducted in the Territory, key tactics and strategies for implementing those activities, the relative responsibilities of the Parties and the associated budget for such activities (such plan, the "**Medical Affairs Plan**" and such budget, the "**Medical Affairs Budget**"). The Parties will update the Medical Affairs Budget on an annual basis no later than [***], and submit such updated Medical Affairs Budget to the JSC for inclusion in the Integrated Budget. CRISPR will lead and manage Medical Affairs Activities in the United States and Vertex will lead and manage Medical Affairs Activities outside of the United States, in each case, in accordance with the Medical Affairs Plan. The number of MSLs to be deployed in each jurisdiction with respect to a Shared Product will be determined by the JDC promptly after Establishment of POC for such Shared Product.

ARTICLE 5
COMMERCIALIZATION.

5.1. **Responsibilities**. CRISPR shall be the Commercializing lead for the Shared Products in the United States and Vertex shall be the Commercializing lead for the Shared Products outside of the United States. The Commercializing lead, with respect to the United States or outside of the United States, respectively, shall be referred to herein as the "Lead Commercialization Party" for such jurisdiction (as applicable, the "**Lead Commercialization Party**"). The Lead Commercialization Party with respect to a jurisdiction will have sole responsibility for the conduct of Commercialization activities with respect to each Shared Product in such jurisdiction in its sole discretion, subject to compliance with the approved Global Commercialization Plan, Global Commercialization Budget and Regional Commercialization Plan(s) for such Shared Product, and the provisions of this ARTICLE 5.

5.2. **Commercialization Plans**. The JCC will oversee the Commercialization of the Shared Products by the Parties in the Field in the Territory. No later than [***] prior to the anticipated launch of each Shared Product in the first country in the Territory, the JCC will develop and submit to the JSC for approval a global Commercialization plan (each, a "**Global Commercialization Plan**") that sets forth at a high level the Commercialization activities to be undertaken by the Parties with respect to the Commercialization of such Shared Product in the Territory. The JCC will update each Global Commercialization Plan on an annual basis (or more frequently as needed) and submit it to the JSC for approval. Each Global Commercialization Plan will include (a) a Global Brand Strategy, (b) a Global Communication Strategy, (c) a Global Market Access and Value Strategy, (d) a Global Pricing Strategy, and (e) a budget for activities conducted under the Global Commercialization Plan (the "**Global Commercialization Budget**"). In addition, no later than [***] prior to the anticipated launch of each Shared Product in the applicable country, each Lead Commercialization Party will develop one or

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more regional or country-level Commercialization plans (each, a "**Regional Commercialization Plan**") for (a) in the case of CRISPR, the U.S. and (b) in the case of Vertex, the Major [***] Countries. Each Party will submit such Regional Commercialization Plans to the JCC for review and approval. Each Lead Commercialization Party will update its Regional Commercialization Plan(s) on an annual basis (or more frequently as needed) and submit them to the JCC for approval. Each such Regional Commercialization Plan must be consistent at all times with the then-current Global Commercialization Plan (including the Global Commercialization Budget) for the applicable Shared Product.

5.3. **Elements of Global Commercialization Plan**. Without limiting Section 5.2, for each Shared Product, the JCC will develop each of the following strategies and submit them to the JSC for approval as part of the Global Commercialization Plan in accordance with Section 5.2:

5.3.1. a global brand strategy for such Shared Product in the Territory, including a life cycle plan, launch sequencing, brand vision, positioning, key messaging, concept and imagery, Trademarks (including name and logos) and supporting market research (the "**Global Brand Strategy**");

5.3.2. a global communication strategy for such Shared Product in the Territory, including plans for the coordination of messages between the Parties, public relations, conferences and exhibitions and other external meetings and communications, publications and symposia, congress presence and internet activities (the "**Global Communication Strategy**");

5.3.3. a strategy for the managed markets and global market access for such Shared Product, including payer strategy and account management, global value proposition, evidence plan to support the global value proposition, and the global value dossier, including economic models with respect to the global value proposition as well as a strategy to comply with any government programs, including required pricing submissions and rebates or discounts (the "**Global Market Access and Value Strategy**"); and

5.3.4. a global pricing strategy for such Shared Product (including list price, targeted net pricing, sales-weighted average discounts and rebates, the approach to pricing with different types of accounts and plans, types of discounts and rebates) in the Territory (the "**Global Pricing Strategy**"), *provided* that the Lead Commercialization Party in each jurisdiction shall have responsibility for the implementation of such global pricing strategy, including negotiating pricing and reimbursement with governments and private payers, in such jurisdiction.

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5.4. **Commercialization Activities**.

5.4.1. **Training**. The Lead Commercialization Party will prepare training programs and materials for employees and sales representatives with respect to the Shared Products in its respective jurisdiction, with the goal of ensuring compliance with all Applicable Laws and each Party's compliance policies. The Lead Commercialization Party will be solely responsible for training its employees and sales representatives in accordance with such training program, consistent with the Global Communication Strategy.

5.4.2. **Trademarks**. The JCC will select one or more product Trademarks for each Shared Product throughout the world consistent with the applicable Global Brand Strategy. Each Shared Product will be promoted and sold in the Territory under the applicable Trademarks.

5.4.3. **Field Sales**. The Lead Commercialization Party will have the sole right to promote the Shared Products (including performing sales calls) in its respective jurisdiction.

5.4.4. **Distribution and Patient Services**. The Lead Commercialization Party will be responsible for distribution and patient services for each Shared Product in its respective jurisdiction, including contracting with applicable service providers, such activities to be determined by the Lead Commercialization Party and included in the Regional Commercialization Plan(s) for such Shared Product.

5.4.5. **Booking Sales; Distribution**. The Lead Commercialization Party will have the sole right to invoice, sell and book all sales of each Shared Product in its respective jurisdiction and will be responsible for warehousing and distributing such Shared Product in its respective jurisdiction.

5.5. **Diligence**. CRISPR will use Commercially Reasonable Efforts to [***] the [***] in the [***]. Vertex will use Commercially Reasonable Efforts to [***] the [***] in the Major [***] Countries. Each Party and its Affiliates will conduct its Commercialization activities in compliance with Applicable Law and the relevant Global Commercialization Plan. Notwithstanding anything to the contrary contained herein, a Party or its Affiliates will not be obligated to undertake or continue any Commercialization activities with respect to any Shared Product if such Party (or any of its Affiliates) reasonably determines that performance of such Commercialization activity would violate Applicable Law or infringe or misappropriate a Third Party's intellectual property.

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ARTICLE 6
MANUFACTURING

6.1. **Manufacturing [***]**. During the period starting on the Effective Date and ending on the date that is [***] days after the Effective Date (the "**[***]**"), CRISPR shall cooperate with Vertex to [***], *provided* that [***], (b) [***], *provided* that, [***], and (c) [***].

6.2. **Manufacturing Working Group**. After the Effective Date, the JMC will establish a manufacturing working group (the "**Manufacturing Working Group**") to operationalize the Manufacture of the Products in accordance with a global manufacturing plan (the "**Global Manufacturing Plan**"), including the corresponding budget (the "**Manufacturing Budget**"), to be prepared by the Manufacturing Working Group within [***] days after the Effective Date and shall be approved by the JMC thereafter. The JMC will select the members of the Manufacturing Working Group as provided in Section 2.5.2(a) and in this Section 6.2. Unless otherwise mutually approved by the Parties in writing: (x) [***] will be the lead party on Manufacturing matters; *provided* that at all times at least [***]% of the members of the Manufacturing Working Group will be [***] representatives; (y) the leader of the Manufacturing Working Group will act as the Manufacturing Lead on the Project Team; and (z) a majority of the members of the Manufacturing Working Group shall be dedicated to the Manufacture of the Products under this Agreement on a full-time basis, unless otherwise mutually agreed by the Parties in writing; *provided*, *however*, that any member of the Manufacturing Working Group who is not dedicated to the Manufacture of the Products under this Agreement on a full-time basis must be sufficiently dedicated to such Manufacture to permit such person to be reasonably and consistently available to participate in the activities of the Manufacturing Working Group. The Manufacturing Working Group will report to the JMC, and will collaborate with the other functions on the Project Team. The Manufacturing Working Group's responsibilities will include: (a) on an [***] basis (or more frequently as needed), preparing updates to the Global Manufacturing Plan, including the Manufacturing Budget, and submitting such updates to the JMC for review, discussion and approval in accordance with Section 2.5.2(i); (b) developing plans to transfer Manufacturing-related Know-How between the Parties as needed to facilitate the Manufacture of the Products; (c) establishing standards applicable to each Party's Manufacturing activities and reviewing each Party's performance against such standards; (d) conducting technical reviews; (e) making recommendations to the JMC regarding capacity planning, supply plans and supply continuity planning for the Products; (f) making recommendations to the JMC regarding the Manufacturing process for each Shared Product and any changes thereto; (g) sharing planning and budgeting information with the JMC, the JDC and JCC; (h) reviewing and sharing the results of regulatory and environmental, health and safety inspections and audits related to the Manufacture of the Products with the JMC; (i) managing CMOs conducting Manufacturing activities with respect to the Products and (j) conducting any technology transfer approved by the JMC and in accordance with Section 6.4. The Manufacturing

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Working Group shall use good faith efforts to reach consensus on the matters for which it is responsible, with each Party's representatives on the Manufacturing Working Group having collectively one vote; *provided* that if, despite the use of such good faith efforts for a reasonable period of time (taking into account the nature of the relevant dispute) the Parties representatives are unable to reach consensus on a given matter and such matter does not require the JMC's approval, [***] [***]; *provided that* [***].

6.3. **Responsibilities**. The Parties, in accordance with the allocation of responsibilities determined by the JMC, shall be responsible for Manufacturing or having Manufactured all pre-clinical, clinical and commercial supplies of the Products in accordance with the Global Manufacturing Plan and subject to the Manufacturing Budget, subject to the oversight of the Manufacturing Working Group and the JMC in consultation with the JDC or JCC, as applicable. The Party responsible for conducting activities under the Global Manufacturing Plan will be responsible for determining how to carry out the day-to-day operations with respect to such activities; *provided* such activities are conducted in accordance with the Global Manufacturing Plan, Manufacturing Working Group guidance and strategy and all Applicable Laws. The Parties, acting through the Manufacturing Working Group, will ensure the process for Manufacturing a Shared Product [***]. [***] will be responsible for contracting with any CMO with respect to the Manufacture of the Shared Products. If [***] determines to build out its own Manufacturing site, it shall so notify the JMC, and the JMC will determine whether to use such Manufacturing site for the Manufacture of the Products under this Agreement. If the JMC determines to use [***] Manufacturing site for the Manufacture of any Product under this Agreement, [***] will use Commercially Reasonable Efforts to ensure that such Manufacturing site contains reasonably adequate equipment and space dedicated to such Product. For clarity, if the JMC does not initially determine to use [***] Manufacturing site for the Manufacture of any Product under this Agreement, it may at any time thereafter determine to do so, *provided* that such Manufacturing site contains reasonably adequate equipment and space dedicated to such Product.

6.4. **Sharing of Manufacturing Information**. Subject to this Section 6.4, each Party shall, upon the other Party's request, provide to such other Party such information as may be requested by such other Party with respect to the Manufacture of any Product under this Agreement for Development, Commercialization or Manufacturing purposes. Without limiting the foregoing, each Party will, within [***] Business Days of the other Party's request, provide to the requesting Party any information requested with respect to the non-requesting Party's Manufacturing activities, including site qualification and scale-up activities. Each Party shall, and shall cause its Affiliates to, [***]. Notwithstanding the foregoing, if the JMC determines that a CMO will Manufacture the Products, [***] shall directly transfer to such CMO any information Controlled by and in the possession of [***] or its Affiliate and reasonably necessary or useful to enable the Manufacture of such Products, *provided* that such transfer obligation shall not limit [***] obligations to transfer information directly to [***] pursuant to this Section 6.4.

