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

FORM 10-Q

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

For the quarterly period ended March 31, 2021

OR

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

For the transition period from _____ to _____.

Commission file number: 001-37923

CRISPR THERAPEUTICS AG

(Exact name of Registrant as specified in its charter)

Switzerland	**Not Applicable**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
Baarerstrasse 14 **6300 Zug, Switzerland**	**Not Applicable**
(Address of principal executive offices)	**(zip code)**

+41 (0)41 561 32 77
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Shares, nominal value CHF 0.03	**CRSP**	**The Nasdaq Global Market**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES ☒ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		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. ☐

Indicate by check mark whether registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

As of April 23, 2021, there were 75,768,936 shares of registrant's common shares outstanding.

Throughout this Quarterly Report on Form 10-Q, the "Company," "CRISPR," "CRISPR Therapeutics," "we," "us," and "our," except where the context requires otherwise, refer to CRISPR Therapeutics AG and its consolidated subsidiaries.

"CRISPR Therapeutics®" standard character mark and design logo, "CTX001™," "CTX110™," "CTX120™," and "CTX130™" are trademarks and registered trademarks of CRISPR Therapeutics AG. All other trademarks and registered trademarks contained in this Quarterly Report on Form 10-Q are the property of their respective owners. Solely for convenience, trademarks, service marks and trade names referred to in this Quarterly Report on Form 10-Q may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, service marks and trade names.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains "forward-looking statements" that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this Quarterly Report on Form 10-Q are forward-looking statements. These statements are often identified by the use of words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "predict," "project," "potential," "will," "would" or the negative or plural of these words or similar expressions or variations, although not all forward-looking statements contain these identifying words. Forward-looking statements in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- *the safety, efficacy and clinical progress of our various clinical programs including those for CTX001™, CTX110™, CTX120™ and CTX130™;*
- *the status of clinical trials, development timelines and discussions with regulatory authorities related to product candidates under development by us and our collaborators;*
- *the initiation, timing, progress and results of our preclinical studies and clinical trials, including our ongoing clinical trials and any planned clinical trials for CTX001, CTX110, CTX120 and CTX130, and our research and development programs, including delays or disruptions in clinical trials, non-clinical experiments and investigational new drug application-enabling studies;*
- *the actual or potential benefits of U.S. Food and Drug Administration, or FDA, designations, such as orphan drug, fast track and regenerative medicine advanced therapy, or such European equivalents, including Priority Medicines (PRIME) designation;*
- *our ability to advance product candidates into, and successfully complete, clinical trials;*
- *our plan to consolidate our U.S. offices in the greater Boston area into a single location and to build-out a cell-therapy manufacturing facility;*
- *our intellectual property coverage and positions, including those of our licensors and third parties as well as the status and potential outcome of proceedings involving any such intellectual property;*
- *our anticipated expenses, ability to obtain funding for our operations and the sufficiency of our cash resources;*
- *the therapeutic value, development, and commercial potential of CRISPR/Cas9 gene-editing technologies and therapies;*
- *the closing of the transaction contemplated by the Amended and Restated Joint Development and Commercialization Agreement with Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited; and*
- *potential impacts due to the coronavirus pandemic such as delays, interruptions or other adverse effects to clinical trials, delays in regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy, and the overall impact of the coronavirus pandemic on our business, financial condition and results of operations.*

Any forward-looking statements in this Quarterly Report on Form 10-Q reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and assumptions that could cause our actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein, and those discussed in the section titled "Risk Factors," set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q, if any, our Annual Report on Form 10-K filed with the Securities and Exchange Commission, or SEC, on February 16, 2021, and in other SEC filings. You should not rely upon forward-looking statements as predictions of future events. Such forward-looking statements speak only as of the date of this report. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make or enter into.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results, performance or achievements may be materially different from what we expect. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Investors and others should note that we announce material information to our investors using our investor relations website (https://crisprtx.gcs-web.com/), SEC filings, press releases, public conference calls and webcasts. We use these channels as well as social media to communicate with the public about our company, our business, our product candidates and other matters. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our company to review the information we post on the social media channels listed on our investor relations website.

Index

	Page Number
PART I: FINANCIAL INFORMATION	
Item 1. Condensed Consolidated Financial Statements (unaudited)	
Condensed Consolidated Balance Sheets as of March 31, 2021 and December 31, 2020	2
Condensed Consolidated Statements of Operations and Comprehensive Loss for the three months ended March 31, 2021 and 2020	3
Condensed Consolidated Statements of Shareholders' Equity for the three months ended March 31, 2021 and 2020	4
Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2021 and 2020	5
Notes to Condensed Consolidated Financial Statements	6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	21
Item 3. Quantitative and Qualitative Disclosures about Market Risk	28
Item 4. Controls and Procedures	29
PART II: OTHER INFORMATION	
Item 1. Legal Proceedings	30
Item 1A. Risk Factors	30
Item 5. Other Information	30
Item 6. Exhibits	31
SIGNATURES	32

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

CRISPR Therapeutics AG
Condensed Consolidated Balance Sheets
(unaudited, in thousands, except share and per share data)

	As of	
	March 31, 2021	**December 31, 2020**
Assets		
Current assets:		
Cash and cash equivalents	$ 1,126,059	$ 1,168,620
Marketable securities	680,144	521,713
Accounts receivable	150	144
Prepaid expenses and other current assets	26,006	26,143
Total current assets	1,832,359	1,716,620
Property and equipment, net	51,913	42,160
Intangible assets, net	167	180
Restricted cash	16,844	16,848
Operating lease assets	50,129	50,865
Other non-current assets	6,498	1,293
Total assets	$ 1,957,910	$ 1,827,966
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 13,072	$ 9,094
Accrued expenses	49,864	53,782
Deferred revenue, current	1,802	2,341
Accrued tax liabilities	3,356	10,473
Operating lease liabilities	12,063	11,362
Other current liabilities	2,933	7,207
Total current liabilities	83,090	94,259
Deferred revenue, non-current	11,776	11,776
Operating lease liabilities, net of current portion	49,408	50,067
Other non-current liabilities	8,138	7,630
Total liabilities	152,412	163,732
Commitments and contingencies, see Note 6		
Shareholders' equity:		
Common shares, CHF 0.03 par value, 115,172,786 shares authorized at March 31, 2021 and December 31, 2020, 75,925,944 and 74,110,160 shares issued at March 31, 2021 and December 31, 2020, respectively, 75,730,628 and 73,914,844 shares outstanding at March 31, 2021 and December 31, 2020, respectively.	2,340	2,277
Treasury shares, at cost, 195,316 shares at March 31, 2021 and December 31, 2020.	(63)	(63)
Additional paid-in capital	2,490,421	2,235,679
Accumulated deficit	(686,739)	(573,576)
Accumulated other comprehensive loss	(461)	(83)
Total shareholders' equity	1,805,498	1,664,234
Total liabilities and shareholders' equity	$ 1,957,910	$ 1,827,966

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

CRISPR Therapeutics AG
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited, in thousands, except share and per share data)

	Three Months Ended March 31,	
	2021	**2020**
Revenue:		
Collaboration revenue	$ 202	$ 157
Grant revenue	337	—
Total revenue	539	157
Operating expenses:		
Research and development	90,565	54,193
General and administrative	24,517	19,550
Total operating expenses	115,082	73,743
Loss from operations	(114,543)	(73,586)
Other income (expense):		
Other income, net	1,955	4,232
Total other income (expense), net	1,955	4,232
Net loss before income taxes	(112,588)	(69,354)
Provision for income taxes	(575)	(377)
Net loss	(113,163)	(69,731)
Foreign currency translation adjustment	5	(25)
Unrealized loss on marketable securities	(383)	—
Comprehensive loss	$ (113,541)	$ (69,756)
Net loss per common share — basic	$ (1.51)	$ (1.15)
Basic weighted-average common shares outstanding	75,005,187	60,847,683
Net loss per common share — diluted	$ (1.51)	$ (1.15)
Diluted weighted-average common shares outstanding	75,005,187	60,847,683

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

CRISPR Therapeutics AG
Condensed Consolidated Statements of Shareholders' Equity
(unaudited, in thousands, except share and per share data)

	Common Shares		Treasury Shares					
	Shares	CHF 0.03 Par Value	Shares	Amount, at cost	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2019	60,783,799	1,847	250,226	(63)	1,162,345	(224,711)	7	939,425
Vesting of restricted shares	5,000	—	—	—	—	—	—	-
Exercise of vested options	83,406	3	—	—	1,385	—	—	1,388
Stock-based compensation expense	—	—	—	—	14,151	—	—	14,151
Issuance of common shares related to license agreement	17,830	—	(17,830)	—	889	—	—	889
Other comprehensive loss	—	—	—	—	—	—	(25)	(25)
Net loss	—	—	—	—	—	(69,731)	—	(69,731)
Balance at March 31, 2020	60,890,035	$ 1,850	232,396	$ (63)	$ 1,178,770	$ (294,442)	$ (18)	$ 886,097
Balance at December 31, 2020	73,914,844	$ 2,277	195,316	$ (63)	$ 2,235,679	$ (573,576)	$ (83)	$ 1,664,234
Issuance of common shares, net of issuance costs of $5.4 million	1,353,121	45	—	—	222,130	—	—	222,175
Vesting of restricted shares	109,355	3	—	—	—	—	—	3
Exercise of vested options, net of issuance costs of $1.5 million	342,051	15	—	—	9,769	—	—	9,784
Purchase of common stock under ESPP	11,257	—	—	—	751	—	—	751
Stock-based compensation expense	—	—	—	—	22,092	—	—	22,092
Other comprehensive loss	—	—	—	—	—	—	(378)	(378)
Net loss	—	—	—	—	—	(113,163)	—	(113,163)
Balance at March 31, 2021	75,730,628	$ 2,340	195,316	$ (63)	$ 2,490,421	$ (686,739)	$ (461)	$ 1,805,498

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

CRISPR Therapeutics AG
Condensed Consolidated Statements of Cash Flows
(unaudited, in thousands)

	Three Months Ended March 31,	
	2021	2020
Operating activities:		
Net loss	$ (113,163)	$ (69,731)
Reconciliation of net loss to net cash used in operating activities:		
Depreciation and amortization	2,715	2,091
Equity-based compensation	22,092	14,151
Other income, non-cash	2,064	890
Changes in:		
Accounts receivable	(6)	(25,018)
Prepaid expenses and other assets	(5,068)	29,659
Accounts payable and accrued expenses	(5,770)	(2,496)
Deferred revenue	(539)	(157)
Operating lease assets and liabilities	778	37
Other liabilities, net	(3,766)	(1,601)
Net cash used in operating activities	(100,663)	(52,175)
Investing activities:		
Purchase of property, plant and equipment	(7,024)	(2,991)
Purchases of marketable securities	(323,975)	—
Maturities of marketable securities	163,101	—
Net cash used in investing activities	(167,898)	(2,991)
Financing activities:		
Proceeds from issuance of common shares, net of issuance costs	214,592	-
Proceeds from exercise of options and ESPP contributions, net of issuance costs	11,399	1,132
Net cash provided by financing activities	225,991	1,132
Effect of exchange rate changes on cash	5	(25)
Decrease in cash	(42,565)	(54,059)
Cash, cash equivalents and restricted cash, beginning of period	1,185,468	948,812
Cash, cash equivalents and restricted cash, end of period	$ 1,142,903	$ 894,753
Supplemental disclosure of non-cash investing and financing activities		
Property and equipment purchases in accounts payable and accrued expenses	$ 8,847	$ 1,340
Equity issuance costs in accounts payable and accrued expenses	$ 2,868	$ 39

	As of March 31,	
Reconciliation to amounts within the condensed consolidated balance sheets	2021	2020
Cash and cash equivalents	$ 1,126,059	$ 889,712
Restricted cash	16,844	5,041
Cash, cash equivalents and restricted cash at end of period	1,142,903	894,753

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared by the Company in accordance with accounting principles generally accepted in the United States of America, or GAAP.

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. The Company views its operations and manages its business in one operating segment, which is the business of discovering, developing and commercializing therapies derived from or incorporating genome-editing technology. Certain information and footnote disclosures normally included in the Company's annual financial statements have been condensed or omitted. These interim financial statements, in the opinion of management, reflect all normal recurring adjustments necessary for a fair presentation of the financial position and results of operations for the three-month interim periods ended March 31, 2021 and 2020.

The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full year. These interim financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2020, which are contained in the 2020 Annual Report on Form 10-K filed with the Securities and Exchange Commission, or the SEC, on February 16, 2021.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company's management evaluates its estimates, which include, but are not limited to, revenue recognition, equity-based compensation expense and reported amounts of expenses during the period. Significant estimates in these consolidated financial statements have been made in connection with revenue recognition and equity-based compensation expense. The Company bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions. Changes in estimates are reflected in reported results in the period in which they become known.

Significant Accounting Policies

The significant accounting policies used in preparation of these condensed consolidated financial statements for the three months ended March 31, 2021 are consistent with those discussed in Note 2 to the consolidated financial statements in the Company's 2020 Annual Report on Form 10-K filed with the SEC on February 16, 2021.

New Accounting Pronouncements – Recently Adopted

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies that the Company adopts as of the specified effective date. The Company does not believe that the adoption of recently issued standards have or may have a material impact on its consolidated financial statements and disclosures.

2. Marketable Securities

The following table summarizes cash equivalents and marketable securities held at March 31, 2021 and December 31, 2020 (in thousands), which are recorded at fair value. The table below excludes $494.2 million and $395.1 million of cash at March 31, 2021 and December 31, 2020, respectively.

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
March 31, 2021				
Cash equivalents:				
Money market funds	$ 629,357	$ —	$ —	$ 629,357
Corporate debt securities	2,533	1	(2)	2,532
Certificates of deposit	—	—	—	—
Commercial paper	—	—	—	—
Total cash equivalents	631,890	1	(2)	631,889
Marketable securities:				
U.S. Treasury securities	—	—	—	—
Corporate debt securities	536,144	37	(551)	535,630
Certificates of deposit	54,273	—	—	54,273
Government-sponsored enterprise securities	3,120	—	(1)	3,119
Commercial paper	87,120	2	—	87,122
Total marketable securities	680,657	39	(552)	680,144
Total cash equivalents and marketable securities	$ 1,312,547	$ 40	$ (554)	$ 1,312,033
December 31, 2020				
Cash equivalents:				
Money market funds	$ 742,958	$ —	$ —	$ 742,958
Corporate debt securities	2,526	1	(24)	2,503
Certificates of deposit	12,527	—	—	12,527
Commercial paper	15,549	—	—	15,549
Total cash equivalents	773,560	1	(24)	773,537
Marketable securities:				
U.S. Treasury securities	47,976	3	—	47,979
Corporate debt securities	324,569	43	(156)	324,456
Certificates of deposit	25,162	—	—	25,162
Government-sponsored enterprise securities	33,738	5	(2)	33,741
Commercial paper	90,375	—	—	90,375
Total marketable securities	521,820	51	(158)	521,713
Total cash equivalents and marketable securities	$ 1,295,380	$ 52	$ (182)	$ 1,295,250

As of March 31, 2021 and December 31, 2020, the aggregate fair value of marketable securities that were in an unrealized loss position for less than twelve months was $473.7 million and $280.3 million, respectively. As of March 31, 2021 and December 31, 2020, no marketable securities were in an unrealized loss position for more than twelve months. The Company has recorded a net unrealized loss of $0.4 million during the three months ended March 31, 2021 related to its debt securities, which is included in comprehensive loss on the condensed consolidated statements of operations and comprehensive loss. No unrealized losses related to debt securities were recorded during the three months ended March 31, 2020.

The Company determined that there is no material credit risk associated with the above investments as of March 31, 2021. As such, an allowance for credit losses was not recognized. As of March 31, 2021, the Company does not intend to sell such securities and it is not more likely than not that the Company will be required to sell the securities before recovery of their amortized cost basis. No available-for-sale debt securities held as of March 31, 2021 had remaining maturities greater than two years.

3. Fair Value Measurements

The following tables present information about the Company's financial assets measured at fair value on a recurring basis and indicate the fair value hierarchy classification of such fair values as of March 31, 2021 and December 31, 2020 (in thousands):

	Fair Value Measurements at March 31, 2021			
	Total	**Level 1**	**Level 2**	**Level 3**
Cash and cash equivalents:				
Cash	$ 494,170	$ 494,170	$ —	$ —
Money market funds	629,357	629,357	—	—
Corporate debt securities	2,532	—	2,532	—
Certificates of deposit	—	—	—	—
Commercial paper	—	—	—	—
Marketable securities:				
U.S. Treasury securities	—	—	—	—
Corporate debt securities	535,630	—	535,630	—
Certificates of deposit	54,273	—	54,273	—
Government-sponsored enterprise securities	3,119	—	3,119	—
Commercial paper	87,122	—	87,122	—
Other non-current assets	2,212	—	—	2,212
Total	$ 1,808,415	$ 1,123,527	$ 682,676	$ 2,212

	Fair Value Measurements at December 31, 2020			
	Total	**Level 1**	**Level 2**	**Level 3**
Cash and cash equivalents:				
Cash	$ 395,083	$ 395,083	$ —	$ —
Money market funds	742,958	742,958	—	—
Corporate debt securities	2,503	—	2,503	—
Certificates of deposit	12,527	—	12,527	—
Commercial paper	15,549	—	15,549	—
Marketable securities:				
U.S. Treasury securities	47,979	—	47,979	—
Corporate debt securities	324,456	—	324,456	—
Certificates of deposit	25,162	—	25,162	—
Government-sponsored enterprise securities	33,741	—	33,741	—
Commercial paper	90,375	—	90,375	—
Other non-current assets	600	—	—	600
Total	$ 1,690,933	$ 1,138,041	$ 552,292	$ 600

Marketable securities classified as Level 2 within the valuation hierarchy generally consist of U.S. treasury securities and government agency securities, corporate bonds, and commercial paper. The Company estimates the fair values of these marketable securities by taking into consideration valuations obtained from third-party pricing sources.

The Company holds equity securities classified as Level 3 which are not material to the Company's financial position.

4. Property and Equipment, net

Property and equipment, net, consists of the following (in thousands):

	As of	
	March 31, 2021	December 31, 2020
Computer equipment	$ 1,472	$ 727
Furniture, fixtures and other	3,420	3,416
Laboratory equipment	27,956	25,353
Leasehold improvements	25,977	25,473
Construction work in process	16,969	8,366
Total property and equipment, gross	75,794	63,335
Accumulated depreciation	(23,881)	(21,175)
Total property and equipment, net	$ 51,913	$ 42,160

Depreciation expense for the three months ended March 31, 2021 and 2020 was $2.7 million and $2.1 million, respectively.

5. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	As of	
	March 31, 2021	December 31, 2020
Payroll and employee-related costs	$ 11,565	$ 22,402
Research costs	22,034	21,684
Licensing fees	930	1,401
Professional fees	1,874	1,670
Intellectual property costs	5,229	3,625
Accrued property and equipment	6,869	2,835
Other	1,363	165
Total	$ 49,864	$ 53,782

6. Commitments and Contingencies

Future Lease Commitments

The Company has entered into certain leasing commitments for which right of use assets and right of use liabilities are not reflected on the consolidated balance sheet as the leases have not yet commenced.

In November 2019, the Company, together with one of its partners, committed to making $3.9 million in annual rental payments to a clinical manufacturing organization under a lease arrangement for a five-year period following commencement of the lease arrangement. The lease arrangement is expected to commence in the second quarter of 2021 and all payments will be split equally between the Company and its partner.

In July 2020, the Company entered into a lease agreement for an office and laboratory facility in Boston, Massachusetts, or the 2020 Boston Lease. In accordance with ASC 842, *Leases*, lease commencement for the 2020 Boston Lease is expected in the second half of 2021. Rent commencement is expected in the first half of 2022. In connection therewith, the Company has committed to making at least $292.5 million in rental payments over a lease term of 152 months. The Company is also obligated to make certain future payments related to the construction of leasehold improvements.

Litigation

In the ordinary course of business, the Company is from time to time involved in lawsuits, investigations, proceedings and threats of litigation related to, among other things, the Company's intellectual property estate (including certain in-licensed intellectual property), commercial arrangements and other matters. Such proceedings may include quasi-litigation, inter partes administrative proceedings in the U.S. Patent and Trademark Office and the European Patent Office involving the Company's intellectual property estate including certain in-licensed intellectual property. The outcome of any of the foregoing, regardless of the merits, is inherently uncertain. In addition, litigation and related matters are costly and may divert the attention of Company's management and other resources that would otherwise be engaged in other activities. If the Company is unable to prevail in any such proceedings, the Company's business, results of operations, liquidity and financial condition could be adversely affected.

Letters of Credit

As of March 31, 2021, the Company had restricted cash of $16.8 million, representing letters of credit securing the Company's obligations under certain leased facilities. The letters of credit are secured by cash held in a restricted depository account. The cash deposit is recorded in restricted cash in the accompanying condensed consolidated balance sheet as of March 31, 2021.

Research, Manufacturing, License and Intellectual Property Agreements

The Company has engaged several research institutions and companies to identify new delivery strategies and applications of the Company's gene-editing technology. The Company is also a party to a number of license agreements which require significant upfront payments and may be required to make future royalty payments and potential milestone payments from time to time. In addition, the Company is also a party to intellectual property agreements, which require maintenance and milestone payments from time to time. Further, the Company is a party to a number of manufacturing agreements that require upfront payments for the future performance of services.

In association with these agreements, on a product-by-product basis, the counterparties are eligible to receive up to low eight-digit potential payments upon specified research, development and regulatory milestones. In addition, on a product-by-product basis, the counterparties are eligible to receive potential commercial milestone payments based on specified annual sales thresholds. The potential payments are low-single digit percentages of the specified annual sales thresholds. The counterparties are also eligible to receive low single-digit royalties on future net sales.

Under certain circumstances and if certain contingent future events occur, Vertex Pharmaceuticals Incorporated and certain of its subsidiaries, or Vertex, is eligible to receive up to $395.0 million in potential specified research, development, regulatory and commercial milestones and tiered single-digit percentage royalties on future net sales. Refer to Note 7 for further discussion on the Company's arrangements with Vertex.

7. Significant Contracts

Agreements with Vertex Pharmaceuticals Incorporated and certain of its subsidiaries

Summary

On October 26, 2015, the Company entered into a strategic collaboration, option and license agreement, or the 2015 Collaboration Agreement, with Vertex. The 2015 Collaboration Agreement is focused on the use of the Company's CRISPR/Cas9 gene-editing technology to discover and develop potential new treatments aimed at the underlying genetic causes of human disease.

On December 12, 2017, the Company and Vertex entered into Amendment No. 1 to the 2015 Collaboration Agreement, or Amendment No. 1, and the Joint Development Agreement, or the JDA. Amendment No. 1, among other things, modified certain definitions and provisions of the 2015 Collaboration Agreement to make them consistent with the JDA and clarified how many options are exercised (or deemed exercised) in connection with certain targets specified under the 2015 Collaboration Agreement. Amendment No. 1 also amended other provisions of the 2015 Collaboration Agreement, including the expiration terms.

In connection with the 2015 Collaboration Agreement, Vertex made a nonrefundable upfront payment of $75.0 million. Under the 2015 Collaboration Agreement, Vertex agreed to fund the discovery activities conducted pursuant to the agreement while retaining options to co-exclusive and exclusive licenses. In December 2017, upon execution of the JDA and Amendment No. 1, Vertex exercised its option to obtain a co-exclusive license to develop and commercialize hemoglobinopathy and beta-globin targets. As such, for potential hemoglobinopathy treatments, including treatments for sickle cell disease, the Company and Vertex will share equally all research and development costs and worldwide revenues. In connection with the JDA, the Company received a $7.0 million up-front payment from Vertex and subsequently received a one-time low seven-digit milestone payment upon the dosing of the second patient in a clinical trial with the initial product candidate. In addition, upon execution of the JDA and Amendment No. 1, it was clarified that Vertex may elect to license up to four remaining targets, for which it will lead global development and commercialization activities and the Company received the right to receive up to $420.0 million in development, regulatory and commercial milestones and royalties on net product sales for each of the targets (inclusive of $10 million due upon exercise of each exclusive option).

In June 2019, the Company and Vertex entered into a series of agreements, which closed on July 23, 2019, including a strategic collaboration and license agreement, or the 2019 Collaboration Agreement, for the development and commercialization of products for the treatment of Duchenne muscular dystrophy, or DMD, and Myotonic Dystrophy Type 1, or DM1. Under the terms of the 2019 Collaboration Agreement, the Company received an upfront, nonrefundable payment of $175.0 million. In addition, the Company is eligible to receive potential aggregate payments of up to $825.0 million based upon the successful achievement of specified research, development, regulatory and commercial milestones for the DMD and DM1 programs. The Company is also eligible to receive tiered royalties on future net sales on any products that may result from this collaboration. For the DMD program, Vertex is responsible for all research, development, manufacturing and commercialization activities and all related costs. For the DM1 program, the Company will perform specified guide RNA research and Vertex is responsible for all other research, development, manufacturing and commercialization costs. Upon Investigational New Drug, or IND, application filing, the Company has the option to forego the DM1 milestones and royalties and instead, co-develop and co-commercialize all DM1 products globally in exchange for payment of 50% of research and development costs incurred by Vertex from the effective date of the agreement through IND filing.

In connection with the execution of the 2019 Collaboration Agreement, the Company and Vertex entered into a second amendment to the 2015 Collaboration Agreement, or Amendment No. 2. Among other things, Amendment No. 2 modified certain definitions and provisions of the 2015 Collaboration Agreement to make them consistent with the 2019 Collaboration Agreement and set forth the number and identity of the collaboration targets under the 2015 Collaboration Agreement. The Company and Vertex agreed that one of the four remaining options under the 2015 Collaboration Agreement, as amended, would not be exercised; instead, the Company reacquired the exclusive rights and agreed to conduct research and development activities for the specified target. Vertex will have the option to co-develop and co-commercialize the specified target upon IND filing in exchange for payment of 50% of research and development costs incurred by the Company from the effective date of the agreement through IND filing. If Vertex does not exercise its option to co-develop and co-commercialize the specified target, Vertex is eligible to receive up to $395.0 million in potential specified research, development, regulatory and commercial milestones and tiered single-digit royalties on future net sales.

In October 2019, Vertex exercised the remaining three options granted to it under the 2015 Collaboration Agreement to exclusively license the collaboration targets developed under the 2015 Collaboration Agreement, resulting in a payment of $30.0 million to the Company in the fourth quarter of 2019. In addition, the Company achieved the first milestone under the 2019 Collaboration Agreement in the first quarter of 2020 and, in connection therewith, received a payment of $25.0 million in April 2020.

Accounting for the Vertex Agreements

The 2015 Collaboration Agreement, Amendment No. 1, and JDA are collectively the “2015 Agreements” and the 2019 Collaboration Agreement and Amendment No. 2. are collectively the “2019 Agreements.” The 2015 Collaboration Agreement, Amendment No. 1, Amendment No. 2, JDA and 2019 Collaboration Agreement are collectively the “Vertex Agreements.”

The Vertex Agreements include components of a customer-vendor relationship as defined under ASC 606, *Revenue from Contracts with Customers*, or ASC 606, collaborative arrangements as defined under ASC 808, *Collaborative Agreements*, or ASC 808, and research and development costs as defined under ASC 730, *Research and Development*, or ASC 730.

Accounting Analysis Under ASC 606

Accounting for the 2019 Agreements

Identification of the Contract

The 2019 Agreements represented a contract modification to the 2015 Agreements. As a result, the 2019 Agreements and the 2015 Agreements are combined for accounting purposes and treated as a single arrangement.

Identification of Performance Obligations

The Company concluded the following material promises were both capable of being distinct and distinct within the context of the Vertex Agreements and represented separate performance obligations: (i) an exclusive license for worldwide rights for DMD gene editing products, or DMD License; (ii) an exclusive license for worldwide rights for DM1 gene editing products, or DM1 License; (iii) the performance of specified guide RNA research for DM1, or DM1 R&D Services; (iv) a material right representing the option to obtain a co-exclusive development and commercialization license for a specified target, or Specified Target Option; (v) three material rights representing the option for up to three exclusive licenses to develop and commercialize the collaboration targets, or Collaboration Target Options; and (vi) the waiving of Vertex's material right associated with its option to a fourth exclusive license in connection with the Company's reacquisition of exclusive rights to the specified target.

Determination of Transaction Price

The overall transaction price was determined based on the remaining transaction price from the 2015 Agreements, as well as the transaction price from the 2019 Agreements. The transaction price includes variable consideration estimated using the most likely amount methodology. As such, the Company determined the transaction price totaling $268.6 million was comprised of: (i) $57.8 million of pre-existing deferred revenue from the 2015 Agreements; (ii) non-cash consideration of $10.0 million related to the waiving of Vertex's material right associated with its option to a fourth exclusive license in connection with the Company's reacquisition of exclusive rights to the specified target; (iii) an upfront payment of $175.0 million; (iv) variable consideration of $25.0 million which represented the Company's estimate related to a near-term research and development milestone for which the Company determined that it is not probable that a significant reversal of cumulative consideration will occur at the onset of the transaction; and (v) variable consideration of $0.8 million which represents the Company's estimate of payments from Vertex for DM1 R&D Services.

The Company determined that all other possible variable consideration resulting from milestones and royalties discussed above was fully constrained as of March 31, 2021. The Company will re-evaluate the transaction price in each reporting period.