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6.5. **CMO Agreements**. Each Party will have the right to review and approve the terms of any agreement, including quality agreements, to be entered into between the other Party and a CMO or a contract testing facility with respect to the Manufacture of any Product, or any intermediate thereof, under this Agreement. No such agreement with a CMO or contract testing facility shall be entered into by a Party without the prior approval of the other Party.

ARTICLE 7
FINANCIAL TERMS; ALLOCATION OF NET PROFIT AND NET LOSS

7.1. **Upfront Payments**. Within four Business Days after the Effective Date, Vertex shall pay to CRISPR a non-refundable, non-creditable, upfront payment in the amount of Seven Million Dollars ($7,000,000). For clarity, CRISPR is solely responsible for all costs and expenses incurred by CRISPR or its Affiliates in connection with the Shared Products prior to the Effective Date.

7.2. **Milestone Payment**. Upon [***], Vertex will make a one-time, non-refundable, non-creditable payment to CRISPR of [***] ($[***]) within [***] days of receipt by Vertex of an invoice for such payment from CRISPR.

7.3. **Allocation**. Starting [***], and continuing through the Co-Co Agreement Term, each Party will be entitled to [***] or will bear [***], as applicable. Each Party will be solely responsible for any Program Expenses incurred by such Party between the Effective Date and [***], 2018. If either Party elects to Opt-Out (as defined below), the [***].

7.4. **Calculation**. [***].

7.5. **Payment of Expenses; Summary Statements**. Subject to reconciliation as provided in Section 7.6, the Party initially incurring Program Expenses will be responsible for and pay for all such Program Expenses so incurred. Each Party will maintain the books and records referred to in Section 7.8. Each Party will accrue all Program Expenses, Sublicense Revenue and Net Sales in accordance with the terms and conditions hereof and in accordance with GAAP, *provided* that all Out-of-Pocket Costs under this Agreement will be deemed accrued at the time of invoice for purposes of the calculation and reconciliation of Net Profit or Net Loss under this Agreement. Within [***] Business Days after the end of each Calendar Quarter, each Party will submit to the other a written report reflecting the accrual of Program Expenses, Sublicense Revenue and Net Sales during the just-ended Calendar Quarter, except that each Party's submission for the last month of such Calendar Quarter will be a good faith estimate and not actual amounts (each, a "**Summary Statement**"). Within [***] days after the end of each Calendar Quarter, each Party will submit to the other an updated Summary

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Statement reflecting the actual accrual of Program Expenses, Sublicense Revenue and Net Sales for the last month of such Calendar Quarter, which Summary Statement will be certified as true and accurate by a representative of such Party that is a Vice President of Finance or more senior representative. Each Summary Statement (after the initial Summary Statement) will reflect an adjustment for the actual amount of the previous Calendar Quarter as needed, *provided* that, if, prior to preparation of a Summary Statement in accordance with the preceding sentence, a Party discovers that actual Program Expenses, Sublicense Revenue or Net Sales have deviated materially from any non-binding, good faith estimate of such Program Expenses, Sublicense Revenue or Net Sales submitted to the other Party in accordance with this Section 7.5 (including any deviation in any single Expense or in aggregate Sublicense Revenue or aggregate Net Sales, in each case, of more than $[***]), then such Party shall promptly notify the other Party of such deviation in advance of delivery of such Summary Statement. Any reporting and reconciliation of variances between estimated and actual Expenses may be delayed by a Calendar Quarter as reasonably necessary in light of a Party's internal reporting procedures. The Parties' respective Summary Statements will serve as the basis of the Reconciliation Reports prepared by [***] pursuant to Section 7.6. The Parties' respective finance departments, coordinated by the JDC, or JCC, as appropriate, will meet at least once per [***], or as otherwise mutually agreed by the Parties, to discuss any questions or issues arising from the Summary Statements, including the basis for the accrual of specific Program Expenses, review budgets and forecasts, and discuss reconciliation and reporting procedures.

7.6. **Reconciliation**. [***] will prepare a reconciliation report, as soon as practicable after the receipt of [***] updated Summary Statement, but in any event within [***] days after the end of each Calendar Quarter, accompanied by reasonable supporting documents and calculations sufficient to support each Party's financial reporting obligations, independent auditor requirements and obligations under the Sarbanes-Oxley Act, which reconciles the amounts accrued and reported in each Party's Summary Statement during such Calendar Quarter and the share of the Net Profits and Net Losses to be allocated to each of the Parties for such Calendar Quarter in accordance with Section 7.3 (such report, the "**Reconciliation Report**"). Payment to reconcile Net Profit or Net Loss, as applicable, shall be made by the owing Party to the other Party within [***] days after such Reconciliation Report is complete.

7.7. **Cost Overruns**. If a Party's Research Costs, Development Costs, Manufacturing Costs, Medical Affairs Costs or Commercialization Costs in any Calendar Year are likely to exceed those set forth in the Research Budget, Development Budget, Manufacturing Budget, Medical Affairs Budget or Global Commercialization Budgets, as applicable, for all of its activities under the Follow-On Research Plan, Global Development Plan, Global Manufacturing Plan, Medical Affairs Plan or Global Commercialization Plans, as applicable, in such Calendar Year by [***], Development Budget, Manufacturing Budget, Medical Affairs Budget or Global Commercialization Budgets, as applicable, such Party will provide the other Party with an explanation for such excess Expenses, and such excess Expenses will be

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included in the Research Costs, Development Costs, Manufacturing Costs, Medical Affairs Costs or Commercialization Costs, as applicable, and, beginning [***], shared by the Parties as provided herein. To the extent a Party's Research Costs, Development Costs, Manufacturing Costs, Medical Affairs Costs or Commercialization Costs, as applicable, exceed those set forth in the Research Budget, Development Budget, Manufacturing Budget, Medical Affairs Budget or Global Commercialization Budgets, [***]

7.8. **Books and Records**. Each Party will keep and maintain accurate and complete records regarding Program Expenses, Sublicense Revenue and Net Sales, during the three preceding Calendar Years. Upon [***] days' prior written notice from the Auditing Party, the Audited Party will permit an independent certified public accounting firm of internationally recognized standing, selected by the Auditing Party and reasonably acceptable to the Audited Party, to examine the relevant books and records of the Audited Party and its Affiliates, as may be reasonably necessary to verify the Summary Statements and Reconciliation Reports. An examination by the Auditing Party under this Section 7.8 will occur not more than once in any Calendar Year and will be limited to the pertinent books and records for any Calendar Year ending not more than [***] months before the date of the request. The accounting firm will be provided access to such books and records at the Audited Party's facility or facilities where such books and records are normally kept and such examination will be conducted during the Audited Party's normal business hours. The Audited Party may require the accounting firm to sign a customary non-disclosure agreement before providing the accounting firm access to its facilities or records. Upon completion of the audit, the accounting firm will provide both the Auditing Party and the Audited Party a written report disclosing whether the applicable Summary Statements and Reconciliation Reports are correct or incorrect and the specific details concerning any discrepancies. No other information will be provided to the Auditing Party. If the report or information submitted by the Audited Party results in an underpayment or overpayment, the Party owing underpaid or overpaid amount will promptly pay such amount to the other Party, and if, as a result of such inaccurate report or information, such amount is more than five percent of the amount that was owed, the Audited Party will reimburse the Auditing Party for the reasonable expense incurred by the Auditing Party in connection with the audit.

7.9. **Payment Method; Currency**.

7.9.1. All payments under this Agreement will be paid in U.S. Dollars, by wire transfer (a) in the case of payments to [***], by [***] to an account of [***] designated by [***] (which account CRISPR may update from time to time in writing) and (b) in the case of payments to [***], by [***]. to an account of [***] designated by [***] (which account [***] may update from time to time in writing).

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

7.9.2. If any amounts that are relevant to the determination of amounts to be paid under this Agreement or any calculations to be performed under this Agreement are denoted in a currency other than U.S. Dollars, then such amounts will be converted to their U.S. Dollar equivalent using the [***] of the official rate of exchange of such domestic currency as quoted by [***], for the Calendar Quarter for which the payment is made.

7.10. **Late Payment**. Any undisputed payments or portions thereof due hereunder that are not paid when due will accrue interest from the date due until paid at an annual rate equal to [***] plus [***] percent (or the maximum allowed by Applicable Law, if less).

7.11. **Payments To / From [***]**. Notwithstanding anything to the contrary set forth in this Agreement, (i) any payments to be made by any [***] under this Agreement shall be made by [***] only; and (ii) any payments to be made to any [***] under this Agreement shall be made to [***] only.

ARTICLE 8
ADVERSE EVENTS

8.1. **Pharmacovigilance Agreement**. [***] shall be responsible for all pharmacovigilance activities for the Shared Products in the Territory. Within [***] days after the Effective Date, the Parties will negotiate in good faith and will set forth in a pharmacovigilance agreement (the "**Pharmacovigilance Agreement**") mutually agreed terms and conditions for the processes and procedures for sharing safety information with respect to the Shared Products that are customary for agreements of this type. The Pharmacovigilance Agreement will include provisions establishing a joint disease area safety team led by [***] to oversee the conduct of the Parties' activities under the Pharmacovigilance Agreement and to coordinate the Parties' interactions with respect to pharmacovigilance activities.

8.2. **Global Safety Database**. [***] will establish and maintain the global database of safety information for each Shared Product (each, a "**Global Safety Database**"), including adverse events and pregnancy reports for each Shared Product, which will be used for regulatory reporting and responses to safety queries from Regulatory Authorities by both Parties. [***] will, and will cause its Affiliates to, transfer all adverse events information in its or their possession or control to the Global Safety Database within a mutually agreed period of time that provides Vertex with sufficient time for the preparation of required regulatory submissions.

8.3. **Risk Management and Signal Detection Activities**. [***] shall be primarily responsible for all signal detection and risk management activities for the Shared Products. These signal detection activities shall include, but are not limited to, proactive review and evaluation of all safety information from the applicable Global Safety Database (including Individual Case Safety Reports and aggregate safety information) and other sources (including the clinical trial databases, non-clinical data, and medical or scientific literature).

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8.4. **Access to Safety Information**. The Parties will arrange for [***] to [***], with a format and periodicity agreed upon by both Parties. In response to [***] from [***], [***] will [***] to [***] within [***] Business Days of a request. In addition, [***] shall [***] to [***].

ARTICLE 9
SUBCONTRACTING

Each Party may subcontract the performance of any activities undertaken by such Party in accordance with the Global Development Plan, the Follow-On Research Plan, the Medical Affairs Plan, any Global Commercialization Plan or any Regional Commercialization Plan to one or more Third Parties (each such Third Party, a "**Subcontractor**") pursuant to a written agreement (a "**Subcontract**") in compliance with the terms of this Agreement and the Quality Agreement. Notwithstanding the foregoing, if either Party desires to subcontract any such activities, it will first discuss the matter with the other Party and reasonably consider using the other Party for such subcontracted activities, taking into account the capabilities of the other Party and potential impact on Expenses, as a potential alternative to subcontracting such activities to a Third Party. If, following such discussion, a Party still desires to subcontract the performance of any such activity to one or more Third Parties, it may proceed to do so, subject to Section 2.3.2(v), Section 2.4.2(k) or Section 2.5.2(o), as applicable, in the case of any such subcontract that the subcontracting Party reasonably anticipates will entail payments to the Subcontractor in excess of $[***] with respect to the subcontracted activities under this Agreement.

ARTICLE 10
LICENSE GRANTS

10.1. **Acknowledgment of Option Exercise**. Each Party acknowledges and agrees that, notwithstanding anything to the contrary in the Collaboration Agreement, effective as of the execution of this Agreement, Vertex is deemed to have exercised [***], without any further action on the part of either Party, [***].

10.2. **License Grants to Vertex**.

10.2.1. **Development and Commercialization Licenses**. Subject to the terms and conditions of this Agreement, CRISPR and, following the Subsidiary Transfer, the CRISPR Subsidiary, grants to Vertex UK and its Affiliates a co-exclusive (with CRISPR) license under CRISPR's and its Affiliates' interest in the Licensed CRISPR Technology, with the right to Sublicense through multiple tiers (subject to Section 10.5), to Research, Develop, Manufacture, have Manufactured, use, keep, sell, offer for sale, import, export and Commercialize Shared Products in the Field in the Territory (such license, the "**Exclusive License**"). As of the Effective Date, this Exclusive License supersedes and replaces the license grant set forth in Section 5.3.1 of the Collaboration Agreement solely with respect to the Shared Targets, and shall be deemed to be the "Exclusive License" under the Collaboration Agreement with respect to the Shared Targets.

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10.2.2. **Research Licenses**. Subject to the terms and conditions of this Agreement, CRISPR and, following the Subsidiary Transfer, the CRISPR Subsidiary, grants to Vertex UK and its Affiliates a co-exclusive (with CRISPR) license under CRISPR's and its Affiliates' interest in the Licensed CRISPR Technology solely to conduct the activities set forth in the Follow-On Research Plan with respect to Follow-On Products in the Field in the Territory.

10.2.3. **License Conditions; Limitations**. Subject to Section 10.7.2, any rights and obligations hereunder, including the rights granted pursuant to the Exclusive License, are subject to and limited by any applicable [***] of CRISPR to the extent the provisions of such obligations or agreements are specifically disclosed to Vertex in writing: (a) with respect to [***] under a CRISPR In-License Agreement, prior to (i) the Effective Date, in the case of the Initial Shared Product, and (ii) the date of designation of a Follow-On Product as a Shared Product, in the case of any other Shared Product; and (b) with respect to [***] under a [***] for which CRISPR is the contracting Party, on or prior to the date on which such [***] becomes effective.

10.3. **License Grants to CRISPR**.

10.3.1. **Development and Commercialization Licenses**. Subject to the terms and conditions of this Agreement, Vertex grants to CRISPR a co-exclusive (with Vertex and its Affiliates) license under Vertex's and its Affiliates' interest in the Licensed Vertex Technology, with the right to Sublicense through multiple tiers (subject to Section 10.5), to Research, Develop, Manufacture, have Manufactured, use, keep, sell, offer for sale, import, export and Commercialize Shared Products in the Field in the Territory.

10.3.2. **Research Licenses**. Subject to the terms and conditions of this Agreement, Vertex grants to CRISPR a co-exclusive (with Vertex and its Affiliates) license under Vertex's and its Affiliates' interest in the Licensed Vertex Technology solely to conduct the activities set forth in the Follow-On Research Plan with respect to Follow-On Products in the Field in the Territory.

10.3.3. **License Conditions; Limitations**. Subject to Section 10.7.2, any rights and obligation hereunder are subject to and limited by any applicable [***] of Vertex to the extent the provisions of such obligations or agreements are specifically disclosed to CRISPR in writing: (a) with respect to [***] under a Vertex In-License Agreement, prior to (i) the Effective Date, in the case of the Initial Shared Product, and (ii) the date

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of designation of a Follow-On Product as a Shared Product, in the case of any other Shared Product; and (b) with respect to [***] under a [***] for which Vertex is the contracting Party, on or prior to the date on which such [***] becomes effective.

10.4. **Licenses to Improvements**.

10.4.1. Subject to the terms and conditions of this Agreement, CRISPR, and, following the Subsidiary Transfer, to the extent necessary, the CRISPR Subsidiary, hereby grants to Vertex UK and its Affiliates a perpetual, irrevocable, non-exclusive, royalty-free, fully paid-up, worldwide, sublicensable license to all improvements or modifications to the Vertex Background Know-How or Vertex Background Patents, whether or not patentable, that arise in the course of performing activities under the Global Development Plan or the Follow-On Research Plan or in the course of Developing, Manufacturing or Commercializing a Product and are Controlled by CRISPR or its Affiliates to make, have made, use, sell, keep, offer for sale and import products other than Shared Products.

10.4.2. Subject to the terms and conditions of this Agreement, Vertex hereby grants to CRISPR a perpetual, irrevocable, non-exclusive, royalty-free, fully paid-up, worldwide, sublicensable license to all improvements or modifications to the CRISPR Platform Technology Patents, CRISPR Background Patents [***], Gene Editing System or CRISPR Background Know-How set forth on Schedule F to the Collaboration Agreement (as may be supplemented by mutual written agreement of the Parties from time to time), whether or not patentable, that arise in the course of performing activities under the Global Development Plan or the Follow-On Research Plan or in the course of Developing, Manufacturing or Commercializing a Product and are Controlled by Vertex or its Affiliates to make, have made, use, sell, keep, offer for sale and import products other than Shared Products.

10.5. **Sublicensing**. Subject to the rights granted or retained by the Parties under this Agreement, either Party may Sublicense (through multiple tiers) to its Affiliates or Third Parties any and all rights granted to it by the other Party or retained by such Party with respect to the Research, Development, Manufacture and Commercialization of Shared Products, *provided* that neither Party may grant any such Sublicense (other than a Subcontract in accordance with the provisions of ARTICLE 9) in a [***] or [***] without the prior written consent of the other Party; and *provided*, *further*, that if either Party intends to Sublicense any such rights in any country, it will discuss the matter with the other Party and in good faith consider using the other Party to conduct any sublicensed activities. If a Party grants any such Sublicense it will remain responsible for its obligations under this Agreement and will be responsible for the performance of the relevant Sublicensee.

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10.6. **No Implied Licenses**. All rights in and to Licensed CRISPR Technology not expressly licensed or assigned to Vertex under this Agreement or the Collaboration Agreement are hereby retained by CRISPR or its Affiliates. All rights in and to any Licensed Vertex Technology not expressly licensed to CRISPR under this Agreement or the Collaboration Agreement, are hereby retained by Vertex or its Affiliates. Except as expressly provided in this Agreement or the Collaboration Agreement, no Party will be deemed by estoppel or implication to have granted the other Party any licenses or other right with respect to any intellectual property.

10.7. **Third Party Agreements**.

10.7.1. **In-License Agreements**. Any financial obligations arising under any CRISPR In-License Agreement or Vertex In-License Agreement as a result of the Development, Manufacture or Commercialization of any Product by either Party, its Affiliates and Sublicensees under this Agreement will be included in [***].

10.7.2. **[***]**. If a Party believes, in its reasonable judgment, that it may be necessary to obtain rights under any [***] in order [***] such Party will promptly notify the other Party and [***]. Unless otherwise agreed by the Parties in writing, (a) if such [***] [***] and (b) [***] [***]. [***] (each, a "**[***]**") [***]. [***], the Parties will [***]. If it is [***] are [***], then the applicable Party shall [***], and the [***] shall be included as [***] under this Agreement. If, within [***] days [***], the applicable Party has not [***], the other Party shall [***], and the [***] shall be included as [***] under this Agreement. If it is [***], then [***], *provided* that the [***] shall not be [***] and shall not be included as [***] under this Agreement unless otherwise mutually agreed by the Parties in writing. The [***] shall [***], and shall not [***].

10.8. **Trademarks**. The Lead Commercialization Party will own and retain all rights to all filed Trademarks for the Shared Products in their respective jurisdictions, and all goodwill associated with or attached thereto arising out of the use thereof by the Parties, their Affiliates and Sublicensees will inure to the benefit of such Lead Commercialization Party. Each non-Lead Commercialization Party, on behalf of itself and its Affiliates, will assign to the Lead Commercialization Party or its relevant Affiliate all right, title and interest in and to such Shared Product Trademarks and goodwill in the relevant jurisdictions. The non-Lead Commercialization Party will not contest, oppose or challenge the Lead Commercialization Party's ownership of such Shared Product Trademarks in the relevant jurisdictions. The Lead Commercialization Party will own rights to any Internet domain names incorporating any Trademark for the Shared Products, or any variation or part of any such Trademark, as its URL address or any part of such address in the applicable jurisdictions. The Lead Commercialization Party will use Commercially Reasonable Efforts to register, maintain and enforce the Trademarks for the Shared Products in the relevant jurisdictions. Notwithstanding anything to the contrary, if a single Trademark is used throughout the Territory with respect to a Shared Product, the Parties will mutually agree upon the ownership of such Shared Product Trademark in the Territory.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

ARTICLE 11
INTELLECTUAL PROPERTY

The terms of the Collaboration Agreement will apply with respect to any and all Know-How and Patents discovered, developed, invented or created in connection with activities under this Agreement.

ARTICLE 12
REPRESENTATIONS AND WARRANTIES

12.1. **Representations and Warranties of Vertex**. Vertex hereby represents and warrants to CRISPR, as of the Effective Date, that:

12.1.1. each of Vertex Parent and Vertex UK is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

12.1.2. each of Vertex Parent and Vertex UK (a) has the requisite power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder and (b) has taken all requisite action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

12.1.3. this Agreement has been duly executed and delivered on behalf of each of Vertex Parent and Vertex UK, and constitutes a legal, valid and binding obligation, enforceable against each of Vertex Parent and Vertex UK in accordance with the terms hereof;

12.1.4. the execution, delivery and performance of this Agreement by each of Vertex Parent and Vertex UK will not constitute a default under or conflict with any agreement, instrument or understanding, oral or written, to which either entity is a party or by which either entity is bound, or violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over Vertex Parent or Vertex UK; and

12.1.5. each of Vertex Parent and Vertex UK has obtained all necessary consents, approvals and authorizations of all Governmental Authorities and other Persons or entities required to be obtained by it in connection with the execution and delivery of this Agreement.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

12.2. **Representations and Warranties of CRISPR**. Each of the CRISPR Entities, jointly and severally, hereby represents and warrants to Vertex, as of the Effective Date, except as set forth on Schedule G, that:

12.2.1. each of CRISPR AG, CRISPR Inc., CRISPR UK and Tracr is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

12.2.2. each of CRISPR AG, CRISPR Inc., CRISPR UK and Tracr (a) has the requisite power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder and (b) has taken all requisite action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

12.2.3. this Agreement has been duly executed and delivered on behalf of CRISPR, and constitutes a legal, valid and binding obligation, enforceable against it in accordance with the terms hereof;

12.2.4. the execution, delivery and performance of this Agreement by CRISPR will not constitute a default under or conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it is bound, or violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it;

12.2.5. CRISPR has obtained all necessary consents, approvals and authorizations of all Governmental Authorities and other Persons or entities required to be obtained by CRISPR in connection with the execution and delivery of this Agreement;

12.2.6. the Licensed CRISPR Technology constitutes all of the Patents and Know-How Controlled by CRISPR that are necessary to Research, Develop, Manufacture or Commercialize the Shared Products contemplated under this Agreement in the Field in the Territory;

12.2.7. CRISPR is the sole and exclusive owner or exclusive licensee of the CRISPR Platform Technology Patents and CRISPR Background Patents, all of which are free and clear of any liens, charges and encumbrances, and, as of the Effective Date, neither any license granted by CRISPR to any Third Party, nor any license granted by any Third Party to CRISPR, conflicts with the license grants to Vertex hereunder, and CRISPR is entitled to grant all rights and licenses (or sublicenses, as the case may be) under such Patents it purports to grant to Vertex under this Agreement;

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

12.2.8. [***], the Research, Development, Manufacture, use, sale, offer for sale, supply or importation by [***]

12.2.9. there are no judgments or settlements against or owed by [***], pending or threatened claims or litigation, in either case relating to the Licensed CRISPR Technology;

12.2.10. the CRISPR Platform Technology Patents and CRISPR Background Patents are, or, upon issuance, will be, [***] [***], [***] and

12.2.11. [***], there are no Manufacturing capacity or Manufacturing process issues that [***] on the Manufacture of the Products.