Allocation of Transaction Price to Performance Obligations

The selling price of each performance obligation was determined based on the Company's estimated standalone selling price, or the ESSP. The Company developed the ESSP for all the performance obligations included in the Vertex Agreements with the objective of determining the price at which it would sell such an item if it were to be sold regularly on a standalone basis. The Company then allocated the transaction price to each performance obligation on a relative standalone selling price basis.

The ESSP for the DMD License and DM1 License was determined to be $224.6 million and $76.2 million, respectively. The ESSP was determined based on probability and present value adjusted cash flows from projected worldwide net profit for each of the respective programs based on probability assessments, projections based on internal forecasts, industry data, and information from other guideline companies within the same industry and other relevant factors. On a relative basis, $151.1 million and $51.3 million of the transaction price was allocated to the DMD License and DM1 License, respectively.

The ESSP for the Specified Target Option material right was determined to be $17.5 million, which was based on the incremental discount between (i) the value of the probability and present value adjusted cash flows from the equal sharing of projected worldwide net profit increased by the value of the option provided to Vertex less (ii) the expected exercise price at the time of option exercise. The present value adjusted cash flows also considered projections based on internal forecasts, industry data, and information from other guideline companies within the same industry and other relevant factors. On a relative basis, $11.8 million of the transaction price was allocated to the Specified Target Option material right.

The ESSP for each of the three Collaboration Target Option material rights was determined to be $25.0 million, $22.2 million and $22.2 million, respectively, which was determined based on the probability and present value adjusted cash flows from milestone payments owed for exclusive licenses, less the price paid to exercise each option. On a relative basis, $46.7 million of the transaction price was allocated to the Collaboration Target Option material rights.

The aforementioned ESSPs reflect the level of risk and expected probability of success inherent in the nature of the associated research area.

The ESSP for the waiving of Vertex's material right associated with its option to a fourth exclusive license under the 2015 Agreements was determined to be $10.0 million, or the contractual value of the option. On a relative basis, $6.7 million of the transaction price was allocated to the waiving of Vertex's material right associated with its option to a fourth exclusive license under the 2015 Agreements.

The ESSP for the DM1 R&D Services was determined to be $1.7 million, which was based on estimates of the associated effort and cost of the services, adjusted for a reasonable profit margin that would be expected to be realized under similar contracts. On a relative basis, $1.1 million of the transaction price was allocated to the DM1 R&D Services.

Recognition of Revenue

The Company determined that the DMD License and DM1 License represent functional intellectual property, as the intellectual property provides Vertex with the ability to perform a function or task in the form of research and development. As such, the revenue related to the licenses was recognized at the point in time in which they were delivered during the third quarter of 2019.

The revenue allocated to the waiving of Vertex's material right associated with its option to a fourth exclusive license in connection with Company's reacquisition of exclusive rights to the specified target was recognized at the point in time in which the option was waived, on the effective date of the 2019 Agreements.

The Company concluded that the Specified Target Option and Collaboration Target Options were considered material rights under the Vertex Agreements. Revenue related to the three Collaboration Target Options material right was recognized at the point in time in which Vertex exercised the Collaboration Target Options, which occurred in the fourth quarter of 2019.

The Company recognizes revenue related to the DM1 R&D Services over time as the services are rendered, which was originally expected to be over an 18-month period from the effective date of the 2019 Agreements and is now expected to be over a 24-month period from the effective date of the 2019 Agreements.

Accounting for the 2015 Agreements (prior to the execution of the 2019 Agreements)

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective approach. The Company applied the practical expedient in ASC 606-10-65-1 in identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price under the practical expedient in ASC 606. There was no significant impact on revenue recognized under ASC 606 and the prior revenue recognition as a result of the adoption.

Identification of the Contract

Amendment No. 1 and the JDA represented a contract modification to the 2015 Collaboration Agreement. As a result, the 2015 Agreements are combined for accounting purposes and treated as a single arrangement.

Identification of Performance Obligations

The Company concluded the following material promises were both capable of being distinct and distinct within the context of the 2015 Agreements and represented separate performance obligations: (i) the non-exclusive research license; (ii) four material rights representing the option for up to four exclusive licenses to develop and commercialize the collaboration targets; (iii) a combined performance obligation representing the co-exclusive research license, and a development and commercialization license to develop and commercialize hemoglobinopathies and beta-globin targets; and (iv) the performance of R&D Services.

Determination of Transaction Price

The overall transaction price was comprised of: (i) original upfront payment of $75.0 million, (ii) an upfront payment of $7.0 million under the JDA, and (iii) $19.3 million of variable consideration associated with the R&D services.

The Company determined that all other possible variable consideration resulting from milestones and royalties discussed above was fully constrained at the time of the transaction.

Allocation of Transaction Price to Performance Obligations

The selling price of each performance obligation was determined based on the Company's ESSP. The Company developed the ESSP for all the performance obligations included in the 2015 Agreements with the objective of determining the price at which it would sell such an item if it were to be sold regularly on a standalone basis. The Company then allocated the transaction price to each performance obligation on a relative standalone selling price basis.

The ESSP for R&D Services was determined to be $19.3 million. The Company developed the ESSP for the R&D Services primarily based on the nature of the services to be performed and estimates of the associated effort and cost of the services, adjusted for a reasonable profit margin that would be expected to be realized under similar contracts. The Company allocated $19.3 million of the transaction price to R&D Services.

The Company's ESSP for each of the remaining material rights to obtain an exclusive license to develop and commercialize a single collaboration target are $45.6 million, $38.4 million, $17.3 million and $17.3 million for a total of $118.6 million. ESSPs for these items were determined based on the probability and present value adjusted cash flows from milestone payments owed for exclusive licenses, less the price paid to exercise each option. On a relative basis, $57.7 million of the transaction price was allocated to these material rights.

The Company's ESSP for the co-exclusive research license and the development and commercialization licenses for hemoglobinopathy and beta-globin targets is $48.9 million. The ESSP for this item was determined based on probability and present value adjusted cash flows from the equal sharing of projected worldwide net profit. ESSP reflects the level of risk and expected probability of success inherent in the nature of the associated research area. On a relative basis, $23.8 million of the transaction price was allocated to the co-exclusive research license and the development and commercialization licenses for hemoglobinopathy and beta-globin targets.

The Company used a market-based approach to determine the ESSP of the non-exclusive research license of $1.0 million. The Company determined ESSP by use of comparative data, including in-licensed research agreements negotiated and executed within the Company. On a relative basis, $0.5 million of the transaction price was allocated to the non-exclusive research license.

The aforementioned ESSPs reflect the level of risk and expected probability of success inherent in the nature of the associated research area.

Recognition of Revenue

The Company determined that the non-exclusive research license is symbolic intellectual property as Vertex receives value from the license through the Company's ongoing activities, and, as such, the revenue related to the non-exclusive research license was recognized ratably over the term of the arrangement. Upon the execution of the JDA, a co-exclusive research, development and commercialization license was granted for hemoglobinopathy and beta-globin targets. The Company determined that the revenue related to these licenses was recognized at a point in time, in which they were delivered at inception of the JDA in December 2017. As Vertex has the material right in its option to obtain four additional exclusive licenses to develop and commercialize four additional collaboration targets, the Company determined that consideration allocated to these material rights would be included in the transaction price of the exclusive license and recognized at a point in time, upon the exercise of the option by Vertex or expiration. As the Company has a right to consideration from Vertex in an amount that corresponds directly with the value of the Company's performance completed to date for the R&D services, the Company recognized revenue related to the R&D services as invoiced, in line with the practical expedient in ASC 606-10-55-18.

Revenue recognized in connection with the Vertex Agreements

Revenue recognized under the Vertex Agreements for the three months ended March 31, 2021 and 2020, respectively, was not material.

As of March 31, 2021 and December 31, 2020, there was $0.2 million and $0.4 million of current deferred revenue related to the collaboration with Vertex. As of March 31, 2021, there was $11.8 million of non-current deferred revenue related to the collaboration with Vertex, which is unchanged from December 31, 2020. The transaction price allocated to the remaining performance obligations was $11.8 million.

Future Milestones under the Vertex Agreements

The Company has evaluated the milestones that may be received in connection with the Vertex Agreements. As discussed above, the Company is eligible to receive up to $410.0 million in additional development, regulatory and commercial milestones and royalties on net product sales for each of the three collaboration targets that Vertex licensed in the fourth quarter of 2019. Each milestone is payable only once per collaboration target, regardless of the number of products directed to such collaboration target that achieve the relevant milestone event.

The Company is eligible to receive additional potential future payments of up to $800.0 million based upon the successful achievement of specified research, development, regulatory and commercial milestones for the DMD and DM1 programs. The Company is also eligible to receive tiered royalties on future net sales on any products that may result from this collaboration; however, the Company has the option to forego the DM1 milestones and royalties to co-develop and co-commercialize all DM1 products globally.

Each of the remaining milestones are fully constrained as of March 31, 2021. There is uncertainty that the events to obtain the research and developmental milestones will be achieved given the nature of clinical development and the stage of the CRISPR/Cas9 technology. The remaining research, development and regulatory milestones will be constrained until it is probable that a significant revenue reversal will not occur. Commercial milestones and royalties relate predominantly to a license of intellectual property and are determined by sales or usage-based thresholds. The commercial milestones and royalties are accounted for under the royalty recognition constraint and will be accounted for as constrained variable consideration. The Company applies the royalty recognition constraint for each commercial milestone and will not recognize revenue for each until the subsequent sale of a licensed product (achievement of each) occurs.

Accounting Analysis under ASC 808

In connection with the 2019 Agreements, the Company identified the following collaborative elements, which were unchanged as those identified with the 2015 Agreements and are accounted for under ASC 808: (i) development and commercialization services for shared products; (ii) R&D Services for follow-on products; and (iii) committee participation. The related impact of the cost sharing associated with research and development is included in research and development expense. Expenses related to services performed by the Company are classified as research and development expense. Payments received from Vertex for partial reimbursement of expenses are recorded as a reduction of research and development expense.

During the three months ended March 31, 2021 and 2020, the Company recognized $19.9 million and $9.1 million of research and development expense related to the Vertex Agreements, respectively. Research and development expense for the three months ended March 31, 2021 and 2020 was net of $10.6 million and $5.5 million of reimbursements from Vertex, respectively.

Accounting Analysis under ASC 730

In connection with the 2019 Agreements, the Company and Vertex agreed that one of the four remaining options under the 2015 Agreements, as amended, would not be exercised; instead, the Company will conduct research and development activities for a specified target. Vertex will have the option to co-develop and co-commercialize the specified target upon IND filing in exchange for payment of 50% of research and development costs incurred by the Company from the effective date of the agreement through IND filing. If Vertex does not exercise its option to do so within a specified time period, Vertex is eligible to receive up to $395.0 million in potential specified research, development, regulatory and commercial milestones and tiered single-digit royalties on future net sales.

In connection therewith, the Company determined that in order for the Company to obtain the right to conduct research and development activities on the specified target, the Company had waived its right to receive an option exercise payment of $10.0 million from Vertex, which was included as non-cash consideration in the transaction price for the 2019 Agreements described above. The Company then subsequently reacquired its rights to the specified target by waiving payment owed by Vertex of $10.0 million for a license that represents in-process research and development and therefore, $10.0 million of non-cash consideration was fully expensed upon the execution of the 2019 Agreements. The Company also determined that research and development services through IND for the specified target and any payment of future development and commercialization milestones, as well as sales-based milestones and royalties for the specified target, would be accounted for as research and development costs under ASC 730 and expensed as incurred. In addition, the Company also determined that should the Company elect its option to co-develop and co-commercialize all DM1 products globally, it will record the option fee as research and development expense upon exercise.

Agreements with Bayer Healthcare LLC

Summary

On December 19, 2015, the Company entered into an agreement with Bayer, to establish a joint venture to focus on the research and the development of new therapeutics to cure blood disorders, blindness and congenital heart disease. On February 12, 2016, the Company and Bayer completed the formation of the joint venture entity, Casebia. Bayer and the Company each received a 50% equity interest in the entity in exchange for their respective contributions to the entity. At that time, the Company also entered into a separate service agreement with Casebia, under which the Company agreed to provide compensated research and development services. Collectively, these agreements are referred to as the “2015 Casebia Agreements.”

On December 13, 2019, the Company, Bayer and Casebia entered into a series of transactions by which, among other things, the Company acquired 100% of the partnership interests in Casebia, or the Retirement Agreement, the Company and Bayer terminated their joint venture, or the Joint Venture Termination Agreement, and the Company and Bayer entered into a new option agreement, or the 2019 Option Agreement. Collectively, these agreements are referred to as the "2019 Casebia Agreements."

In connection with the Retirement Agreement, Casebia retired Bayer's outstanding partnership interests in exchange for $22.0 million less certain estimated interim operating expenses of $6.0 million, and the Company acquired 100% of the partnership interests in Casebia.

In connection with entering into the Retirement Agreement, the Company, Bayer and Casebia entered into the Joint Venture Termination Agreement. In connection therewith, the Company and Bayer agreed to terminate the Joint Venture Agreement from December 2015. Under the Joint Venture Termination Agreement, Casebia-owned patents are now co-owned by the Company and Bayer, subject to certain exclusive licenses granted therein. Under the Joint Venture Termination Agreement, the Company and Bayer each retained rights to their respective contributed intellectual property.

In connection with entering into the Retirement Agreement and the Joint Venture Termination Agreement, the Company and Bayer also entered into the 2019 Option Agreement, under which, among other things, the Company committed to invest a specified amount in certain research and development activities as described under "Accounting Analysis – Accounting for 2019 Casebia Agreements". In addition, Bayer has an option (exercisable during a specified exercise period defined by future events, but in no event longer than 5 years after the effective date of the 2019 Option Agreement) to co-develop and co-commercialize two products for the diagnosis, treatment or prevention of certain autoimmune disorders, eye disorders or hemophilia A disorders. In the event Bayer elects to co-develop and co-commercialize a product, the parties will negotiate and enter into a co-development and co-commercialization agreement, or the Co-Commercialization Agreement, for such product, and Bayer would be responsible for 50% of the research and development costs incurred by the Company for such product going forward. Bayer would receive 50% of all profits from sales of such product and would be responsible for 50% of all losses.

If Bayer elects to exercise its option to co-develop and co-commercialize a product, Bayer will make a one-time $20.0 million payment, or the Option Payment, to the Company that will become non-refundable once the parties execute a Co-Commercialization Agreement with respect to such optioned product. The Option Payment is payable only once with respect to the first time Bayer exercises an option under the 2019 Option Agreement.

In addition, following Bayer's exercise of its option and/or the execution of the Co-Commercialization Agreement for an optioned product, for a period beginning on the effective date of such Co-Commercialization Agreement and ending on the earlier of the three month anniversary of such effective date or during the 90-day negotiation process of such Co-Commercialization Agreement, Bayer has a right to negotiate an exclusive license to develop and commercialize such optioned product. If Bayer exercises such right, the parties will enter into an exclusive license agreement for such optioned product on terms mutually agreeable to the parties. Further, the Option Payment paid for such optioned product would become credited against payments due under such exclusive license or any other exclusive license entered into in connection with the 2019 Option Agreement.