12.3. **CRISPR Covenants**. Each of the CRISPR Entities, jointly and severally, hereby covenants to Vertex that, *except* as expressly permitted under this Agreement:

12.3.1. CRISPR will maintain and not breach any CRISPR In-License Agreements or [***] that provide a grant of rights from such Third Party to CRISPR that are Controlled by CRISPR and are licensed or may become subject to a license from CRISPR to Vertex for the Shared Products under this Agreement;

12.3.2. CRISPR will promptly notify Vertex of any material breach by one or more CRISPR Entities or a Third Party of any CRISPR In-License Agreements or [***] that provides a grant of rights from such Third Party to one or more CRISPR Entities and are licensed from CRISPR to Vertex under this Agreement, and in the event of a breach by [***], will [***]. CRISPR will [***] as soon as possible, but in no event later than the date on which [***];

12.3.3. it will not amend, modify or terminate any CRISPR In-License Agreement or [***] in a manner that would have an adverse effect on Vertex's rights hereunder without first obtaining Vertex's written consent, which consent may be withheld in Vertex's sole discretion;

12.3.4. it will not enter into any new agreement or other obligation with any Third Party, or amend an existing agreement with a Third Party, in each case that adversely restricts, limits or encumbers the rights granted to Vertex under this Agreement or the additional rights;

12.3.5. it will not, and will cause its Affiliates not to (a) license, sell, assign or otherwise transfer to any Person any Licensed CRISPR Technology (or agree to do any of the foregoing), *except* as will not adversely restrict, limit or encumber the rights granted to Vertex under this Agreement, or (b) incur or permit to exist, with respect to any Licensed CRISPR Technology, any lien, encumbrance, charge, security interest, mortgage, liability, grant of license to Third Parties or other restriction (including in connection with any indebtedness);

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

12.3.6. it will use Commercially Reasonable Efforts to obtain and maintain the requisite resources and expertise to perform its obligations hereunder;

12.3.7. all employees and Subcontractors of CRISPR performing Research or Development activities hereunder on behalf of CRISPR will be obligated to assign to CRISPR all right, title and interest in and to any inventions developed by them, whether or not patentable, or, solely with respect to Subcontractors, grant exclusive license rights to CRISPR with a right to grant sublicenses through multiple tiers;

12.3.8. it will not engage, in any capacity in connection with this Agreement, any Person who either has been debarred by the FDA, is the subject of a conviction described in Section 306 of the FD&C Act or is subject to any such similar sanction; and

12.3.9. CRISPR will inform Vertex in writing promptly if it or any Person engaged by CRISPR or any of its Affiliates who is performing services under this Agreement or any ancillary agreements is debarred or is the subject of a conviction described in Section 306 of the FD&C Act, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to CRISPR's Knowledge, is threatened, relating to the debarment or conviction of CRISPR, any of its Affiliates or any such Person performing services hereunder or thereunder.

12.4. **Vertex Covenants**. Vertex hereby covenants to CRISPR that, except as expressly permitted under this Agreement:

12.4.1. it will use Commercially Reasonable Efforts to obtain and maintain the requisite resources and expertise to perform its obligations hereunder;

12.4.2. Vertex will not engage, in any capacity in connection with this Agreement any Person who either has been debarred by the FDA, is the subject of a conviction described in Section 306 of the FD&C Act or is subject to any such similar sanction; and

12.4.3. Vertex will inform CRISPR in writing promptly if it or any Person engaged by Vertex or any of its Affiliates who is performing services under this Agreement or any ancillary agreements is debarred or is the subject of a conviction described in Section 306 of the FD&C Act, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to Vertex's knowledge, is threatened, relating to the debarment or conviction of CRISPR, any of its Affiliates or any such Person performing services hereunder or thereunder.

12.5. **Disclaimer**. Except as otherwise expressly set forth in this Agreement, neither Party nor its Affiliates makes any representation or extends any warranty of any kind, either express or implied, including any warranty of merchantability or fitness for a particular purpose. Vertex and CRISPR understand that each Product is the subject of ongoing Research and Development and that neither Party can assure the safety, usefulness or commercial or technical viability of any Product.

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

12.6. **[***]**. Notwithstanding anything to the contrary in this Agreement, if it is [***] that [***] has [***] (a "**[***]**"), then (a) if [***] shall [***] The Parties acknowledge and agree that notwithstanding anything to the contrary in this Agreement, (i) a [***], and [***] or the [***] and (ii) [***].

ARTICLE 13
INDEMNIFICATION; INSURANCE

13.1. **Indemnification by Vertex**. Vertex will indemnify, defend and hold harmless each CRISPR Indemnified Party from and against any and all Liability that the CRISPR Indemnified Party may be required to pay to one or more Third Parties to the extent resulting from or arising out of:

13.1.1. [***];

13.1.2. [***];

except, in each case, to the extent CRISPR is required to indemnify Vertex pursuant to Section 13.2.

13.2. **Indemnification by CRISPR**. Each CRISPR Entity will jointly and severally indemnify, defend and hold harmless each Vertex Indemnified Party from and against any and all Liabilities that the Vertex Indemnified Party may be required to pay to one or more Third Parties to the extent resulting from or arising out of:

13.2.1. [***];

13.2.2. [***];

except, in each case, to the extent Vertex is required to indemnify CRISPR pursuant to Section 13.1.

13.3. **Procedure**. Each Party will notify the other Party in writing if it becomes aware of a claim for which indemnification may be sought hereunder. In case any proceeding (including any governmental investigation) will be instituted involving any Indemnified Party, such Indemnified Party will give prompt written notice of the indemnity claim to the Indemnifying Party and provide a copy to the Indemnifying Party of any complaint, summons or other written or verbal notice that the Indemnified Party receives in connection with any such claim. An Indemnified Party's failure to deliver written notice will relieve the Indemnifying Party of liability to the Indemnified Party under this ARTICLE 13 only to the extent such delay is prejudicial to the Indemnifying Party's ability to defend such claim. *Provided* that the Indemnifying Party is not contesting the indemnity obligation, the Indemnified Party will permit the Indemnifying Party to control any litigation relating to such claim and the disposition of such claim by

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negotiated settlement or otherwise and any failure to contest prior to assuming control will be deemed to be an admission of the obligation to indemnify. The Indemnifying Party will act reasonably and in good faith with respect to all matters relating to such claim and will not settle or otherwise resolve such claim without the Indemnified Party's prior written consent, which will not be withheld, delayed or conditioned unreasonably, other than settlements only involving the payment of monetary awards for which the Indemnifying Party will be fully-responsible. The Indemnified Party will cooperate with the Indemnifying Party in such Party's defense of any claim for which indemnity is sought under this Agreement, at the Indemnifying Party's sole cost and expense.

13.4. **Other Third Party Claims**. If a Third Party brings a claim of any nature arising out of [***] other than [***], the [***] will [***]. [***] will [***]. The [***] will [***]. The [***]. If [***].

13.5. **Insurance**.

13.5.1. **Coverage**. From and after the Effective Date, each Party will, at its sole cost and expense, procure and maintain the following policies, each naming the other Party and its Indemnified Parties as additional insureds:

(a) [***] in amounts not less than $[***] annual aggregate;

(b) [***] coverage in amounts not less than $[***];

(c) [***] in amounts not less than $[***] per incident and $[***] annual aggregate, which policy shall include [***], as applicable, and for [***]; and

(d) [***] (also called [***]) in amounts not less than $[***] per claim and annual aggregate, covering [***].

Each such policy will be [***].

13.5.2. **Evidence of Insurance**. Each Party will provide the other Party with evidence of the insurance required under this Section 13.5 upon the other Party's request. Each Party will provide the other Party with notice at least 30 days prior to the cancellation, non-renewal or material change in such insurance. The cancelling or non-renewing Party will obtain replacement insurance providing comparable coverage prior to the expiration of such 30-day period.

13.5.3. **Post-Termination Obligations**. Each Party will maintain the insurance required under this Section 13.5 beyond the expiration or termination of this Agreement for a reasonable period after the period during which either Party or its Affiliates or Sublicensees is Developing or Commercializing any Product, which in no event will be less than five years.

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13.5.4. **Affiliates, Sublicensees and Distributors**. Each Party will (i) ensure that all applicable Affiliates of such Party are covered under such Party's insurance policies as described in Section 13.5.1 and (ii) require all of its Sublicensees and Distributors to comply with the provisions and obligations under this Section 13.5 as if such entity were such Party.

13.5.5. **No Limitation**. The minimum amounts of insurance coverage required under this Section 13.5 will not be construed to create a limit of liability with respect to a Party's indemnification obligations under Section 13.1 or 13.2, as applicable, or with respect to such Party's share of any Liabilities under Section 13.4.

13.5.6. **Self-Insurance**. Notwithstanding the foregoing, [***] may self-insure to the extent that it self-insures for its other activities.

13.6. **Limitation of Consequential Damages**. Except for (a) claims of a Third Party that are subject to indemnification under this ARTICLE 13, (b) claims arising out of a Party's willful misconduct, or (c) a Party's breach of ARTICLE 15, neither Party nor any of its Affiliates will be liable to the other Party or its Affiliates for any incidental, consequential, special, punitive or other indirect damages or lost or imputed profits or royalties, lost data or cost of procurement of substitute goods or services, whether liability is asserted in contract, tort (including negligence and strict product liability), indemnity or contribution, and irrespective of whether that Party or any representative of that Party has been advised of, or otherwise might have anticipated the possibility of, any such loss or damage.

ARTICLE 14
TERM; TERMINATION

14.1. **Co-Co Agreement Term; Expiration**. This Agreement is effective as of the Effective Date and, unless earlier terminated pursuant to the other provisions of this ARTICLE 14, will continue in full force and effect until there is no longer any Global Development Plan or Global Commercialization Plan contemplating Development or Commercialization of the Shared Products in the Territory.

14.2. **Termination of the Agreement**.

14.2.1. **Vertex's Termination for Convenience**. Vertex will be entitled to terminate this Agreement for convenience, in its entirety or with respect to one or more Shared Product(s), by providing CRISPR 90 days' written notice of such termination; *provided, however*, that if any termination under this Section 14.2.1 with respect to a Shared Product occurs after such Shared Product has received Marketing Approval, Vertex will provide CRISPR no less than 270 days' written notice of such termination.

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14.2.2. **Termination for Material Breach**.

(a) **Vertex's Right to Terminate**. If CRISPR (or any CRISPR Entity(ies)) is in material breach of this Agreement, then Vertex may deliver notice of such material breach to CRISPR. If the breach is curable, CRISPR will have [***] days from the receipt of such notice to cure such breach (*except* to the extent such breach involves the failure to make a payment when due, which breach must be cured within [***] Business Days following receipt of such notice). If either CRISPR fails to cure such breach within such [***]-day or [***]-Business Day period, as applicable, or the breach is not subject to cure, Vertex in its sole discretion may either (i) terminate this Agreement (A) if such breach relates solely to a particular Shared Product, with respect to the Shared Product affected by such breach or (B) if such breach relates to this Agreement as a whole, in its entirety, by providing written notice to CRISPR or (ii) elect to exercise the alternative remedy provisions set forth in Section 14.5 (in lieu of termination).

(b) **CRISPR's Right to Terminate**. If Vertex is in material breach of this Agreement, then CRISPR may deliver notice of such material breach to Vertex. If the breach is curable, Vertex will have [***] days following receipt of such notice to cure such breach (*except* to the extent such breach involves the failure to make a payment when due, which breach must be cured within [***] Business Days following receipt of such notice). If Vertex fails to cure such breach within the [***]-day or [***]-Business Day period, as applicable, or the breach is not subject to cure, CRISPR in its sole discretion may either (i) terminate this Agreement (A) if such breach relates solely to a particular Shared Product, with respect to the Shared Product affected by such breach or (B) if such breach relates to this Agreement as a whole, in its entirety, by providing written notice to Vertex or (ii) elect to exercise the alternative remedy provisions set forth in Section 14.5 (in lieu of termination).

(c) **Disputes Regarding Material Breach**. Notwithstanding the foregoing, if the Breaching Party in this Section 14.2.2 disputes in good faith the existence, materiality, or failure to cure of any such breach that is not a payment breach, and provides notice to the Non-Breaching Party of such dispute within the relevant cure period, the Non-Breaching Party will not have the right to terminate this Agreement in accordance with this Section 14.2.2, unless and until the relevant dispute has been resolved. It is understood and acknowledged that during the pendency of such dispute, all the terms and conditions of this Agreement will remain in effect and the Parties will continue to perform all of their respective obligations hereunder.

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14.2.3. **Termination for Patent Challenge**. If a Party (the "**Challenging Party**") (A) commences or actively and voluntarily participates in any action or proceeding (including any Patent opposition or re-examination proceeding), or otherwise asserts any claim, challenging or denying the validity or enforceability of any claim of any Patent that is licensed to the Challenging Party under this Agreement or (B) actively and voluntarily assists any other Person in bringing or prosecuting any action or proceeding (including any Patent opposition or re-examination proceeding) challenging or denying the validity or enforceability of any claim of any Patent that is licensed to the Challenging Party under this Agreement by the other Party (the "**Non-Challenging Party**") (each of (A) and (B), a "**Patent Challenge**"), then, to the extent permitted by Applicable Law, the Non-Challenging Party shall have the right, in its sole discretion, to give notice to the Challenging Party that the Non-Challenging Party may terminate the license(s) granted under such Patent to the Challenging Party [***] days following such notice, and, unless the Challenging Party withdraws or causes to be withdrawn all such challenge(s), or in the case of ex-parte proceedings, multi-party proceedings, or other Patent Challenges that the Challenging Party does not have the power to unilaterally withdraw or cause to be withdrawn, the Challenging Party ceases assisting any other party to such Patent Challenge and, to the extent the Challenging Party is a party to such Patent Challenge, it withdraws from such Patent Challenge within such [***]-day period, the Non-Challenging Party shall have the right to deem the Challenging Party to have exercised an Opt-Out with respect to any Shared Product(s) Covered by a Patent that is the subject of such Patent Challenge, by providing written notice thereof to the Challenging Party, in which case the provisions of Section 14.3 shall apply; *provided*, *however*, [***]. The foregoing right of the Non-Challenging Party shall not apply with respect to any Patent Challenge where the Patent Challenge is made in defense of an assertion of the relevant Patent that is first brought by the Non-Challenging Party against the Challenging Party. For the avoidance of doubt, any participation by the Challenging Party or its employees in any claim, challenge or proceeding in response to a subpoena or as required under a pre-existing agreement between the Challenging Party's employee(s) or consultant(s) and their prior employer(s) shall not constitute active and voluntary participation or assistance and shall not give rise to the Non-Challenging Party's right to deem the Challenging Party as having exercised an Opt-Out with respect to any Shared Product hereunder.

14.2.4. **Termination for Insolvency**. If CRISPR (or any CRISPR Entity(ies)) undergoes any Insolvency Event, then Vertex may terminate this Agreement in its entirety effective immediately upon written notice to CRISPR. If an Insolvency Event occurs with respect to CRISPR (or any CRISPR Entity(ies)):

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(a) All rights and licenses now or hereafter granted by CRISPR to Vertex under or pursuant to this Agreement, including, for the avoidance of doubt, any Exclusive Licenses, are, for all purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of rights to "intellectual property" as defined in the U.S. Bankruptcy Code. Upon the occurrence of any Insolvency Event with respect to CRISPR (or any CRISPR Entity(ies)), CRISPR agrees that Vertex, as licensee of such rights under this Agreement, will retain and may fully exercise all of its rights and elections under the U.S. Bankruptcy Code. CRISPR will, during the Co-Co Agreement Term, create and maintain current copies or, if not amenable to copying, detailed descriptions or other appropriate embodiments, to the extent feasible, of all intellectual property licensed under this Agreement. Each Party acknowledges and agrees that "embodiments" of intellectual property within the meaning of Section 365(n) include laboratory notebooks, cell lines, product samples and inventory, research studies and data, all Regulatory Approvals (and all applications for Regulatory Approval) and rights of reference therein, the Licensed CRISPR Technology and all information related to the Licensed CRISPR Technology. If (x) a case under the U.S. Bankruptcy Code is commenced by or against CRISPR (or any CRISPR Entity(ies)), (y) this Agreement is rejected as provided in the U.S. Bankruptcy Code, and (z) Vertex elects to retain its rights hereunder as provided in Section 365(n) of the U.S. Bankruptcy Code, CRISPR (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) will:

(i) provide to Vertex all such intellectual property (including all embodiments thereof) held by CRISPR and such successors and assigns, or otherwise available to them, immediately upon Vertex's written request. Whenever CRISPR or any of its successors or assigns provides to Vertex any of the intellectual property licensed hereunder (or any embodiment thereof) pursuant to this Section 14.2.4(a)(i), Vertex will have the right to perform CRISPR's obligations hereunder with respect to such intellectual property, but neither such provision nor such performance by Vertex will release CRISPR from liability resulting from rejection of the license or the failure to perform such obligations; and

(ii) not interfere with Vertex's rights under this Agreement, or any agreement supplemental hereto, to such intellectual property (including such embodiments), including any right to obtain such intellectual property (or such embodiments) from another entity, to the extent provided in Section 365(n) of the U.S. Bankruptcy Code.

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(b) All rights, powers and remedies of Vertex provided herein are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including the U.S. Bankruptcy Code) in the event of the commencement of a case under the U.S. Bankruptcy Code with respect to CRISPR. The Parties agree that they intend the following rights to extend to the maximum extent permitted by Applicable Law, and to be enforceable under U.S. Bankruptcy Code Section 365(n):

(i) the right of access to any intellectual property rights (including all embodiments thereof) of CRISPR, or any Third Party with whom CRISPR contracts to perform an obligation of CRISPR under this Agreement, and, in the case of any such Third Party, which is necessary for the Manufacture, use, sale, import or export of Shared Products; and

(ii) the right to contract directly with any Third Party to complete the contracted work.

14.3. **Opt-Out**.

14.3.1. On a Shared Product-by-Shared Product basis, after [***] either Party may opt out of this Agreement with respect to such Shared Product (the "**Opt-Out Product**") upon [***] days' notice to the other Party ("**Opt-Out**"). The other Party shall pay such opting out Party royalties on Net Sales (as defined in the Collaboration Agreement) of such Opt-Out Product ("**Opt-Out Royalties**") in accordance with this Section 14.3, and the terms of Sections 7.5.2, 7.5.3, 7.5.4 and 7.5.5 of the Collaboration Agreement shall apply to such royalties, *mutatis mutandis*. The applicable royalty rates shall be determined in accordance with the table set forth below based on the timing of the Opt-Out notice for the applicable Opt-Out Product. Upon the other Party's receipt of such notice, all rights and obligations under this Agreement with respect to the Opt-Out Product shall terminate, *except for* the obligations set forth in this Section 14.3.

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Timing of Opt Out for an Opt-Out Product	Net Sales (in Dollars) for such Opt-Out Product in the Territory	Opt-Out Royalty Rates as a Percentage (%) of Net Sales of such Opt-Out Product
[***]	[***]	[***]
	[***]	**[***]**
	[***]	**[***]**
	[***]	**[***]**
[***]	[***]	[***]
	[***]	**[***]**
	[***]	**[***]**
	[***]	**[***]**

14.3.2. If the opting out Party is CRISPR, the Opt-Out Product shall be deemed a Product (as defined in the Collaboration Agreement) directed to a Collaboration Target other than a [***] under the Collaboration Agreement, and the terms and conditions of the Collaboration Agreement shall apply with respect to the Opt-Out Product, *provided* that, in lieu of the royalty rates payable under Section 7.5.1 of the Collaboration Agreement Vertex shall pay royalties at the rates set forth in this Section 14.3; and *provided*, *further*, that Vertex shall have no obligation to pay to CRISPR any milestone payment under Section 7.3 of the Collaboration Agreement with respect to such Opt-Out Product.

14.3.3. If the opting out Party is Vertex, the Parties shall negotiate in good faith a termination agreement for the Opt-Out Product, including the obligation to pay royalties as set forth in this Section 14.3 and the following provisions:

(a) CRISPR (acting directly or through one or more Affiliates or Sublicensees) will use Commercially Reasonable Efforts to [***] for the [***] in all [***];

(b) CRISPR (acting directly or through one or more Affiliates or Sublicensees) will use Commercially Reasonable Efforts to [***], the [***] in each [***] where [***];

(c) CRISPR will prepare a Development and Commercialization plan setting forth in reasonable detail (which detail shall be at least sufficient for Vertex to evaluate CRISPR's compliance with its obligations under this Agreement) CRISPR's plans for (a) the Development of the Opt-Out Product through [***] and (b) starting upon [***] for the Opt-Out Product and continuing thereafter until the expiration of the applicable Royalty Term, Commercialization of the Opt-Out Product, as appropriate for the stage of the Opt-Out Product, including a launch plan for each [***]; and

(d) following the first sale of the Opt-Out Product giving rise to Net Sales (as defined in the Collaboration Agreement), within [***] days after the end of each Calendar Quarter, CRISPR will deliver a report to Vertex specifying on a country-by-country basis: [***]. All royalty payments due for each Calendar Quarter will be due and payable within [***] days after CRISPR's delivery of the applicable report.

14.3.4. Following any Opt-Out with respect to an Opt-Out Product, the opting out Party shall, within a reasonable time as mutually agreed by the Parties, (i) transfer to the other Party all Regulatory Filings with respect to such Opt-Out Product, (ii) conduct any technology transfer with respect to such Opt-Out Product as reasonably requested by the non-opting out Party and (iii) use reasonable efforts to transfer to the non-opting out Party any existing relationships with key vendors to the extent relating to such Opt-Out Product. The Expenses of all activities under this Section 14.3.4 shall be shared equally by the Parties.

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14.3.5. If the opting out Party is conducting Manufacturing activities with respect to the Opt-Out Product at the time of such Opt-Out, the opting out Party will continue to supply the other Party's requirements of the Opt-Out Product, at the other Party's expense at cost of Manufacturing such Opt-Out Product, until such time as the Parties are able to complete a technology transfer of the applicable Manufacturing technology to the other Party or its designated CMO, and the other Party or such CMO is capable of supplying the other Party's requirements of the Opt-Out Product. The Expenses of technology transfer activities under this Section 14.3.5, including any Expenses incurred in establishing a CMO capable of Manufacturing the Opt-Out Products, shall be shared equally by the Parties.

14.3.6. For the avoidance of doubt, the allocation of [***] and [***] pursuant to Section [***] with respect to an Opt-Out Product shall terminate upon the effectiveness of the Opt-Out for such Opt-Out Product.