Either party may terminate the 2019 Option Agreement upon the other party's material breach, subject to specified notice and cure provisions. The Company may also terminate the 2019 Option Agreement in the event Bayer commences or participates in any action or proceeding challenging the validity or enforceability of any Company patent necessary or useful for the research, development, manufacture or commercialization of a product that is the subject of the 2019 Option Agreement. Bayer may also terminate the 2019 Option Agreement upon the Company's bankruptcy or insolvency, or for convenience at any time, after giving written notice.

Accounting Analysis

Accounting for the 2015 Casebia Agreements

Transactions under the 2015 Casebia Agreements ceased on the effective date of the 2019 Casebia Agreements. There was no financial impact of the 2015 Casebia Agreements for the three months ended March 31, 2021 and 2020.

Accounting for the 2019 Casebia Agreements

The Company determined that the Retirement Agreement and Joint Venture Termination Agreement resulted in the Company obtaining a controlling interest in Casebia and should be accounted for as a separate component from the 2019 Option Agreement. In doing so, the Company allocated the consideration transferred of $41.0 million (consisting of $16.0 million of assets acquired net of the purchase price, as displayed in the table below, and $25.0 million of cash allocated to the 2019 Option Agreement) between the two components using a relative fair value approach. The Company determined the relative fair value related to obtaining a controlling interest in Casebia was $32.0 million and the relative fair value of the consideration transferred related to the 2019 Option Agreement was $25.0 million, which is comprised of $20.2 million related to certain research and development activities and $4.8 million related to certain options as described above.

As a result of the Retirement Agreement, the Company determined that it had obtained a controlling interest in a variable interest entity, for which it became the primary beneficiary. As such, under ASC 810, *Consolidation*, the Company accounted for the net assets obtained under ASC 805, *Business Combinations*. In accordance therewith, the Company determined the set of acquired assets and assumed liabilities did not meet the definition of a business, as the Company did not acquire an assembled workforce and thus the Company did not acquire substantive processes capable of producing outputs. As such, no goodwill was recorded. The Company measured the fair value of the assets and liabilities received, determining the relative fair value was $16.0 million (after paying the $16.0 million for Bayer's 50% interest) and recorded the difference between that amount and the Company's carrying amount, which was zero, as a gain within other income (expense). The relative fair value of the assets and liabilities received (exclusive of the $16.0 million paid from Casebia to Bayer to retire Bayer's interest in the JV) was determined as follows (in thousands):

Fair value	Amount
Cash and cash equivalents	$ 6,784
Prepaid expenses and other current assets	2,565
Property, plant and equipment, net	9,340
Operating lease assets	11,003
Restricted cash	1,226
Accrued expenses and other current liabilities	(3,915)
Operating lease liabilities	(11,003)
Net assets	$ 16,000

The value of the reacquired rights related to the intellectual property was determined to be insignificant.

The Company determined that the 2019 Option Agreement should be accounted for under ASC 730-20, *Research and Development Expense*. This determination was based on the fact that the financial risk associated with the research and development has been transferred to the Company because repayment of any of the funds provided by Bayer depends solely on the results of the research and development having a future economic benefit. The Company further determined that it had two separate obligations under the 2019 Option Agreements, which consist of (i) research and development services and (ii) future delivery of up to two options for products in defined fields. The relative fair value of the obligations was determined to be $20.2 million and $4.8 million, respectively. As the Company has accounted for its obligations as a contract to perform research and development for others, with respect to the obligation to perform research and development services the Company will recognize an offset to research and development expense as the research is performed and, with respect to the future delivery of up to two option for products in defined fields, at the earlier of option exercise (at or near IND application filing), expiration, or when commercially reasonable efforts to progress the program have been exhausted.

During the three months ended March 31, 2021 and 2020, the Company recorded a benefit of $4.3 million and $1.9 million, respectively, to research and development expense for qualifying expenses incurred under the 2019 Option Agreement. As of March 31, 2021 and December 31, 2020, the Company has recorded $2.7 million and $7.0 million, respectively, in other current liabilities relating to certain research and development obligations to be satisfied within one year of the balance sheet date. As of March 31, 2021, the Company has recorded $4.8 million in other long-term liabilities consisting of the previously allocated value of such obligations to be satisfied beyond one year from the balance sheet date as well as the relative fair value of the options, which is unchanged from December 31, 2020.

8. Share Capital

The Company had 115,172,786 authorized common shares as of March 31, 2021, with a par value of CHF 0.03 per share. Share Capital consisted of the following:

		As of	
Type of Share Capital	**Conditional Capital**	**March 31, 2021**	**December 31, 2020**
Common shares	Registered share capital	80,321,227	75,133,951
Common shares	Authorized share capital	14,125,426	17,625,426
Common shares	Conditional share capital - Bonds or similar debt instruments	4,919,700	4,919,700
Common shares	Conditional share capital - Employee benefit plans	15,806,433	17,493,709
	Total	115,172,786	115,172,786

At-the-Market Offerings

In August 2019, the Company entered into an Open Market Sale Agreement℠ with Jefferies under which the Company was able to offer and sell, from time to time at its sole discretion through Jefferies, as its sales agent, its common shares, par value of CHF 0.03 per share, or the August 2019 Sales Agreement. In August 2019, the Company filed a prospectus supplement with the SEC to offer and sell, from time to time, common shares having aggregate gross proceeds of up to $200.0 million, or the 2019 ATM. During the year ended December 31, 2020, the Company issued and sold an aggregate of 2.2 million common shares under the 2019 ATM at an average price of $89.47 per share for aggregate proceeds of $195.5 million, which were net of equity issuance costs of $4.5 million.

In December 2020, in connection with the August 2019 Sales Agreement, the Company filed a prospectus supplement with the SEC to offer and sell, from time to time, common shares having aggregate gross proceeds of up to $350.0 million, or the 2020 ATM. During the year ended December 31, 2020, the Company issued and sold an aggregate of 1.8 million common shares under the 2020 ATM at an average price of $169.57 per share for aggregate proceeds of $298.0 million, which were net of equity issuance costs of $4.5 million. Additional equity issuance costs for stamp taxes related to shares sold in 2020 related to the 2019 ATM and 2020 ATM were $4.9 million, of which $4.0 million was payable as of December 31, 2020.

In January 2021, the Company issued and sold under the 2020 ATM an aggregate of 0.3 million common shares at an average price of $162.46 per share with aggregate proceeds of $46.7 million, which were net of equity issuance costs of $0.7 million. An additional $0.5 million of stamp taxes on this amount was payable as of March 31, 2021.

In January 2021, in connection with the August 2019 Sales Agreement, the Company filed a prospectus supplement with the SEC to offer and sell, from time to time, common shares having aggregate gross proceeds of up to $600.0 million, or the 2021 ATM. As of March 31, 2021, the Company has issued and sold an aggregate of 1.1 million common shares under the 2021 ATM at an average price of $169.82 per share for aggregate proceeds of $177.8 million, which were net of equity issuance costs of $2.4 million. An additional $1.8 million of stamp taxes on this amount was payable as of March 31, 2021.

July 2020 Offering

In July 2020, the Company sold 7.4 million common shares through an underwritten public offering (inclusive of shares sold pursuant to the exercise of the underwriters' option to purchase additional shares) at a public offering price of $70.00 per share for aggregate net proceeds of $484.8 million, which were net of equity issuance costs and stamp tax of $32.5 million.

9. Stock-based Compensation

During the three months ended March 31, 2021, the Company recognized the following stock-based compensation expense (in thousands):

	Three Months Ended March 31,	
	2021	**2020**
Research and development	$ 12,845	$ 7,362
General and administrative	9,247	6,789
Total	$ 22,092	$ 14,151

Stock option activity

The following table summarizes stock option activity for the three months ended March 31, 2021:

	Shares	Weighted-average exercise price per share
Outstanding at December 31, 2020	8,101,980	$ 42.44
Granted	882,558	139.05
Exercised	(342,471)	33.12
Cancelled or forfeited	(69,404)	43.31
Outstanding at March 31, 2021	8,572,663	$ 52.76
Exercisable at March 31, 2021	3,962,897	$ 31.48
Vested and expected to vest at March 31, 2021	8,572,663	$ 52.76

As of March 31, 2021, total unrecognized compensation expense related to stock options was $191.3 million, which the Company expects to recognize over a remaining weighted-average period of 3.1 years.

Restricted stock activity

The following table summarizes restricted stock activity for the three months ended March 31, 2021:

	Restricted Stock	Weighted-Average Grant Date Fair Value
Unvested balance as of December 31, 2020	894,092	$ 70.55
Granted	278,645	136.16
Vested	(109,355)	40.64
Cancelled or forfeited	(11,003)	57.94
Unvested balance as of March 31, 2021	1,052,379	$ 91.16

As of March 31, 2021, total unrecognized compensation expense related to unvested restricted common shares was $76.5 million, which the Company expects to recognize over a remaining weighted-average vesting period of 2.8 years.

10. Net Loss Per Share Attributable to Common Shareholders

Basic net loss per share is calculated by dividing net loss attributable to common shareholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is calculated by dividing the net loss attributable to common shareholders by the weighted-average number of common share equivalents outstanding for the period, including any dilutive effect from outstanding stock options and warrants using the treasury stock method. The Company's net loss is net loss attributable to common shareholders for all periods presented.

The following common stock equivalents were excluded from the calculation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect (in thousands):

	Three Months Ended March 31,	
	2021	2020
Outstanding options	8,572,663	8,495,315
Unvested restricted common shares	1,052,379	967,060
ESPP	10,594	—
Total	9,635,636	9,462,375

11. Income Taxes

During the three months ended March 31, 2021 and 2020, the Company recorded an income tax provision of $0.6 million and $0.4 million, respectively, representing an effective tax rate of -0.5% and -0.5%, respectively. The income tax provision is primarily attributable to the year-to-date pre-tax income earned by the Company's U.S. subsidiary. The difference in the statutory tax rate and effective tax rate is primarily a result of the jurisdictional mix of earnings and losses that are not benefited. The Company maintains a valuation allowance against certain deferred tax assets that are not more-likely-than-not realizable. As a result, the Company has not recognized a tax benefit related to losses generated in Switzerland in the current periods. On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, was enacted in the United States, the impact of which was not material.

12. Subsequent Events

As described in Note 7, in December 2017, the Company and Vertex entered into the JDA pursuant to which the parties agreed to, among other things, co-develop and co-commercialize CTX001 and other product candidates specified in the JDA.

On April 16, 2021, the Company and Vertex agreed to amend and restate the JDA and entered into an Amended and Restated Joint Development and Commercialization Agreement (the "A&R JDCA"), pursuant to which the parties agreed to, among other things, (a) adjust the governance structure for the collaboration and adjust the responsibilities of each party thereunder; (b) adjust the allocation of net profits and net losses between the parties with respect to CTX001 only; and (c) exclusively license (subject to the Company's reserved rights to conduct certain activities) certain intellectual property rights to Vertex relating to the specified product candidates and products (including CTX001) that may be researched, developed, manufactured and commercialized under such agreement.

The A&R JDCA includes, among other things, provisions relating to the following:

Governance; Activities. The Company and Vertex will establish the following committees: (i) a joint oversight committee to provide high-level oversight and (ii) a transition committee to provide for forum planning, discussing and sharing information regarding certain transition activities until completion of such activities. Effective as of the closing of the transaction contemplated by the A&R JDCA, the previously established collaboration strategy team and all working groups established by such team will be disbanded. Each of the committees will contain an equal number of representatives from each of the Company and Vertex. The A&R JDCA provides that, subject to the terms and conditions of such agreement, Vertex will have the right to conduct all research, development, manufacturing and commercialization activities relating to the specified product candidates and products (including CTX001) throughout the world subject to the Company's reserved right to conduct certain activities. The Company continues to participate in certain aspects of such activities in an observer capacity unless and to the extent otherwise agreed to by the parties.

Financial Terms. In connection with the closing of the transaction contemplated by the A&R JDCA, the Company will receive a $900 million up-front payment from Vertex and a one-time $200 million milestone payment upon receipt by Vertex of the first marketing approval of the initial product candidate from the U.S. Food and Drug Administration or the European Commission. The net profits and net losses, as applicable, incurred under the A&R JDCA with respect to all product candidates and products specified in the A&R JDCA other than CTX001 shall be shared equally between the Company and Vertex. With respect to CTX001 only, the net profits and net losses, as applicable, incurred under the A&R JDCA through July 1, 2021 (or such applicable later date in the event HSR clearance has not been received by October 1, 2021) in connection with the initial shared product (i.e., CTX001) will be shared equally between the Company and Vertex, and beginning July 1, 2021 (or such applicable later date in the event HSR clearance has not been received by October 1, 2021), the net profits and net losses, as applicable, incurred under the A&R JDCA will be allocated 40% to the Company and 60% to Vertex.

Termination. Either party can terminate the A&R JDCA upon the other party's material breach, subject to specified notice and cure provisions, or, in the case of Vertex, in the event that the Company becomes subject to specified bankruptcy, winding up or similar circumstances. Either party may terminate the A&R JDCA 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 A&R JDCA. Vertex also has the right to terminate the A&R JDCA 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 A&R JDCA on account of an uncured material breach, such party may elect to keep the A&R JDCA 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 out of the development of a product candidate under the A&R JDCA after predetermined points in the development of the product candidate, on a candidate-by-candidate basis. In the event of such opt-out, the party 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 closing of the transaction contemplated by the A&R JDCA is subject to certain conditions including the expiration of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act and any other required antitrust clearance.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (i) our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and (ii) our audited consolidated financial statements and related notes and management's discussion and analysis of financial condition and results of operations included in our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the Securities and Exchange Commission, or the SEC, on February 16, 2021. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business and impact and potential impacts on our business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including, without limitation, those factors set forth in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2020 and the "Risk Factors" section of subsequent Quarterly Reports on Form 10-Q, including this Quarterly Report on Form 10-Q, our actual results or timing of certain events could differ materially from the results or timing described in, or implied by, these forward-looking statements.