14.4. **Consequences of Expiration or Certain Terminations of the Agreement**. If this Agreement expires or is terminated by a Party with respect to one or more Shared Products (each, a "**Terminated Product**") in accordance with Section 14.2 at any time and for any reason, the following terms will apply with respect to each Terminated Product:

14.4.1. The Parties will return (or destroy, as directed by the other Party) all data, files, records and other materials containing or comprising the other Party's Confidential Information with respect to the Terminated Product, unless such Confidential Information also relates to other products that are subject to the Collaboration Agreement or are necessary for a Party to exercise its rights under Section 14.3. Notwithstanding the foregoing, the Parties will be permitted to retain one copy of such data, files, records, and other materials for archival and legal compliance purposes.

14.4.2. Termination or expiration of this Agreement for any reason will be without prejudice to any rights or financial compensation that will have accrued to the benefit of a Party with respect to the Terminated Product prior to such termination or expiration. Such termination or expiration will not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement.

14.4.3. Except as may be necessary for a Party to exercise the rights set forth in Section 14.3, all licenses granted by a Party to the other Party under this Agreement with respect to the Terminated Product will terminate and each Party and its Affiliates will cease all Research, Development, Manufacture and Commercialization activities with respect to the Terminated Product.

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14.4.4. Except as may be necessary for a Party to exercise the rights set forth in Section 14.3, Vertex will assign back to the CRISPR Entity designated by CRISPR AG any Patents assigned to Vertex under Section 8.1.3 of the Collaboration Agreement that relate to the Terminated Product to the extent that such Patents do not also relate to other products for which Vertex is retaining an exclusive license under the Collaboration Agreement.

14.4.5. Except as set forth in Section 14.3, neither Party will have any further rights or obligations with respect to the Terminated Product.

14.5. **Alternative Remedies for Material Breach**. If a Party has the right to terminate this Agreement in its entirety or with respect to one or more Shared Products for the other Party's material breach pursuant to Section 14.2.2, the non-breaching Party may elect, in lieu of exercising such right, to keep this Agreement in effect, in which case the provisions of Section 14.3 shall apply, [***]%.

14.6. **Survival**. The following provisions of this Agreement will survive any expiration or termination of this Agreement: ARTICLE 1, ARTICLE 7 (with respect to any amounts owed as of the time of expiration or termination or paid during the Co-Co Agreement Term), Section 10.1, Section 10.4, Section 10.6, ARTICLE 11, Section 12.5, Section 12.6, ARTICLE 13, Section 14.3, Section 14.4, Section 14.6, ARTICLE 15, Section 16.1, Sections 16.3-16.18.

ARTICLE 15
CONFIDENTIALITY

The terms of Article 12 of the Collaboration Agreement will apply with respect to any and all information disclosed by the Disclosing Party to the Receiving Party under this Agreement that meets the definition of Confidential Information under the Collaboration Agreement (including, for clarity, the terms of this Agreement).

ARTICLE 16
MISCELLANEOUS

16.1. **Assignment**. Neither this Agreement nor any interest hereunder will be assignable by either Party without the prior written consent of the other Party, *except* as follows: (a) Vertex, and subject to Section 16.2, CRISPR, may, subject to the terms of this Agreement, assign its rights and obligations under this Agreement by way of sale of itself or the sale of the portion of such Party's business to which this Agreement relates, through merger, sale of assets or sale of stock or ownership interest; *provided* that such sale is not primarily for the benefit of its creditors; and *provided*, *further*, that no CRISPR Entity may assign its rights and obligations hereunder unless all CRISPR Entities are assigning their rights and obligations hereunder to the same Third Party; and (b) either Party may assign its rights and obligations under this Agreement to any of its Affiliates; *provided* that such Party will remain liable for all of its rights and obligations

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under this Agreement. An assigning Party will promptly notify the other Party of any assignment or transfer under the provisions of this Section 16.1. This Agreement will be binding upon the successors and permitted assigns of the Parties and the name of a Party appearing herein will be deemed to include the names of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Agreement. Any assignment not in accordance with this Section 16.1 will be void.

16.2. **Change of Control**.

16.2.1. **Effects of Change of Control**.

(a) If during the Co-Co Agreement Term, any CRISPR Entity undergoes a Change of Control to a Competitor, then CRISPR shall [***].

(b) If during the Co-Co Agreement Term, Vertex undergoes a Change of Control to a Competitor, then Vertex shall [***].

16.3. **Force Majeure**. Each Party will be excused from the performance of its obligations under this Agreement to the extent that such performance is prevented by Force Majeure and the nonperforming Party promptly provides notice of the prevention to the other Party. Such excuse will be continued so long as the condition constituting force majeure continues and the nonperforming Party uses Commercially Reasonable Efforts to remove the condition.

16.4. **Representation by Legal Counsel**. Each Party hereto represents that it has been represented by legal counsel in connection with this Agreement and acknowledges that it has participated in the drafting hereof. In interpreting and applying the terms and provisions of this Agreement, the Parties agree that no presumption will exist or be implied against the Party that drafted such terms and provisions.

16.5. **Notices**. All notices which are required or permitted hereunder will be in writing and sufficient if delivered personally, sent by nationally-recognized overnight courier or sent by electronic mail, confirmation of receipt requested, addressed as follows:

If to Vertex:

Vertex Pharmaceuticals Incorporated
Attn: Business Development
50 Northern Avenue
Boston, Massachusetts 02110
E-mail: phil_tinmouth@vrtx.com

with a copy to:

Vertex Pharmaceuticals Incorporated

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Attn: Corporate Legal
50 Northern Avenue
Boston, Massachusetts 02110
E-mail: paige_goodwin@vrtx.com

and:

Ropes & Gray LLP
Attn: Marc A. Rubenstein
Prudential Tower
800 Boylston Street
Boston, Massachusetts 02199-3600
E-mail: marc.rubenstein@ropesgray.com

If to CRISPR:

CRISPR Therapeutics AG
Attn: Chief Executive Officer
Baarerstrasse 14
6300 Zug
Switzerland
Email: samarth.kulkarni@crisprtx.com

with a copy to:

Goodwin Procter LLP
Attn: Christopher Denn
100 Northern Avenue
Boston, Massachusetts 02210
E-mail: cdenn@goodwinlaw.com

or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice will be deemed to have been given: (a) when delivered if personally delivered on a Business Day (or if delivered or sent on a non-business day, then on the next Business Day); (b) on receipt if sent by overnight courier; or (c) when confirmation of receipt is sent, if sent by electronic mail. Any notices required or permitted under this Agreement that are delivered by Vertex to CRISPR AG pursuant to this Section 16.5 shall be deemed properly delivered hereunder to each of CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr.

16.6. **Amendment**. No amendment, modification or supplement of any provision of this Agreement will be valid or effective unless made in writing and signed by a duly authorized officer of each of Vertex Parent, Vertex UK and CRISPR AG, CRISPR Inc., CRISPR UK and Tracr.

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16.7. **Waiver**. No provision of this Agreement will be waived by any act, omission or knowledge of a Party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving Party. The waiver by either of Vertex or CRISPR of any breach of any provision hereof by the other Party will not be construed to be a waiver of any succeeding breach of such provision or a waiver of the provision itself. Written waiver of any provision of this Agreement by of any one of the CRISPR Entities in accordance with this Section 16.7 shall be binding upon each of CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr.

16.8. **Severability**. If any clause or portion thereof in this Agreement is for any reason held to be invalid, illegal or unenforceable, the same will not affect any other portion of this Agreement, as it is the intent of the Parties that this Agreement will be construed in such fashion as to maintain its existence, validity and enforceability to the greatest extent possible. In any such event, this Agreement will be construed as if such clause of portion thereof had never been contained in this Agreement, and there will be deemed substituted therefor such provision as will most nearly carry out the intent of the Parties as expressed in this Agreement to the fullest extent permitted by Applicable Law.

16.9. **Descriptive Headings**. The descriptive headings of this Agreement are for convenience only and will be of no force or effect in construing or interpreting any of the provisions of this Agreement.

16.10. **Export Control**. This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States of America or other countries that may be imposed upon or related to CRISPR or Vertex from time to time. Each Party agrees that it will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products using such technical information to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from the appropriate Governmental Authority.

16.11. **Governing Law**. This Agreement, and all claims arising under or in connection therewith, will be governed by and interpreted in accordance with the substantive laws of The Commonwealth of Massachusetts, without regard to conflict of law principles thereof.

16.12. **Entire Agreement**. This Agreement, together with the Collaboration Agreement, constitutes and contains the complete, final and exclusive understanding and agreement of the Parties and cancels and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether oral or written, between the Parties respecting the subject matter hereof and thereof.

16.13. **Independent Contractors**. Both Parties are independent contractors under this Agreement. Nothing herein contained will be deemed to create an employment, agency, joint venture or partnership relationship between the Parties hereto or any of their agents or employees, or any other legal arrangement that would impose

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liability upon one Party for the act or failure to act of the other Party. Neither Party will have any express or implied power to enter into any contracts or commitments or to incur any liabilities in the name of, or on behalf of, the other Party, or to bind the other Party in any respect whatsoever.

16.14. **Interpretation**. *Except* where the context expressly requires otherwise, (a) the use of any gender herein will be deemed to encompass references to either or both genders, and the use of the singular will be deemed to include the plural (and vice versa), (b) the words "include," "includes" and "including" will be deemed to be followed by the phrase "without limitation," (c) the word "will" will be construed to have the same meaning and effect as the word "shall," (d) any definition of or reference to any agreement, instrument or other document herein will be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (e) any reference herein to any Person will be construed to include the Person's successors and assigns, (f) the words "herein," "hereof" and "hereunder," and words of similar import, will be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (g) all references herein to Sections, Schedules or Exhibits will be construed to refer to Sections, Schedules or Exhibits of this Agreement, and references to this Agreement include all Schedules and Exhibits hereto, (h) the word "notice" will mean notice in writing (whether or not specifically stated) and will include notices, consents, approvals and other written communications contemplated under this Agreement, (i) provisions that require that a Party, the Parties or any committee hereunder "agree," "consent" or "approve" or the like will require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise (but excluding e-mail and instant messaging), (j) references to any specific law, rule or regulation, or article, section or other division thereof, will be deemed to include the then-current amendments thereto or any replacement or successor law, rule or regulation thereof and (k) the term "or" will be interpreted in the inclusive sense commonly associated with the term "and/or."

16.15. **No Third Party Rights or Obligations**. No provision of this Agreement will be deemed or construed in any way to result in the creation of any rights or obligations in any Person not a Party to this Agreement.

16.16. **Further Actions**. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

16.17. **Counterparts**. This Agreement may be executed in two counterparts, each of which will be an original and both of which will constitute together the same document. Counterparts may be signed and delivered by facsimile or digital transmission (.pdf), each of which will be binding when received by the applicable Party.

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16.18. **CRISPR Entities**. Notwithstanding anything to the contrary in this Agreement:

16.18.1. CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr shall be jointly and severally liable to Vertex for all obligations of CRISPR under this Agreement;

16.18.2. Breach or violation of any representation, warranty covenant or other obligation of CRISPR under this Agreement may result from, be caused by or arise from the act or omission of any one or more of the CRISPR Entities;

16.18.3. Any particular right or interest of CRISPR under this Agreement shall only be exercisable once by the first CRISPR Entity to exercise such right or interest hereunder on behalf of CRISPR (*i.e.*, Vertex shall not be liable to more than one CRISPR Entity with respect to any particular right or interest of CRISPR hereunder, including any payment obligations of Vertex hereunder); and

16.18.4. Any consent or approval of CRISPR permitted or required under this Agreement by any one of CRISPR UK, CRISPR AG, CRISPR Inc. or Tracr shall be binding upon all of the CRISPR Entities.

[SIGNATURE PAGE FOLLOWS]

* * * *

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IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their representatives thereunto duly authorized as of the Effective Date.