Special Note About Coronavirus (COVID-19)

Since March 2020, we have been evaluating the actual and potential business impacts related to the outbreak of a novel strain of virus named SARS-CoV-2 (severe acute respiratory syndrome 2), or coronavirus, which causes coronavirus disease, or COVID-19. As a result of the coronavirus pandemic, we have experienced, and may further experience, disruptions, pauses and/or delays that have and could further adversely impact our business operations, and/or associated timelines. As we gradually return to work in accordance with state and local regulations, we maintain temporary work-from-home procedures for all employees other than for those personnel and contractors who perform essential activities that must be completed on-site. If negative developments relating to the coronavirus pandemic continue, including as a result of a continued so-called "resurgence" or additional "waves", we may be required to restrict on-site staff at our offices and laboratories again and at times have limited access to our offices on a temporary and intermittent basis; with respect to our hemoglobinopathies clinical trials, we may elect to pause patient dosing in certain of our trials again if ICU beds and related healthcare resources become significantly constrained again or governmental authorities impose additional business or travel restrictions; with respect to our immuno-oncology clinical trials, investigators participating in our clinical trials may not want to take the risk of exposing cancer patients to the coronavirus since the dosing of patients is conducted within an in-patient setting; and certain aspects of our supply chain could be disrupted if our third party suppliers and manufacturers paused their operations again in response to such negative developments and/or as a result of national and local regulations. The ultimate impact of the coronavirus pandemic on our business operations remains uncertain and subject to change and will depend on future developments, which cannot be accurately predicted. We will continue to monitor the situation closely.

Overview

We are a leading gene editing company focused on the development of CRISPR/Cas9-based therapeutics. CRISPR/Cas9 is a revolutionary gene editing technology that allows for precise, directed changes to genomic DNA. The application of CRISPR/Cas9 for gene editing was co-invented by one of our scientific founders, Dr. Emmanuelle Charpentier, who, along with her collaborators, published work elucidating how CRISPR/Cas9, a naturally occurring viral defense mechanism found in bacteria, can be adapted for use in gene editing. We are applying this technology to potentially treat a broad set of rare and common diseases by disrupting, correcting or regulating the genes related to such diseases. We believe that our scientific expertise, together with our approach, may enable an entirely new class of highly active and potentially curative therapies for patients for whom current biopharmaceutical approaches have had limited success.

Our Programs

We have established a portfolio of therapeutic programs across a broad range of disease areas including hemoglobinopathies, oncology, regenerative medicine and rare diseases.

Our lead product candidate, CTX001, is an investigational, autologous, gene-edited hematopoietic stem cell therapy that is being evaluated for the treatment of transfusion-dependent beta thalassemia, or TDT, and severe sickle cell disease, or SCD. CTX001 is being developed under a joint development and commercialization agreement between us and Vertex Pharmaceuticals Incorporated and certain of its subsidiaries, or Vertex. Please see Part II, Item 5 of this Quarterly Report on Form 10-Q for additional information regarding this collaboration.

We and Vertex are investigating CTX001 in an ongoing Phase 1/2 open-label clinical trial, CLIMB THAL-111, that is designed to assess the safety and efficacy of a single dose of CTX001 in patients ages 12 to 35 with TDT. In the fourth quarter of 2019, we expanded the TDT patient population for CTX001 to include beta zero/beta zero subtypes. The first two patients in the trial were treated sequentially and, following data from the initial two patients indicating successful engraftment and an acceptable safety profile, the trial opened for concurrent dosing. CLIMB THAL-111 is designed to follow patients for approximately two years after infusion. Each patient will be asked to participate in a long-term follow-up study. CTX001 has been granted Regenerative Medicine Advanced Therapy, or RMAT, designation, as well as Fast Track Designation and Rare Pediatric Disease designation by the U.S. Food and Drug Administration, or FDA, for the treatment of TDT. In addition, CTX001 for the treatment of TDT has received orphan drug designation, or ODD, by the FDA and European Commission; and CTX001 has been granted Priority Medicines (PRIME) designation by the European Medicines Agency for the treatment of TDT. In the fourth quarter of 2020, we released updated clinical data from the first seven patients with TDT treated with CTX001 during the Scientific Plenary Session at the ASH Annual Meeting and Exposition.

We and Vertex are also investigating CTX001 in an ongoing Phase 1/2 open-label clinical trial, CLIMB SCD-121, that is designed to assess the safety and efficacy of a single dose of CTX001 in patients ages 12 to 35 with severe SCD. Similar to the trial in TDT, the first two patients in the trial were treated sequentially and, following data from the initial two patients indicating successful engraftment and an acceptable safety profile, the trial opened for concurrent dosing. CLIMB SCD-121 is designed to follow patients for approximately two years after infusion. Each patient will be asked to participate in a long-term follow-up study. CTX001 has been granted RMAT Designation, as well as Fast Track Designation and Rare Pediatric Disease designation by the FDA for the treatment of SCD. In addition, CTX001 for the treatment of SCD has received ODD by the FDA and European Commission; and CTX001 has been granted Priority Medicines (PRIME) designation by the European Medicines Agency for the treatment of SCD. In the fourth quarter of 2020, we released updated clinical data from the first three patients with SCD treated with CTX001 during the Scientific Plenary Session at the ASH Annual Meeting and Exposition.

In addition, we are developing our own portfolio of CAR-T cell product candidates based on our gene-editing technology.

CTX110. Our lead immuno-oncology product candidate, CTX110, is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting cluster of differentiation 19, or CD19. CTX110 is being investigated in an ongoing Phase 1 single-arm, multi-center, open-label clinical trial, CARBON, that is designed to assess the safety and efficacy of several dose levels of CTX110 for the treatment of relapsed or refractory B-cell malignancies. In October 2020, we released initial top-line data from the ongoing CARBON clinical trial.

CTX120. CTX120 is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting B-cell maturation antigen. CTX120 is being investigated in an ongoing Phase 1 single-arm, multi-center, open-label clinical trial that is designed to assess the safety and efficacy of several dose levels of CTX120 for the treatment of relapsed or refractory multiple myeloma. CTX120 has received ODD by the FDA.

CTX130. CTX130 is a healthy donor-derived gene-edited allogeneic CAR-T investigational therapy targeting cluster of differentiation 70, or CD70, an antigen expressed on various solid tumors and hematologic malignancies. CTX130 is being developed for the treatment of both solid tumors, such as renal cell carcinoma, and T-cell and B-cell hematologic malignancies. CTX130 is being investigated in two ongoing independent Phase 1 single-arm, multi-center, open-label clinical trials that are designed to assess the safety and efficacy of several dose levels of CTX130 for the treatment of relapsed or refractory renal cell carcinoma and various types of lymphoma, respectively.

Strategic Partnerships

Given the numerous potential therapeutic applications for CRISPR/Cas9, we have partnered strategically to broaden the indications we can pursue and accelerate development of programs by accessing specific technologies and/or disease-area expertise. We maintain three broad strategic partnerships to develop gene editing-based therapeutics in specific disease areas.

Vertex. We established our initial collaboration agreement in 2015 with Vertex, which focused on TDT, SCD, cystic fibrosis and select additional indications. In December 2017, we entered into a joint development and commercialization agreement with Vertex pursuant to which, among other things, we are co-developing and preparing to co-commercialize CTX001 for TDT and SCD. On April 16, 2021 we and Vertex agreed to amend and restate our existing joint development and commercialization agreement, pursuant to which, among other things, we will continue to develop and prepare to commercialize CTX001 for TDT and SCD in partnership with Vertex, subject to, among other things, certain adjustments to the governance structure for the collaboration and responsibilities of the parties. Please see Part II, Item 5 of this Quarterly Report on Form 10-Q for additional information. In addition, in June 2019, we entered into a strategic collaboration and license agreement for the development and commercialization of products for the treatment of Duchenne muscular dystrophy and myotonic dystrophy type 1.

ViaCyte. We entered into the ViaCyte Collaboration Agreement in September 2018 with ViaCyte, Inc., or ViaCyte, to pursue the discovery, development and commercialization of gene-edited allogeneic stem cell therapies for the treatment of diabetes. The combination of ViaCyte's stem cell capabilities and our gene editing capabilities has the potential to enable a beta-cell replacement product that may deliver durable benefit to patients without the need for immune suppression.

Bayer. In the fourth quarter of 2019, we entered into a series of transactions, or the Bayer Transaction, pursuant to which we and Bayer terminated our 2015 agreement, which created the joint venture, Casebia Therapeutics Limited Liability Partnership, or Casebia, to discover, develop and commercialize CRISPR/Cas9 gene-editing therapeutics to treat the genetic causes of bleeding disorders, autoimmune disease, blindness, hearing loss and heart disease. In connection thereto, Casebia became a wholly-owned subsidiary of ours. We and Bayer also entered into a new option agreement pursuant to which Bayer has an option to co-develop and co-commercialize two products for the diagnosis, treatment or prevention of certain autoimmune disorders, eye disorders, or hemophilia A disorders for a specified period of time, or, under certain circumstances, exclusively license such optioned products.

Refer to Note 9 of the notes to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021 for a description of the key terms of our arrangement with ViaCyte. Refer to Note 7 of the notes to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a description of the key terms of our arrangements with Vertex and Bayer.

Financial Overview

Since our inception in October 2013, we have devoted substantially all of our resources to our research and development efforts, identifying potential product candidates, undertaking drug discovery and preclinical development activities, building and protecting our intellectual property estate, organizing and staffing our company, business planning, raising capital and providing general and administrative support for these operations. To date, we have primarily financed our operations through private placements of our preferred shares, common share issuances, convertible loans and collaboration agreements with strategic partners.

Our revenue to date has been primarily derived from collaborations with partners. We were profitable for the year ended December 31, 2019 due to collaboration revenue from Vertex and the gain from consolidating Casebia, but we do not expect to sustain our profitability in future years. With the exception of the year ended December 31, 2019, we have incurred significant net operating losses each year since our inception and we expect to continue to incur net operating losses for the foreseeable future. As of March 31, 2021, we had $1,806.2 million in cash, cash equivalents and marketable securities and an accumulated deficit of $686.7 million. We expect to continue to incur significant expenses and increasing operating losses for the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase significantly as we continue our current research programs and development activities; seek to identify additional research programs and additional product candidates; conduct initial drug application supporting preclinical studies and initiate clinical trials for our product candidates; initiate preclinical testing and clinical trials for any other product candidates we identify and develop; maintain, expand and protect our intellectual property estate; further develop our gene editing platform; hire additional research, clinical and scientific personnel; incur facilities costs associated with such personnel growth; develop manufacturing infrastructure; and incur additional costs associated with operating as a public company. In addition, we expect to spend significantly more on capital expenditures than we have historically incurred in order to construct and build out our new U.S. headquarters for research and development in Boston, Massachusetts, and our cell therapy manufacturing facility in Framingham, Massachusetts. Please refer to Part I, Item 2 of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021 for more information about these facilities.

Revenue

We have not generated any revenue to date from product sales and do not expect to do so in the near future. Revenue recognized for the three months ended March 31, 2021 and 2020 was not material. For additional information about our revenue recognition policy, see Note 2, "Summary of Significant Accounting Policies," in our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021, as well as Note 7 of the notes to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our product discovery efforts and the development of our product candidates, which include:

- employee-related expenses, including salaries, benefits and equity-based compensation expense;
- costs of services performed by third parties that conduct research and development and preclinical activities on our behalf;

- costs of purchasing lab supplies and non-capital equipment used in our preclinical activities and in manufacturing preclinical study materials;
- consultant fees;
- facility costs, including rent, depreciation and maintenance expenses; and
- fees and other payments related to acquiring and maintaining licenses under our third-party licensing agreements.

Research and development costs are expensed as incurred. Nonrefundable advance payments for research and development goods or services to be received in the future are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. At this time, we cannot reasonably estimate or know the nature, timing or estimated costs of the efforts that will be necessary to complete the development of any product candidates we may identify and develop. This is due to the numerous risks and uncertainties associated with developing such product candidates, including the uncertainty of:

- successful completion of preclinical studies and IND-enabling studies;
- successful enrollment in, and completion of, clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and non-patent exclusivity;
- launching commercial sales of the product, if and when approved, whether alone or in collaboration with others;
- acceptance of the product, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies and treatment options;
- a continued acceptable safety profile following approval;
- enforcing and defending intellectual property and proprietary rights and claims; and
- achieving desirable medicinal properties for the intended indications.

A change in the outcome of any of these variables with respect to the development of any product candidates or the subsequent commercialization of any product candidates we may successfully develop could significantly change the costs, timing and viability associated with the development of that product candidate.

Except for activities we perform in connection with our collaboration with Vertex and ViaCyte, as well as in connection with the Bayer Transaction, we do not track research and development costs on a program-by-program basis.

Research and development activities are central to our business model. We expect our research and development costs to increase significantly for the foreseeable future as our current development programs progress, new programs are added and as we continue to prepare regulatory filings. These increases will likely include the costs related to the implementation and expansion of clinical trial sites and related patient enrollment, monitoring, program management and manufacturing expenses for current and future clinical trials. In addition, we expect that our research and development expenses will increase in future periods as we incur additional costs in connection with research and development activities under our collaboration with ViaCyte.

General and Administrative Expenses

General and administrative expenses consist primarily of employee related expenses, including salaries, benefits and equity-based compensation, for personnel in executive, finance, accounting, business development and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to patent and corporate matters and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities, and potential commercialization of our product candidates. In addition, we anticipate increased expenses related to the reimbursements of third-party patent related expenses in connection with certain of our in-licensed intellectual property.

Other Income (Expense), Net

Other income (expense), net consists primarily of interest income earned on investments.

Results of Operations

Comparison of three months ended March 31, 2021 and 2020 (in thousands):

	Three Months Ended March 31,		Period to Period
	2021	2020	Change
Revenue:			
Collaboration revenue	$ 202	$ 157	$ 45
Grant revenue	337	—	337
Total revenue	539	157	382
Operating expenses:			
Research and development	90,565	54,193	36,372
General and administrative	24,517	19,550	4,967
Total operating expenses	115,082	73,743	41,339
Loss from operations	(114,543)	(73,586)	(40,957)
Other income, net	1,955	4,232	(2,277)
Net loss before income taxes	(112,588)	(69,354)	(43,234)
Provision for income taxes	(575)	(377)	(198)
Net loss	$ (113,163)	$ (69,731)	$ (43,432)

Collaboration Revenue

Collaboration revenue for the three months ended March 31, 2021 and 2020, respectively, was not material. Please refer to Note 7 of the notes to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for further information.

Research and Development Expenses

Research and development expenses were $90.6 million for the three months ended March 31, 2021, compared to $54.2 million for the three months ended March 31, 2020. The increase of approximately $36.4 million was primarily attributable to the following:

- $14.0 million of increased employee compensation, benefit and other headcount related expenses, of which $5.5 million is increased stock-based compensation expense, primarily due to an increase in headcount to support overall growth;
- $17.9 million of increased variable research and development costs; and,
- $6.3 million of increased facility-related expenses.

General and Administrative Expenses

General and administrative expenses were $24.5 million for the three months ended March 31, 2021, compared to $19.5 million for the three months ended March 31, 2020. The increase of approximately $5.0 million was primarily attributable to the following:

- $3.9 million of increased employee compensation, benefit and other headcount related expenses, of which $2.5 million is increased stock-based compensation expense, primarily due to an increase in headcount to support overall growth; and,
- $0.9 million of increased intellectual property costs.

Other Income, Net

Other income was $2.0 million for the three months ended March 31, 2021, compared to $4.2 million of income for the three months ended March 31, 2020. The change was primarily due to interest income earned on cash, cash equivalents and marketable securities for the three months ended March 31, 2021.

Liquidity and Capital Resources

As of March 31, 2021, we had cash, cash equivalents and marketable securities of approximately $1,806.2 million, of which approximately $800.2 million was held outside of the United States.

In August 2019, we entered into a Open Market Sale Agreement℠ with Jefferies LLC, or Jefferies, under which we are able to offer and sell, from time to time at our sole discretion through Jefferies, as our sales agent, our common shares, par value of CHF 0.03 per share, or the August 2019 Sales Agreement. In December 2020, in connection with the August 2019 Sales Agreement, we filed a prospectus supplement with the SEC to offer and sell from time to time common shares having aggregate gross proceeds of up to $350.0 million, or the 2020 ATM. In January 2021, we issued and sold under the 2020 ATM an aggregate of 0.3 million common shares at an average price of $162.46 per share with aggregate proceeds of $46.7 million, which were net of equity issuance costs of $0.7 million. An additional $0.5 million of stamp taxes on this amount was payable at March 31, 2021.

In January 2021, in connection with the August 2019 Sales Agreement, we filed a prospectus supplement with the SEC to offer and sell from time to time common shares having aggregate gross proceeds of up to $600.0 million. As of March 31, 2021, we have issued and sold an aggregate of 1.1 million common shares under the 2021 ATM at an average price of $169.82 per share for aggregate proceeds of $177.8 million, which were net of equity issuance costs of $2.4 million. An additional $1.8 million of stamp taxes on this amount was payable at March 31, 2021.

We have predominantly incurred losses and cumulative negative cash flows from operations since our inception, and as of March 31, 2021, we had an accumulated deficit of $686.7 million. We anticipate that we will continue to incur losses for at least the next several years. We expect that our research and development and general and administrative expenses will continue to increase and, as a result, we will need additional capital to fund our operations, which we may raise through public or private equity or debt financings, strategic collaborations, or other sources.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, research and development activities, compensation and related expenses, laboratory and related supplies, legal and other regulatory expenses, patent prosecution filing and maintenance costs for our licensed intellectual property and general overhead costs, including costs associated with operating as a public company. We expect our expenses to increase compared to prior periods in connection with our ongoing activities, particularly as we continue research and development and preclinical and clinical activities and initiate preclinical studies to support initial drug applications. We also anticipate that we will incur significant capital expenditures as we develop our manufacturing infrastructure and facilities.

Because our research programs are still in early stages of development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of any current or future product candidates, if approved, or whether, or when, we may achieve profitability. Until such time as we can generate substantial product revenues, if ever, we expect to finance our cash needs through a combination of equity financings, debt financings and payments received in connection with our collaboration agreements. We are entitled to research payments under our collaboration with Vertex. Additionally, we are eligible to earn payments, in each case, on a per-product basis under our collaboration with Vertex. Except for this source of funding, we do not have any committed external source of liquidity. We intend to consider opportunities to raise additional funds through the sale of equity or debt securities when market conditions are favorable to us to do so. However, including as a result of the coronavirus pandemic, the trading prices for our common shares and other biopharmaceutical companies have been highly volatile. As a result, we may face difficulties raising capital through sales of our common shares or such sales may be on unfavorable terms. In addition, a recession, depression or other sustained adverse market event, including resulting from the spread of the coronavirus, could materially and adversely affect our business and the value of our common shares. To the extent that we raise additional capital through the future sale of equity or debt securities, the ownership interests of our shareholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing shareholders. If we raise additional funds through collaboration arrangements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Outlook

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect our existing cash will enable us to fund our operating expenses and capital expenditures for at least the next 24 months without giving effect to any additional proceeds we may receive under our collaboration with Vertex and any other capital raising transactions we may complete. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect. Given our need for additional financing to support the long-term clinical development of our programs, we intend to consider additional financing opportunities when market terms are favorable to us.

Our ability to generate revenue and achieve profitability depends significantly on our success in many areas, including: developing our delivery technologies and our gene-editing technology platform; selecting appropriate product candidates to develop; completing research and preclinical and clinical development of selected product candidates; obtaining regulatory approvals and marketing authorizations for product candidates for which we complete clinical trials; developing a sustainable and scalable manufacturing process for product candidates; launching and commercializing product candidates for which we obtain regulatory approvals and marketing authorizations, either directly or with a collaborator or distributor; obtaining market acceptance of our product candidates, if approved; addressing any competing technological and market developments; negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter; maintaining good relationships with our collaborators and licensors; maintaining, protecting and expanding our estate of intellectual property rights, including patents, trade secrets and know-how; and attracting, hiring and retaining qualified personnel.

Cash Flows

The following table provides information regarding our cash flows for each of the periods below (in thousands):

	Three Months Ended March 31,		Period to Period
	2021	2020	Change
Net cash used in operating activities	$ (100,663)	$ (52,175)	$ (48,488)
Net cash used in investing activities	(167,898)	(2,991)	(164,907)
Net cash provided by financing activities	225,991	1,132	224,859
Effect of exchange rate changes on cash	5	(25)	30
Net increase decrease in cash	$ (42,565)	$ (54,059)	$ 11,494

Net Cash Used in Operating Activities

Net cash used in operating activities was $100.7 million for the three months ended March 31, 2021, compared to cash used in operating activities of $52.2 million for the three months ended March 31, 2020. The $48.5 million increase in cash used in operating activities was primarily driven by the increase in net loss of $43.4 million, which was driven by increased spending in our clinical and pre-clinical stage programs and increased payroll and payroll-related expenses to support overall growth, as well as a $14.8 million decrease in net changes of operating assets and liabilities. The increase was offset by $9.7 million increase of non-cash expense related primarily to stock compensation and depreciation.

Net Cash Used in Investing Activities

Net cash used in investing activities for the three months ended March 31, 2021 was $167.9 million, compared to $3.0 million for the three months ended March 31, 2020. The increase in net cash used in investing activities consisted primarily of purchases of marketable securities and property and equipment.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the three months ended March 31, 2021 was $226.0 million, compared with $1.1 million for the three months ended March 31, 2020. The net cash provided by financing activities for the three months ended March 31, 2021 consisted of option exercise proceeds, net of issuance costs. Additionally, 1.4 million common shares were issued in connection with our Open Market Sale Agreement℠, which resulted in $222.1 million of net cash proceeds, after deducting $3.1 million in equity issuance costs, excluding $2.2 million of stamp taxes which were accrued as of March 31, 2021.

Contractual Obligations

The disclosure of our contractual obligations and commitments was reported in our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021. There have been no material changes from the contractual commitments and obligations previously disclosed in our Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

As of March 31, 2021, we did not have any off-balance sheet arrangements as defined under applicable SEC rules.

Critical Accounting Policies and Significant Judgments and Estimates

This discussion and analysis of our financial condition and results of operations is based on our financial statements, which we have prepared in accordance with U.S. GAAP. We believe that several accounting policies are important to understanding our historical and future performance. We refer to these policies as critical because these specific areas generally require us to make judgments and estimates about matters that are uncertain at the time we make the estimate, and different estimates—which also would have been reasonable—could have been used. On an ongoing basis, we evaluate our estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and other market-specific or other relevant assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe that our most critical accounting policies are those relating to revenue recognition, variable interest entities and equity-based compensation, and there have been no changes to our accounting policies discussed in our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021.

Recent Accounting Pronouncements

Refer to Note 1 of the notes to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

Item 3. Qualitative and Quantitative Disclosures about Market Risk

Interest Rate Sensitivity

We are exposed to market risk related to changes in interest rates. As of March 31, 2021, we had cash, cash equivalents and marketable securities of $1,806.2 million, primarily invested in U.S. treasury securities and government agency securities, corporate bonds, commercial paper and money market accounts invested in U.S. government agency securities. Due to the conservative nature of these instruments, we do not believe that we have a material exposure to interest rate risk. If interest rates were to increase or decrease by 1%, the fair value of our investment portfolio would increase or decrease by an immaterial amount.

Foreign Currency Exchange Rate Risk

As a result of our foreign operations, we face exposure to movements in foreign currency exchange rates, primarily the Swiss Franc and British Pound, against the U.S. dollar. The current exposures arise primarily from cash, accounts payable and intercompany receivables and payables. Changes in foreign exchange rates affect our consolidated statement of operations and distort comparisons between periods. To date, foreign currency transaction gains and losses have not been material to our financial statements, and we have not engaged in any foreign currency hedging transactions.

Item 4. Controls and Procedures.

Management's Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934 is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

As of March 31, 2021, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our principal executive officer and principal financial officer have concluded based upon the evaluation described above that, as of March 31, 2021, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

During the quarter ended March 31, 2021, there were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Securities Exchange Act of 1934, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

In the ordinary course of business, we are from time to time involved in lawsuits, investigations, proceedings and threats of litigation related to, among other things, our intellectual property estate (including certain in-licensed intellectual property), commercial arrangements and other matters. Such proceedings may include quasi-litigation, inter partes administrative proceedings in the U.S. Patent and Trademark Office and the European Patent Office involving our intellectual property estate including certain in-licensed intellectual property. There are currently no claims or actions pending against us that, in the opinion of our management, are likely to have a material adverse effect on our business.

There have been no material developments with respect to the legal proceedings previously disclosed in "Item 3. Legal Proceedings" of our Annual Report on Form 10-K for the fiscal year ended December 31, 2020 filed with the SEC on February 16, 2021.

Item 1A. Risk Factors.

We are updating and supplementing our risk factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 16, 2021 to add the following new risk factor:

We may not complete the pending transaction with Vertex within the time frame we anticipate, or at all, which could have an adverse effect on our business, financial condition and operations.

In December 2017, we entered into a Joint Development and Commercialization Agreement with Vertex, or the JDA, to, among other things, co-develop and co-commercialize CTX001 and other product candidates specified in the JDA. On April 16, 2021, we and Vertex agreed to amend and restate the JDA and entered into an Amended and Restated Joint Development and Commercialization Agreement, or the A&R JDCA. In connection with the closing of the transaction contemplated by the A&R JDCA, we will receive a $900 million up-front payment from Vertex and will also be entitled to receive a one-time $200 million milestone payment upon the achievement of a regulatory milestone.

The closing of the transaction contemplated by the A&R JDCA is subject to certain conditions including the expiration of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act and any other required antitrust clearance. As a result, we cannot assure you that the transaction with Vertex will be completed, or that, if completed, it will be within the expected time frame.

If the transaction does not close within the expected time frame or at all, we may be subject to a number of material risks. The price of our common shares may decline to the extent that current market prices reflect a market assumption that the transaction will be completed. The failure to complete the transaction also may result in negative publicity and negatively affect our relationship with Vertex. In addition, if the transaction does not close or closing is delayed, we may incur additional costs and be required to devote additional resources to the development of CTX001.

There have been no other material changes from the risk factors disclosed in our Annual Report on Form 10-K filed with the SEC on February 16, 2021. Please refer to the complete Part I, Item 1A of our Annual Report for additional risks and uncertainties we are facing that may have a material adverse effect on our business prospects, financial condition and results of operations.

Item 5. Other Information.

As disclosed in our Current Report on Form 8-K filed with the SEC on April 20, 2021 and described in Note 12 of the notes to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, on April 16, 2021, we entered into an Amended and Restated Joint Development and Commercialization Agreement, or the A&R JDCA, pursuant to which we and Vertex agreed to amend and restate our current joint development and collaboration agreement to, among other things, (a) adjust the governance structure for the collaboration and adjust the responsibilities of each party thereunder; (b) adjust the allocation of net profits and net losses between the parties with respect to CTX001 only; and (c) exclusively license (subject to our reserved rights to conduct certain activities) certain intellectual property rights to Vertex relating to the specified product candidates and products (including CTX001) that may be researched, developed, manufactured and commercialized under such agreement. The closing of the transaction contemplated by the A&R JDCA is subject to certain conditions including the expiration of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act and any other required antitrust clearance.

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth in the Exhibit Index below.

Exhibit Number	Description of Document
10.1*#	Lease, dated May 5, 2020, by and between CRISPR Therapeutics, Inc. and CRP/KING 33 NY AVE. OWNER, L.L.C.
10.2*#	First Amendment to Lease dated December 2, 2020, by and between CRISPR Therapeutics, Inc. and CRP/KING 33 NY AVE. OWNER, L.L.C.
10.3*†	First Amendment to the Strategic Collaboration and License Agreement dated March 17, 2021, between CRISPR Therapeutics AG and Vertex Pharmaceuticals Incorporated.
10.4*†#	Amended and Restated Joint Development and Commercialization Agreement between, on the one hand, Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited, and on the other hand, CRISPR Therapeutics AG, CRISPR Therapeutics Limited, CRISPR Therapeutics, Inc., and TRACR Hematology Ltd., dated as of April 16, 2021.
31.1*	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*+	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*)

* Filed herewith.

\+ The certification attached as Exhibit 32.1 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of CRISPR Therapeutics AG under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

† Certain portions of this exhibit have been omitted because they are not material and the registrant customarily and actually treats that information as private or confidential.

\# Certain exhibits and schedules to these agreements have been omitted pursuant to Item 601 of Regulation S-K. The registrant will furnish copies of any of the exhibits and schedules to the Securities and Exchange Commission upon request.

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 thereunto duly authorized.

CRISPR Therapeutics AG

Dated: April 27, 2021

By: /s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

Dated: April 27, 2021

By: /s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial Officer)

33 NEW YORK AVENUE
FRAMINGHAM, MASSACHUSETTS 01701

LEASE SUMMARY SHEET

Execution Date:	May 5, 2020
Tenant:	CRISPR THERAPEUTICS, INC., a Delaware corporation
Tenant's Mailing Address:	610 Main Street Cambridge, MA 02139 Attention: General Counsel
Landlord:	CRP/KING 33 NY AVE. OWNER, L.L.C., a Delaware limited liability company
Building:	33 New York Avenue, Framingham, Massachusetts 01701. The Building currently consists of approximately 106,438 rentable square feet. Upon the Substantial Completion of the Landlord's Work, the Building will consist of approximately 113,458 rentable square feet. The land (the "**Land**") on which the Building is located is more particularly described in Exhibit 2 attached hereto and made a part hereof.
Premises:	Areas on the first (1st) floor of the Building, the Generator Area, the Loading Dock Premises, and the roof of the Building, containing approximately 50,249 rentable square feet of space in the aggregate. The Premises consist of: **Prime Premises**, which will be located on first (1st) floor in the southerly portion of the Building, closest to New York Avenue; **Rooftop Equipment Premises**, which will be located on the Building rooftop; and **Generator Area**, as defined in Section 1.3(c). **Loading Dock Premises**, which will be located in the Building's loading dock area and will consist of two (2) of the Building's six (6) loading bays, which two loading bays are dedicated to Tenant's exclusive use and shall be enclosed as part of the Landlord's Work pursuant to Exhibit 4. The term "**Premises**" shall mean the (i) Prime Premises, (ii) Rooftop Equipment Premises, the (iii) Generator Area, and (iv) the Loading Dock Premises, as applicable. The Premises are shown on the Lease Plans attached hereto as Exhibit 1A, Exhibit 1B, and Exhibit 1C and made a part hereof (the "**Lease Plans**"). Landlord and Tenant stipulate and agree that the Rentable Square Footage of the Building and the Rentable Square Footage of the Premises are correct and shall not be remeasured.