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Ian Smith
Name: Ian Smith
Title: Executive Vice President, Chief Operating Officer

VERTEX PHARMACEUTICALS (EUROPE) LIMITED

By: /s/ Ian Smith
Name: Ian Smith
Title: Director

CRISPR THERAPEUTICS AG

By: /s/ Rodger Novak
Name: Rodger Novak
Title: President

CRISPR THERAPEUTICS LIMITED

By: /s/ Tyler Dylan-Hyde
Name: Tyler Dylan-Hyde
Title: Director and Chief Legal Officer

CRISPR THERAPEUTICS, INC.

By: /s/ Rodger Novak
Name: Rodger Novak
Title: President

TRACR HEMATOLOGY LTD.

By: /s/ Tyler Dylan-Hyde
Name: Tyler Dylan-Hyde
Title: Director

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SCHEDULE A

[***] ARBITRATION

Selection of [***] Expert and Submission of Positions. The Parties will select and agree upon a mutually acceptable independent Third Party expert who is neutral, disinterested and impartial, and has the experience specified in Section 2.8 for the applicable dispute (the "**[***] Expert**"). If the Parties are unable to mutually agree upon a [***] Expert within [***] days following the delivery of the request for [***] Arbitration, then upon request by either Party, the [***] Expert will be an arbitrator appointed by Judicial and Mediation Services ("**JAMS**"), which arbitrator need not have the above-described experience. Once the [***] Expert has been selected, each Party will within [***] days following selection of the [***] Expert provide the [***] Expert and the other Party with a written report setting forth its position with respect to the substance of the dispute and may submit a revised or updated report and position to the [***] Expert within [***] days of receiving the other Party's report. If so requested by the [***] Expert, each Party will make oral submissions to the [***] Expert based on such Party's written report, and each Party will have the right to be present during any such oral submissions.

JAMS Supervision. In the event the [***] Expert is a JAMS arbitrator selected by JAMS as provided in this Schedule A, the matter will be conducted as a binding arbitration in accordance with JAMS procedures, as modified by this Schedule A (including that the arbitrator will adopt as his or her decision the position of one Party or the other, as described below). In such event, the arbitrator may retain a Third Party expert with the same experience specified in Section 2.8 for the [***] Expert to assist in rendering such decision, and the expenses of any such expert will be shared by the Parties as costs of the arbitration as provided in this Schedule A.

Determination by the [***] Expert. The [***] Expert will, no later than [***] days after the last submission of the written reports and, if any, oral submissions, select one of the Party's positions as his or her final decision, and will not have the authority to modify either Party's position or render any substantive decision other than to so select the position of either Party as set forth in their respective written report (as initially submitted, or as revised in accordance with this Schedule A, as applicable). The decision of the [***] Expert will be the sole, exclusive and binding remedy between them regarding the dispute submitted to such [***] Expert.

Location; Costs. Unless otherwise mutually agreed upon by the Parties in writing, the in-person portion (if any) of such proceedings will be conducted in Boston, Massachusetts. [***]

Timetable for Completion in [***] Days. The Parties will use, and will direct the [***] Expert to use, commercially reasonable efforts to resolve a dispute within [***] days after the selection of the [***] Expert, or if resolution within [***] days is not reasonably achievable, as determined by the [***] Expert, then as soon thereafter as is reasonably practicable

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Table of Contents

SCHEDULE B

RESERVED

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Table of Contents

SCHEDULE C-1

PROJECT TEAM FUNCTIONS

Functions on Project team
[***]

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Table of Contents

SCHEDULE C-2

INITIAL PROJECT TEAM MEMBERS

[***]

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Table of Contents

SCHEDULE D

INITIAL CLINICAL TRIALS

[***]

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Table of Contents

SCHEDULE E

CRISPR IN-LICENSE AGREEMENTS

[***]

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Table of Contents

SCHEDULE F

VERTEX IN-LICENSE AGREEMENTS

[***]

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Table of Contents

SCHEDULE G

CRISPR DISCLOSURE SCHEDULE

[***]

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AMENDMENT NO. 1
TO THE
STRATEGIC COLLABORATION, OPTION AND LICENSE AGREEMENT

This Amendment No. 1 to the Strategic Collaboration, Option and License Agreement, dated October 26, 2015, between Vertex Pharmaceuticals Incorporated ("**Vertex Parent**") and Vertex Pharmaceuticals (Europe) Limited ("**Vertex UK**" and together with Vertex Parent, "**Vertex**"), on the one hand, and CRISPR Therapeutics AG ("**CRISPR AG**"), CRISPR Therapeutics, Inc. ("**CRISPR Inc.**"), CRISPR Therapeutics Limited ("**CRISPR UK**") and TRACR Hematology Ltd ("**Tracr**" and together with CRISPR AG, CRISPR Inc. and CRISPR UK "**CRISPR**"), on the other hand (this "**Amendment**") is entered into as of this 12th day of December, 2017 (the "**Amendment Effective Date**") by and between Vertex and CRISPR. Capitalized terms used and not defined herein have their respective meanings set forth in the Agreement (as defined below).

RECITALS

WHEREAS, Vertex and CRISPR entered into that certain Strategic Collaboration, Option and License Agreement, dated October 26, 2015 (the "**Agreement**");

WHEREAS, pursuant to Section 6.1.2(c) of the Agreement, Vertex and CRISPR are entering into a Joint Development and Commercialization Agreement (the "**JDCA**") with respect to certain Shared Products; and

WHEREAS, in connection with the execution of the JDCA, Vertex and CRISPR now wish to amend and update certain portions of the Agreement as set forth herein;

NOW, THEREFORE, in consideration of the respective covenants, representations, warranties and agreements set forth herein, the Parties hereto agree as follows:

ARTICLE 1
AMENDMENTS

1.1 Amendment to Section 1.27. Section 1.27 of the Agreement is hereby deleted in its entirety and replaced with the following:

"1.27. "**Collaboration Target**" means a Vertex Target that Vertex has selected as the subject of a Research Plan in accordance with Section 2.3.3. For clarity, if Vertex exercises an Option with respect to any such Vertex Target, such Vertex Target shall continue to constitute a "Collaboration Target" under this Agreement during the Agreement Term."

1.2 Amendment to Section 1.117. The final sentence of the third paragraph of Section 1.117 of the Agreement is hereby deleted in its entirety and replaced with the following: "For clarity, [***]."

1.3 Amendment to Section 2.13.2. The final sentence of Section 2.13.2 of the Agreement is hereby deleted in its entirety and replaced with the following: "For the avoidance of doubt, each Party's obligations under this Section 2.13.2 will terminate (a) with respect to a [***] and (b) with respect to a [***]."

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1.4 Amendment to Section 3.1.2. Clause (h) of Section 3.1.2 of the Agreement is hereby deleted in its entirety and replaced with the following:

(h) perform such other duties as are specifically assigned to the JRC under this Agreement or any Joint Development & Commercialization Agreement.

1.5 Amendment to Section 4.1.1.

(a) The first sentence of Section 4.1.1 of the Agreement is hereby deleted in its entirety and replaced with the following: "CRISPR hereby grants to Vertex and its Affiliates an exclusive option to obtain the Exclusive License with respect a maximum of six Collaboration Targets (each, an "**Option**," and such six Collaboration Target maximum, the "**Option Cap**"), [***]."

(b) The second sentence of Section 4.1.1 of the Agreement is hereby deleted in its entirety and replaced with the following: "On a Collaboration Program-by-Collaboration Program basis, at any time starting on the Effective Date, but no later than [***] days after Vertex's receipt of an Option Exercise Data Package for the applicable Collaboration Program (the "**Option Deadline**"), Vertex will notify CRISPR as to whether or not Vertex is exercising the Option for such Collaboration Program; *provided*, that if, following receipt of the applicable Option Exercise Data Package, Vertex delivers a Continuation Notice to the JRC, the Option Deadline will be extended until the date that is [***] days after Vertex's receipt of a revised Option Exercise Data Package reflecting the results of the Continuation Research as provided in Section 2.6."

1.6 Amendment to Section 7.2. Section 7.2 of the Agreement is hereby deleted in its entirety and replaced with the following:

"7.2. **Reserved**."

1.7 Amendment to Section 11.1. Section 11.1 of the Agreement is hereby deleted in its entirety and replaced with the following:

"11.1. **Agreement Term; Expiration**. This Agreement is effective as of the Effective Date and, unless earlier terminated pursuant to the other provisions of this ARTICLE 11, will continue in full force and effect until this Agreement expires as follows:

11.1.1. on a country-by-country and Product-by-Product basis, on the date of expiration of (a) all payment obligations under this Agreement or any Joint Development & Commercialization Agreement and (b) any payment obligations of either Party with respect to Opt-Out Royalties (as defined in the applicable Joint Development & Commercialization Agreement), in each case ((a) and (b)), with respect to such Product in such country;

11.1.2. in its entirety upon the expiration of (a) all payment obligations under this Agreement or any Joint Development & Commercialization Agreement and (b) any payment obligations of either Party with respect to Opt-Out Royalties (as defined in the applicable Joint Development & Commercialization Agreement), in each case ((a) and (b)), with respect to all Products in all countries pursuant to Section 11.1.1; and

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11.1.3. in its entirety upon expiration of all Options if Vertex has not exercised any Option as provided in Section 4.1.1."

1.8 Amendment to Section 13.5. Section 13.5 of the Agreement is hereby deleted in its entirety and replaced with the following:

"13.5. **Notices**. All notices which are required or permitted hereunder will be in writing and sufficient if delivered personally, sent by nationally-recognized overnight courier or sent by electronic mail, confirmation of receipt requested, addressed as follows:

If to Vertex:

Vertex Pharmaceuticals Incorporated
Attn: Business Development
50 Northern Avenue
Boston, Massachusetts 02110
E-mail: phil_tinmouth@vrtx.com

with a copy to:

Vertex Pharmaceuticals Incorporated
Attn: Corporate Legal
50 Northern Avenue
Boston, Massachusetts 02110
E-mail: paige_goodwin@vrtx.com

and:

Ropes & Gray LLP
Attn: Marc A. Rubenstein
Prudential Tower
800 Boylston Street
Boston, Massachusetts 02199-3600
E-mail: marc.rubenstein@ropesgray.com

If to CRISPR:

CRISPR Therapeutics AG
Attn: Chief Executive Officer
Baarerstrasse 14
6300 Zug
Switzerland
E-mail: samarth.kulkarni@crisprtx.com

[***] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

with a copy to:

Goodwin Proctor LLP
Attn: Christopher Denn
53 State Street
Boston, Massachusetts 02109
E-mail: cdenn@goodwinlaw.com

or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. In addition, each Party will deliver a courtesy copy to the other Party's Alliance Manager concurrently with such notice. Any such notice will be deemed to have been given: (a) when delivered if personally delivered on a Business Day (or, if delivered on a non-business day, then on the next Business Day); (b) on receipt if sent by overnight courier; or (c) when confirmation of receipt is sent, if sent by electronic mail. Any notices required or permitted under this Agreement that are delivered by Vertex to CRISPR AG pursuant to this Section 13.5 shall be deemed properly delivered hereunder to each of CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr."

1.9 Amendment of Certain Cross-References.

(a) The reference to "this Section 8.1.3" in Section 8.1.2(d) is hereby deleted and replaced with a reference to "this Section 8.1.2".

(b) The reference to "Section 11.2.5 (Public Announcements; Publications)" in Section 11.4.1(c) is hereby deleted.

(c) The reference to "Schedule 2.2" in Section 2.2 of Schedule G is hereby deleted and replaced with a reference to "Schedule I".

(d) The reference to "Schedule F" in Schedule I is hereby deleted and replaced with a reference to "Schedule G".