Property:	The Building, the Land, and other improvements located on, and to be constructed on, the Land.
Parking Areas:	The surface parking lots located on the Property that Landlord provides for parking by all tenants of space on the Property.
Term Commencement Date:	The date on which Landlord's Work is Substantially Complete.
Rent Commencement Date:	The Term Commencement Date (subject to extension due to Landlord Delays or Permitting Delays, as hereinafter defined).
Expiration Date:	Fifteen (15) years after the Rent Commencement Date, except that if the Rent Commencement Date does not occur on the first day of a calendar month, then the Expiration Date shall be the last day of the calendar month in which the date fifteen (15) years after the Rent Commencement Date occurs.
Extension Term(s):	Subject to Section 1.2 below, two (2) extension terms of seven (7) years each.
Landlord's Contribution:	Up to $8,793,575.00, subject to Article 4 below and Exhibit 4 attached hereto.
Permitted Uses:	Subject to Legal Requirements, Tenant shall have the right to use the following portions of the Premises only for the following uses: **Prime Premises**: General office, research, development, biomanufacturing and laboratory use, and other ancillary uses related to the foregoing; **Rooftop Equipment Premises**: Installation, operation and maintenance of Tenant's Rooftop Equipment; and **Generator Area**: Installation and operation of Tenant's Generator. **Loading Dock Premises**: Those uses customarily associated with loading bays, subject, however, to the Rules and Regulations attached hereto as Exhibits 9 and 9-1.

Base Rent:

RENT YEAR	ANNUAL BASE RENT	MONTHLY PAYMENT
Term Commencement Date – day immediately prior to Rent Commencement Date	$0.00	$0.00
Rent Year 1	$2,160,707.00	$180,058.92
Rent Year 2	$2,225,528.21	$185,460.68
Rent Year 3	$2,292,294.06	$191,024.50
Rent Year 4	$2,361,062.88	$196,755.24
Rent Year 5	$2,431,894.76	$202,657.90
Rent Year 6	$2,504,851.61	$208,737.63
Rent Year 7	$2,579,997.16	$214,999.76
Rent Year 8	$2,657,397.07	$221,449.76
Rent Year 9	$2,737,118.98	$228,093.25
Rent Year 10	$2,819,232.55	$234,936.05
Rent Year 11	$2,903,809.53	$241,984.13
Rent Year 12	$2,990,923.81	$249,243.65
Rent Year 13	$3,080,651.53	$256,720.96
Rent Year 14	$3,173,071.07	$264,422.59
Rent Year 15	$3,268,263.21	$272,355.27

Rent Year: Rent Year 1 shall be the twelve (12) month period commencing as of the Rent Commencement Date, except that if the Rent Commencement Date occurs on other than the first day of a calendar month, then Rent Year 1 shall commence as of the Rent Commencement Date and shall end on the last day of the calendar month in which the first anniversary of the Rent Commencement Date occurs. Each Rent Year after Rent Year 1 shall be the twelve (12) month period immediately following the preceding Rent Year.

Operating Costs and Taxes: See Sections 5.2 and 5.3.

Tenant's Share:	A fraction, the numerator of which is the number of rentable square feet in the Premises and the denominator of which is the number of rentable square feet in the Building. As of the Rent Commencement Date, Tenant's Share with respect to the Premises shall be 44.26%.
Letter of Credit:	$1,260,412.44, as such amount may be reduced in accordance with Section 7, below.
Guarantor:	None.

EXHIBIT 1A	LEASE PLAN – PRIME PREMISES
EXHIBIT 1B	LEASE PLAN – ROOFTOP EQUIPMENT PREMISES
EXHIBIT 1C	LEASE PLAN – GENERATOR AREA PREMISES
EXHIBIT 2	LEGAL DESCRIPTION
EXHIBIT 3	PARKING AREAS
EXHIBIT 4	WORK LETTER
EXHIBIT 4-1	TENANT/LANDLORD RESPONSIBILITY MATRIX
EXHIBIT 4-2	LOCATION PLAN OF BUILDING EXPANSION WORK
EXHIBIT 4-3	LOCATION PLAN OF ROOF EXPANSION WORK
EXHIBIT 4-4	SPACE PLANS OF TENANT'S WORK
EXHIBIT 5	WORK LETTER – EXPANSION PREMISES
EXHIBIT 5-1	LEASE PLAN –EXPANSION PREMISES
EXHIBIT 6	FORM OF LETTER OF CREDIT
EXHIBIT 7	LANDLORD'S SERVICES &
EXHIBIT 8	TENANT'S HAZARDOUS MATERIALS
EXHIBIT 9	BUILDING RULES AND REGULATIONS
EXHIBIT 9-1	CONSTRUCTION RULES AND REGULATIONS
EXHIBIT 9-2	TENANT WORK INSURANCE SCHEDULE
EXHIBIT 10	SIGNAGE GUIDELINES
EXHIBIT 11	SCREENING STANDARDS
EXHIBIT 12	[INTENTIONALLY OMITTED]
EXHIBIT 13	FORM OF NOTICE OF LEASE
EXHIBIT 14	FORM OF SNDA
EXHIBIT 15	PARKING AND TRAFFIC DEMAND MANAGEMENT PLAN
EXHIBIT 16	PARKING RELOCATION RADIUS PLAN

TABLE OF CONTENTS

1.	LEASE GRANT; TERM; APPURTENANT RIGHTS; EXCLUSIONS		1
	1.1	Lease Grant	1
	1.2	Extension Term	1
	1.3	Appurtenant Rights	2
	1.4	Tenant’s Access	6
	1.5	No recording // Notice of Lease	7
	1.6	Exclusions	7
	1.7	Acid Neutralization Tank	7
2.	RIGHTS RESERVED TO LANDLORD		8
	2.1	Additions and Alterations	8
	2.2	Additions to the Property	9
	2.3	Name and Address of Building	10
	2.4	Landlord’s Access	10
	2.5	Pipes, Ducts and Conduits	11
	2.6	Minimize Interference	11
3.	CONDITION OF PREMISES; CONSTRUCTION.		11
	3.1	Condition of Premises	11
	3.2	Landlord’s Work	11
4.	USE OF PREMISES		14
	4.1	Permitted Uses	14
	4.2	Prohibited Uses	14
	4.3	Intentionally Omitted	15
	4.4	MWRA Permit	15
	4.5	Parking and Traffic Demand Management Plan	15
5.	RENT; ADDITIONAL RENT		15
	5.1	Base Rent; Additional Rent	15
	5.2	Operating Costs	16
	5.3	Taxes	20
	5.4	Late Payments	21
	5.5	No Offset; Independent Covenants; Waiver	22
	5.6	Survival	23
6.	INTENTIONALLY OMITTED.		23
7.	LETTER OF CREDIT		23
	7.1	Amount	23
	7.2	Application of Proceeds of Letter of Credit	24
	7.3	Transfer of Letter of Credit	24
	7.4	Cash Proceeds of Letter of Credit	24
	7.5	Return of Security Deposit or Letter of Credit	24

8. WAIVER OF SECURITY INTEREST IN TENANT'S PROPERTY. 25

9. UTILITIES, LANDLORD'S SERVICES 25

9.1 Electricity 25
9.2 Water 25
9.3 Gas 26
9.4 Other Utilities 26
9.5 Interruption or Curtailment of Utilities 26
9.6 Landlord's Services 26

10. MAINTENANCE AND REPAIRS 26

10.1 Maintenance and Repairs by Tenant 26
10.2 Maintenance and Repairs by Landlord 27
10.3 Accidents to Sanitary and Other Systems 27
10.4 Floor Load--Heavy Equipment 27
10.5 Premises Cleaning 27
10.6 Pest Control 28
10.7 Service Interruptions 28

11. ALTERATIONS AND IMPROVEMENTS BY TENANT 29

11.1 Landlord's Consent Required 29
11.3 After-Hours 30
11.4 Harmonious Relations 31
11.5 Liens 31
11.6 General Requirements 31

12. SIGNAGE 31

12.1 Restrictions 31
12.2 Exterior Signage 31
12.3 Building Directory 32

13. ASSIGNMENT, MORTGAGING AND SUBLETTING 32

13.1 Landlord's Consent Required 32
13.2 Landlord's Recapture Right 33
13.3 Standard of Consent to Transfer 33
13.4 Listing Confers no Rights 33
13.5 Profits In Connection with Transfers 33
13.6 Prohibited Transfers 34
13.7 Exceptions to Requirement for Consent 34

14. INSURANCE; INDEMNIFICATION; EXCULPATION 35

14.1 Tenant's Insurance 35
14.2 Indemnification 36
14.3 Property of Tenant 37
14.4 Limitation of Landlord's Liability for Damage or Injury 37
14.5 Waiver of Subrogation; Mutual Release 37

14.6 Tenant's Acts--Effect on Insurance 37
14.7 Landlord's Insurance 38

15. CASUALTY; TAKING 38

15.1 Damage 38
15.2 Termination Rights 39
15.3 Rent Abatement 40
15.4 Taking for Temporary Use 40
15.5 Disposition of Awards 40

16. ESTOPPEL CERTIFICATE. 40

17. HAZARDOUS MATERIALS 41

17.1 Prohibition 41
17.2 Environmental Laws 42
17.3 Hazardous Material Defined 42
17.4 Chemical Safety Program 42
17.5 Testing 42
17.6 Indemnity; Remediation 43
17.7 Disclosures 44
17.8 Removal 44

18. RULES AND REGULATIONS. 45

18.1 Rules and Regulations 45
18.2 Energy Conservation 45
18.3 Recycling 45

19. LAWS AND PERMITS. 46

19.1 Legal Requirements 46

20. DEFAULT 47

20.1 Events of Default 47
20.2 Remedies 48
20.3 Damages - Termination 48
20.4 Landlord's Self-Help; Fees and Expenses 50
20.5 Waiver of Redemption, Statutory Notice and Grace Periods 50
20.6 Landlord's Remedies Not Exclusive 50
20.7 No Waiver 50
20.8 Restrictions on Tenant's Rights 51
20.9 Landlord Default 51

21. SURRENDER; ABANDONED PROPERTY; HOLD-OVER 52

21.1 Surrender 52
21.2 Abandoned Property 53
21.3 Holdover 54
21.4 Warranties 54

22. MORTGAGEE RIGHTS 54
22.1 Subordination 54
22.2 Notices 55
23. QUIET ENJOYMENT. 55
24. NOTICES. 55
25. MISCELLANEOUS 56
25.1 Separability 56
25.2 Captions 56
25.3 Broker 56
25.4 Entire Agreement 56
25.5 Governing Law 57
25.6 Representation of Authority 57
25.7 Expenses Incurred by Landlord Upon Tenant Requests 57
25.8 Survival 57
25.9 Limitation of Liability 57
25.10 Binding Effect 58
25.11 Landlord Obligations upon Transfer 58
25.12 No Grant of Interest 58
25.13 Financial Information 58
25.14 OFAC Certificate and Indemnity 58
25.15 Confidentiality 59
25.16 Force Majeure 59
26. RIGHT OF FIRST OFFER. 59
27. EXPANSION OPTION 62

THIS INDENTURE OF LEASE (this "**Lease**") is hereby made and entered into on the Execution Date by and between Landlord and Tenant.

Each reference in this Lease to any of the terms and titles contained in any Exhibit attached to this Lease shall be deemed and construed to incorporate the data stated under that term or title in such Exhibit. All capitalized terms not otherwise defined herein shall have the meanings ascribed to them as set forth in the Lease Summary Sheet which is attached hereto and incorporated herein by reference.

1. LEASE GRANT; TERM; APPURTENANT RIGHTS; EXCLUSIONS

1.1 Lease Grant. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Premises upon and subject to terms and conditions of this Lease, for a term of years commencing on the Term Commencement Date and, unless earlier terminated or extended pursuant to the terms hereof, ending on the Expiration Date (the "**Initial Term**"; the Initial Term and any duly exercised Extension Terms are hereinafter collectively referred to as the "**Term**").

1.2 Extension Term.

(a) Provided that the following conditions, which may be waived by Landlord in its sole discretion, are satisfied (i) Tenant, an Affiliated Entity (hereinafter defined) and/or a Successor (hereinafter defined) is/are then occupying at least fifty-one percent (51%) of the Premises; and (ii) no monetary or material non-monetary Event of Default has occurred that remains uncured as of the date of the Extension Notice (hereinafter defined), and no more than two (2) Events of Default have occurred in the twelve (12) months preceding Tenant's delivery of the Extension Notice, then Tenant shall have the option to extend the Term for two (2) additional terms of seven (7) years each (each an "**Extension Term**"), commencing as of the expiration of the Initial Term and of the first such Extension Term, respectively. Tenant must exercise each such option to extend, if at all, by giving Landlord written notice (the "**Extension Notice**") on or before the date that is twelve (12) months prior to the then-applicable expiration of the Term, *time being of the essence*. Upon the timely giving of such notice, the Term shall be deemed extended upon all of the terms and conditions of this Lease, except that Base Rent during each such Extension Term shall be calculated in accordance with this Section 1.2. Landlord shall have no obligation to construct or renovate the Premises during either such Extension Term. If Tenant fails to give timely notice, as aforesaid, Tenant shall have no further right to extend the Term. Notwithstanding the fact that Tenant's proper and timely exercise of such option to extend the Term shall be self-executing, the parties shall promptly execute a lease amendment reflecting each such Extension Term, as applicable, after Tenant exercises such option. The execution of such lease amendment shall not be deemed to waive any of the conditions to Tenant's exercise of its rights under this Section 1.2.

(b) The Base Rent during each Extension Term (in each case, the "**Extension Term Base Rent**") shall be determined in accordance with the process described hereafter. Extension Term Base Rent shall be the fair market rental value of the Premises then demised to Tenant as of the commencement of such Extension Term as determined in accordance with the process described below, for renewals of first class office/research/laboratory building/campus in the greater Route 128 and MetroWest real estate market (the "**Market Area**") of equivalent

quality, size, utility and location, with the length of the Extension Term, and all other relevant factors to be taken into account. After receipt of an Extension Notice, Landlord shall deliver to Tenant written notice of its determination of the Extension Term Base Rent for the Extension Term, provided that Landlord shall not be obligated to deliver its determination to Tenant sooner than the date that is eleven (11) months prior to the then-applicable expiration of the Term. Tenant shall, within thirty (30) days after receipt of such notice, notify Landlord in writing whether Tenant accepts or rejects Landlord's determination of the Extension Term Base Rent ("**Tenant's Response Notice**"). If Tenant fails timely to deliver Tenant's Response Notice, Landlord's determination of the Extension Term Base Rent shall be binding on Tenant.