(e) The reference to "Schedule I" in Schedule L is hereby deleted and replaced with a reference to "this Schedule L".

ARTICLE 2
DESIGNATION OF [***] AS COLLABORATION TARGET

The Parties hereby agree that the [***] ("**[***]**") is a Collaboration Target under the Agreement, effective as of the Amendment Effective Date.

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ARTICLE 3
DEEMED OPTION EXERCISE BY VERTEX

Notwithstanding anything to the contrary in the Agreement, the execution of the JDCA by the Parties shall be deemed to constitute an exercise by Vertex of the Option with respect to [***]. In accordance with Section 4.1.1 of the Agreement, as amended by this Amendment, such Option exercise with respect to [***]

ARTICLE 4
REFERENCE TO AND EFFECT ON THE AGREEMENT

4.1 Reference to Agreement. Upon and after the effectiveness of this Amendment, each reference in the Agreement to "this Agreement", "hereunder", "hereof" or words of like import referring to the Agreement shall mean and be a reference to the Agreement as modified and amended hereby.

4.2 Effectiveness of Amendment. Upon execution and delivery of this Amendment by both Parties, the amendments set forth above shall be effective as of the Amendment Effective Date. Except as specifically amended above, the Agreement is and shall continue to be in full force and effect and is hereby in all respects ratified and confirmed and shall constitute the legal, valid, binding and enforceable obligations of the Parties.

ARTICLE 5
MISCELLANEOUS

5.1 Governing Law. This Amendment, and all claims arising under or in connection therewith, will be governed by and interpreted in accordance with the substantive laws of The Commonwealth of Massachusetts, without regard to conflict of law principles thereof.

5.2 Descriptive Headings. The descriptive headings of this Amendment are for convenience only and will be of no force or effect in construing or interpreting any of the provisions of this Amendment.

5.3 Counterparts. This Amendment may be executed in two counterparts, each of which will be an original and both of which will constitute together the same document. Counterparts may be signed and delivered by facsimile or digital transmission (.pdf), each of which will be binding when received by the applicable Party.

[*Signature Page Follows*]

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IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their representatives thereunto duly authorized as of the Amendment Effective Date.

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Ian Smith
Name: Ian Smith
Title: Executive Vice President, Chief Operating Officer

VERTEX PHARMACEUTICALS (EUROPE) LIMITED

By: /s/ Ian Smith
Name: Ian Smith
Title: Director

CRISPR THERAPEUTICS AG

By: /s/ Rodger Novak
Name: Rodger Novak
Title: President

CRISPR THERAPEUTICS LIMITED

By: /s/ Tyler Dylan-Hyde
Name: Tyler Dylan-Hyde
Title: Director and Chief Legal Officer

CRISPR THERAPEUTICS, INC.

By: /s/ Rodger Novak
Name: Rodger Novak
Title: President

TRACR HEMATOLOGY LTD.

By: /s/ Tyler Dylan-Hyde
Name: Tyler Dylan-Hyde
Title: Director

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Exhibit 99.1

Vertex and CRISPR Therapeutics to Co-Develop and Co-Commercialize CTX001 as CRISPR/Cas9 Gene Edited Treatment for Sickle Cell Disease and ß-Thalassemia

-Vertex selects CTX001 as first gene edited treatment to be developed as part of collaboration with CRISPR Therapeutics-

-Clinical Trial Application for CTX001 submitted in Europe to support initiation of Phase 1/2 clinical study in ß-thalassemia in 2018-

-Preclinical data for CTX001 presented this week at the American Society for Hematology Annual Meeting-

Boston and Cambridge, MA and Zug, Switzerland – December 12, 2017 - Vertex Pharmaceuticals Incorporated (NASDAQ: VRTX) and CRISPR Therapeutics AG (NASDAQ: CRSP) today announced that the companies will co-develop and co-commercialize CTX001, an investigational gene editing treatment, as part of the companies' previously announced collaboration aimed at the discovery and development of new gene editing treatments that use the CRISPR/Cas9 technology. CTX001 represents the first gene-based treatment that Vertex exclusively licensed from CRISPR Therapeutics as part of the collaboration. For CTX001, CRISPR and Vertex will equally share all research and development costs and profits worldwide. A Clinical Trial Application was submitted earlier this month for CTX001 to support the initiation of a Phase 1/2 trial in ß-thalassemia in 2018 in Europe, and an Investigational New Drug (IND) Application is planned for submission in 2018 to support the initiation of a Phase 1/2 trial in sickle cell disease in the U.S. Preclinical data presented for CTX001 at the American Society for Hematology on December 10, 2017 showed clinically relevant increases in fetal hemoglobin and a high editing rate that support the advancement of CTX001 into the planned trials in ß-thalassemia and sickle cell disease in 2018.

"Over the past two years, we've made significant progress with CRISPR Therapeutics on the discovery and preclinical development of multiple CRISPR/Cas9-based treatments, and

we’re pleased to select CTX001 as the first of these treatments to move into clinical development as part of our collaboration,” said David Altshuler, M.D., Ph.D., Vertex’s Executive Vice President, Global Research and Chief Scientific Officer. “The addition of CTX001 to our clinical development pipeline provides us with a near-term opportunity to generate the first proof-of-concept clinical data for a CRISPR/Cas9-based medicine in two genetic diseases that are highly aligned with our research strategy.”

“The submission of a Clinical Trial Application for CTX001 in Europe, supported by the robust data presented at the recent ASH Annual Meeting, reflect the advances we have achieved in translating the potential of CRISPR/Cas9 science into transformative therapies. We now look forward to working closely with Vertex as we initiate clinical trials next year,” commented Samarth Kulkarni, Ph.D., Chief Executive Officer of CRISPR Therapeutics. “The study of CTX001 in ß-thalassemia will be the first company-sponsored clinical trial of a CRISPR-based therapy and is a major step forward for both the treatment of certain inherited blood diseases and for our collaboration with Vertex.”

Clinical Development Plans for CTX001

CRISPR Therapeutics and Vertex will co-develop and co-commercialize CTX001 for the treatment of hemoglobinopathies, including ß-thalassemia and sickle cell disease. A Phase 1/2 trial of CTX001 is expected to begin in 2018 in Europe and will be designed to assess the safety and efficacy of CTX001 in adult transfusion dependent ß-thalassemia patients. The companies also plan to file an IND Application for CTX001 with the United States Food and Drug Administration to support the initiation of a Phase 1/2 trial in sickle cell disease in 2018 in the U.S. Additional details on the trial designs will be provided upon study initiation.

About CTX001 and Recent Data Presented at the American Society for Hematology (ASH) Annual Meeting

CTX001 is an investigational *ex vivo* CRISPR gene-edited therapy for patients suffering from ß-thalassemia and sickle cell disease in which a patient’s hematopoietic stem cells are engineered to produce high levels of fetal hemoglobin (HbF; hemoglobin F) in red blood cells. HbF is a form of the oxygen carrying hemoglobin that is naturally present at birth,

and is then replaced by the adult form of hemoglobin. The elevation of HbF by CTX001 has the potential to alleviate transfusion-requirements for ß-thalassemia patients and painful and debilitating sickle crises for sickle cell patients.

On December 10, 2017, CRISPR Therapeutics presented preclinical data at the 2017 ASH Annual Meeting that showed greater than 90% editing of hematopoietic stem cells at the target site, leading to clinically relevant increases in fetal hemoglobin. These data support the advancement of CTX001 into the planned trials in ß-thalassemia and sickle cell disease in 2018.

About the CRISPR-Vertex Collaboration

CRISPR and Vertex entered into a strategic research collaboration in 2015 aimed at the discovery and development of gene editing treatments using the CRISPR/Cas9 technology to correct defects in specific gene targets known to cause or contribute to particular diseases. Vertex has exclusive rights to license up to six new CRISPR/Cas9-based treatments that emerge from the collaboration, and CTX001 represents the first treatment to emerge from the joint research program. For CTX001, CRISPR and Vertex will equally share all research and development costs and profits worldwide.

About CRISPR Therapeutics

CRISPR Therapeutics is a leading gene-editing company focused on developing transformative gene-based medicines for serious diseases using its proprietary CRISPR/Cas9 gene-editing platform. CRISPR/Cas9 is a revolutionary technology that allows for precise, directed changes to genomic DNA. The company’s multi-disciplinary team of world-class researchers and drug developers is working to translate this technology into breakthrough human therapeutics in a number of serious diseases. Additionally, CRISPR Therapeutics has established strategic collaborations with Bayer AG and Vertex Pharmaceuticals to develop CRISPR-based therapeutics in diseases with high unmet need. The foundational CRISPR/Cas9 patent estate for human therapeutic use was licensed from the company’s scientific founder Emmanuelle Charpentier, Ph.D. CRISPR Therapeutics AG is headquartered in Zug, Switzerland, with its wholly-owned U.S. subsidiary, CRISPR Therapeutics, Inc., and R&D operations based in Cambridge, Massachusetts. For more information, please visit http://www.crisprtx.com.

About Vertex

Vertex is a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious and life-threatening diseases. In addition to clinical development programs in CF, Vertex has more than a dozen ongoing research programs focused on the underlying mechanisms of other serious diseases.

Founded in 1989 in Cambridge, Mass., Vertex's headquarters is now located in Boston's Innovation District. Today, the company has research and development sites and commercial offices in the United States, Europe, Canada and Australia. Vertex is consistently recognized as one of the industry's top places to work, including being named to *Science* magazine's Top Employers in the life sciences ranking for seven years in a row. For additional information and the latest updates from the company, please visit www.vrtx.com.

CRISPR Forward-Looking Statement

Certain statements set forth in this press release constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, but not limited to, statements concerning: the timing of filing of clinical trial applications and INDs and timing of commencement of clinical trials, the intellectual property coverage and positions of the Company, its licensors and third parties, the sufficiency of the Company's cash resources and the therapeutic value, development, and commercial potential of CRISPR/Cas9 gene editing technologies and therapies. You are cautioned that forward-looking statements are inherently uncertain. Although the Company believes that such statements are based on reasonable assumptions within the bounds of its knowledge of its business and operations, the forward-looking statements are neither promises nor guarantees and they are necessarily subject to a high degree of uncertainty and risk. Actual performance and results may differ materially from those projected or suggested in the forward-looking statements due to various risks and uncertainties. These

risks and uncertainties include, among others: uncertainties regarding the intellectual property protection for our technology and intellectual property belonging to third parties; uncertainties inherent in the initiation and completion of preclinical studies for the Company's product candidates; availability and timing of results from preclinical studies; whether results from a preclinical trial will be predictive of future results of the future trials; expectations for regulatory approvals to conduct trials or to market products; and those risks and uncertainties described under the heading "Risk Factors" in the Company's most recent annual report on Form 10-K, and in any other subsequent filings made by the Company with the U.S. Securities and Exchange Commission (SEC), which are available on the SEC's website at www.sec.gov. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date they are made.

Vertex's Special Note Regarding Forward-looking Statements

This press release contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, including, without limitation, the statements in the second and third paragraphs and statements regarding the planned clinical development timeline, including submission of an IND to the FDA. While Vertex believes the forward-looking statements contained in this press release are accurate, these forward-looking statements represent the company's beliefs only as of the date of this press release, and there are a number of factors that could cause actual events or results to differ materially from those indicated by such forward-looking statements. Those risks and uncertainties include, among other things, that data from the company's development programs may not support registration or further development of its compounds due to safety, efficacy or other reasons and other risks listed under Risk Factors in Vertex's annual report and quarterly reports filed with the Securities and Exchange Commission and available through the company's website at www.vrtx.com. Vertex disclaims any obligation to update the information contained in this press release as new information becomes available.

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