(c) If and only if Tenant's Response Notice is timely delivered to Landlord and indicates both that Tenant rejects Landlord's determination of the Extension Term Base Rent and desires to submit the matter to arbitration, then the Extension Term Base Rent shall be determined in accordance with the procedure set forth in this Section 1.2(c). In such event, within ten (10) days after receipt by Landlord of Tenant's Response Notice indicating Tenant's desire to submit the determination of the Extension Term Base Rent to arbitration, Tenant and Landlord shall each notify the other, in writing, of their respective selections of an appraiser (respectively, "**Landlord's Appraiser**" and "**Tenant's Appraiser**"). Landlord's Appraiser and Tenant's Appraiser shall thereafter attempt to agree on the Extension Term Base Rent for the applicable Extension Term; provided, however, that if Landlord's Appraiser and Tenant's Appraiser are unable to so agree on the Extension Term Base Rent within ten (10) days after the appointment of the second of the two appraisers (the "**Initial Determination Period**"), then Landlord's Appraiser and Tenant's Appraiser shall jointly select a third appraiser (the "**Third Appraiser**") within ten (10) days after the expiration of the Initial Determination Period. All of the appraisers selected shall be individuals with at least ten (10) consecutive years' commercial appraisal experience for office and laboratory space in the area in which the Premises are located, shall be members of the Appraisal Institute (M.A.I.), and, in the case of the Third Appraiser, shall not have acted in any capacity for either Landlord or Tenant within five (5) years of his or her selection. The three appraisers shall determine the Extension Term Base Rent in accordance with the requirements and criteria set forth in Section 1.2(b) above, employing the method commonly known as Baseball Arbitration, whereby Landlord's Appraiser and Tenant's Appraiser each sets forth its determination of the Extension Term Base Rent as defined above, and the Third Appraiser must select one or the other (it being understood that the Third Appraiser shall be expressly prohibited from selecting a compromise figure). Landlord's Appraiser and Tenant's Appraiser shall deliver their determinations of the Extension Term Base Rent to the Third Appraiser within five (5) days of the appointment of the Third Appraiser and the Third Appraiser shall render his or her decision within ten (10) days after receipt of both of the other two determinations of the Extension Term Base Rent. The Third Appraiser's decision shall be binding on both Landlord and Tenant. Each party shall bear the cost of its own appraiser and the cost of the Third Appraiser shall be paid by the party whose determination is not selected.

1.3 Appurtenant Rights.

(a) Common Areas. Subject to the terms of this Lease and the Rules and Regulations (hereinafter defined), Tenant shall have, as appurtenant to the Premises, rights to use in common with others entitled thereto, the following areas (such areas are hereinafter referred to as the "**Common Areas**"): (i) the common hallway(s) of the Building serving the Premises, (ii)

common walkways and driveways necessary for access to the Building, (iii) risers, shafts, chases, and conduits designated by Landlord for use by tenants and/or other occupants, (iv) the Parking Areas, (v) areas of the Building and the Property necessary for access to the Loading Dock Premises and Generator Area, and on the rooftop of the Building necessary for access to the Rooftop Equipment Premises, (vi) common electrical and service facilities, and (vii) other areas and facilities located in the Building, on the Land, or elsewhere on the Property designated by Landlord from time to time for the common use of tenants of the Building and other entitled thereto; and no other appurtenant rights or easements. **"Rules and Regulations"** shall be defined as the rules and regulations promulgated by Landlord pursuant to, and subject to, the provisions of Section 18.1 of the Lease.

(b) Parking.

(i) During the Term, Landlord shall, subject to the terms hereof, make available up to one hundred thirteen (113) parking spaces for Tenant's use free of charge (except that the costs of maintenance and repair of the parking areas shall, subject to the provisions of Section 5.2, be included in Operating Costs) in the Parking Areas serving the Building as shown on Exhibit 3. The number of parking spaces in the parking areas reserved for Tenant, as modified pursuant to this Lease, are hereinafter referred to as the "**Parking Spaces**." Tenant shall have no right to hypothecate or encumber the Parking Spaces, and shall not sublet, assign, or otherwise transfer the Parking Spaces other than to employees of Tenant occupying the Premises or to a Successor (hereinafter defined), an Affiliated Entity (hereinafter defined), or a transferee pursuant to an approved Transfer under Section 13 of this Lease. Subject to Landlord's right to allocate parking for other tenants of the Building based on a ratio not to exceed three (3) spaces per 1,000 rentable square feet of space, said Parking Spaces will be on an unassigned, non-reserved basis, and shall be subject to such Rules and Regulations, as may be in effect for the use of the parking areas from time to time. Reserved and handicap parking spaces must be honored. Landlord shall designate eleven (11) of Tenant's Parking Spaces as reserved spaces in the area located adjacent to the Building's main entrance. Notwithstanding anything to the contrary contained herein, Landlord shall have the right, upon at least three (3) months' prior written notice to Tenant, to temporarily, for a period not to exceed six (6) months relocate all or any portion of the Parking Spaces to other portions of the Property and/or to any of the parking areas shown on Exhibit 16 attached hereto. If Landlord elects to relocate Tenant's Parking Spaces, Landlord (at its sole cost and expense) shall provide, for the duration of such relocation, shuttle service to and from such temporary parking location. Landlord hereby agrees that Tenant shall have reasonable input into any such temporary parking solution. The foregoing limitations on Landlord's ability to relocate all or any portion of the Parking Spaces (including, without limitation, the radius restriction and the maximum, six (6) month window for any such relocation) shall not apply in connection with a relocation of all or any portion of the Parking Spaces resulting from Tenant's exercise of the expansion option set forth in Section 27 of this Lease); provided that Landlord shall not relocate any more of the Parking Spaces than reasonably necessary for any longer than reasonably necessary to complete the applicable Expansion Premises Work.

(c) Generator Area.

(i) Landlord shall demise and lease the Generator Area, as hereinafter defined, to Tenant, and Tenant shall hire and take the Generator Area from Landlord for the Lease

Term. The "**Generator Area**" shall be defined as the area of the Property shown on Exhibit 1C attached hereto. Tenant shall have the right to use the Generator Area solely for the purpose of using Tenant's own emergency generator ("**Tenant's Generator**") in accordance with the provisions of this Section 1.3(c). Said demise of Tenant's Generator Area shall be upon all of the same terms and conditions of the Lease, except as set forth herein. Tenant shall not operate Tenant's Generator until Landlord has obtained copies of all required governmental permits, licenses, and authorizations necessary for the installation and operation of Tenant's Generator. Tenant shall be permitted to use Tenant's Generator Area solely for the maintenance and operation of Tenant's Generator, and Tenant's Generator and Generator Area are solely for the benefit of Tenant. All electricity generated by Tenant's Generator may only be consumed by Tenant in the Premises.

(ii) Tenant shall, at Tenant's sole cost, comply with local sound ordinances (which may require sound mitigation measures) relating to Tenant's Generator, and Tenant may elect to use a portion of the Landlord's Contribution for such purposes.

(iii) Landlord shall have no obligation to provide any services including, without limitation, electric current, to Tenant's Generator Area; provided, however, that Tenant, at Tenant's sole cost, shall, subject to the provisions of this Lease, have the right to install wiring in locations acceptable to Landlord and Tenant in order to connect Tenant's Generator to Tenant's electrical system serving the Premises.

(iv) Tenant shall have no right to make any changes, alterations, additions, decorations or other improvements (collectively "**Installations**") to Tenant's Generator Area without Landlord's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed.

(v) Tenant shall be responsible for the cost of repairing any damage to the Building and/or Property caused by the installation of any Installations.

(vi) Tenant shall have no right to sublet Tenant's Generator Area or to assign its interest hereunder, other than to an Affiliated Entity or Successor as defined in Section 13.7 of this Lease, or a transferee pursuant to an approved Transfer under Section 13 of this Lease.

(vii) Tenant shall take Tenant's Generator Area "as-is" in the condition in which Tenant's Generator Area is in as of the Term Commencement Date, without any obligation on the part of Landlord to prepare or construct Tenant's Generator Area for Tenant's use or occupancy.

(viii) In addition to and without limiting Tenant's obligations under the Lease, Tenant shall comply with all applicable environmental and fire prevention laws, ordinances and regulations in Tenant's use of Tenant's Generator Area.

(ix) Tenant shall, at Tenant's sole cost and expense, repair and maintain Tenant's Generator and Installations.

(x) In addition to and without limiting the insurance provisions of the Lease, Tenant shall procure, keep in force and pay for Commercial General Liability Insurance in respect of Tenant's Generator Area satisfying the requirements of Section 14.1 of the Lease.

(xi) To the maximum extent permitted by Law, Tenant's Generator and all installations in Tenant's Generator Area shall be at the sole risk of Tenant.

(xii) In addition to and without limiting the indemnification provisions set forth in the Lease, Tenant shall, to the maximum extent permitted by law and subject to Section 14.5, indemnify, defend, and hold Landlord harmless from any and all claims, losses, demands, actions, or causes of actions suffered by any person, firm, corporation, or other entity arising from Tenant's use of Tenant's Generator Area, except to the extent caused by the negligent acts, negligent omissions or willful misconduct of Landlord or any Landlord Parties.

(xiii) Notwithstanding anything in this Section 1.3(c) to the contrary, Landlord shall have the right to access the area beneath the Generator Area, and shall further have the right to relocate the Generator Area on a temporary and/or a permanent basis upon not less than thirty (30) days prior written notice and at Landlord's sole cost and expense, including, without limitation, for the purpose of accessing utilities buried underneath the Generator Area for the purposes of maintenance, repairs and/or replacements; provided that (1) any such access to the area beneath the Generator Area, and any such temporary or permanent relocation of the Generator Area, shall not in any case materially adversely affect Tenant's ability to utilize Tenant's Generator or any of Tenant's rights pursuant to this Section 1.3(c), and (2) to the extent that Tenant's Generator is offline due to a relocation of the Generator Area pursuant to this Section 1.3(c)(xiii), Landlord shall provide Tenant with access to substitute generator capacity at least equal to that of Tenant's Generator.

(d) Rooftop Equipment Premises. Tenant shall have the right, as part of Tenant's Work, to install certain equipment within a portion of the rooftop of the Building (the "**Rooftop Equipment Premises**") as shown on Exhibit 1B and to connect such equipment to the Premises (any equipment installed within the Rooftop Equipment Premises and such connections to the Premises, as the same may be modified, altered or replaced during the Term, is collectively referred to herein as "**Tenant's Rooftop Equipment**"), for Tenant's exclusive use during the Term in accordance with the provisions of this Lease, including, without limitation, Section 11 hereof. Tenant shall have the right, throughout the Term of the Lease, as the same may be extended, to use Tenant's Rooftop Equipment in accordance with all applicable laws, ordinances, rules, regulations, statutes, by-laws, court decisions and orders and requirements of all public authorities (collectively, "**Legal Requirements**"). Tenant shall not operate Tenant's Rooftop Equipment until it has delivered to Landlord copies of all required governmental permits, licenses, and authorizations necessary for the installation and operation thereof. Any installation of Tenant's Rooftop Equipment (i) will not affect the structural integrity of the Building or adversely affect the roof or the roof membrane in any manner; (ii) shall be adequately screened in accordance with Landlord's screening standards as further described in Exhibit 11, attached hereto, and in compliance with the City of Framingham zoning requirements so as to minimize the visibility of such equipment; and (iii) shall be adequately sound-proofed to meet all Legal Requirements. In addition, Tenant shall comply with all reasonable construction rules and regulations promulgated by Landlord in connection with the installation, maintenance and operation of Tenant's Rooftop

Equipment. Landlord shall have no obligation to provide any services including, without limitation, electric current or gas service, to the Rooftop Equipment Premises or to Tenant's Rooftop Equipment, Tenant hereby acknowledging that as of the Execution Date, there are no utility connections directly serving the Rooftop Equipment Premises. Tenant shall be responsible for the cost of repairing and maintaining Tenant's Rooftop Equipment and the cost of repairing any damage to the Building, or the cost of any necessary improvements to the Building, caused by or as a result of the installation, replacement and/or removal of Tenant's Rooftop Equipment. Landlord makes no warranties or representations to Tenant as to the suitability of the Rooftop Equipment Premises for the installation and operation of Tenant's Rooftop Equipment. In the event that at any time during the Term, Landlord determines, in its reasonable discretion, that the operation and/or periodic testing of Tenant's Rooftop Equipment interferes with the operation of the Building or the business operations of any of the occupants of the Building, then Tenant shall, upon notice from Landlord, cause all further testing of Tenant's Rooftop Equipment to occur after normal business hours (hereinafter defined).

(e) Intentionally Deleted.

(f) Outdoor Patio. Subject to the Rules and Regulations and the provisions of this Lease, Landlord agrees that Tenant shall have, as appurtenant to the Premises, the non-exclusive right to use the existing outside seating area adjacent to the Building (the "**Outside Seating Area**") throughout the Term hereof. In no event shall Landlord permit smoking or vaping within 20 feet of the Building or any Tenant entrance to the Building. Notwithstanding anything to the contrary contained herein, Landlord shall have the right, upon prior written notice (which notice may be given via e-mail) (except that no notice shall be required in the event of an emergency) to temporarily close all or any portion of the Outside Seating Area in connection with the performance of repairs, maintenance, and/or construction (if such closure cannot be reasonably avoided in connection with such repairs, maintenance and/or construction). Landlord shall install and maintain, at its sole cost and expense, all desired furniture, equipment and lighting (collectively, "**Furniture**") in the Outside Seating Area.

1.4 Tenant's Access.

(a) From and after the Term Commencement Date and until the end of the Term, Tenant shall have access to the Premises twenty-four (24) hours a day, seven (7) days a week, except in an emergency, and subject to Legal Requirements, the Rules and Regulations, the terms of this Lease, Force Majeure (hereinafter defined) and matters of record existing as of the date of this Lease. Tenant and its employees shall have access to the Building after normal business hours by means of a card reader access system.

(b) Subject to Section 3.2, and further subject to Section 11, Tenant shall have the right to access the Premises, at Tenant's sole risk, beginning on the date two (2) months prior to the Estimated Delivery Date, as such date may be adjusted in accordance with Section 3.2 (the "**Early Access Date**") for the commencement of Tenant's Work, provided that Landlord and Tenant agree to coordinate such access so as not to materially interfere with the performance of the Landlord's Work (as defined in Exhibit 4). Tenant shall, prior to the first entry to the Premises pursuant to this Section 1.4(b), provide Landlord with certificates of insurance evidencing that the insurance required in Section 14 hereof is in full force and effect and covering any person or entity

entering the Building. Tenant shall defend, indemnify and hold the Landlord Parties (hereinafter defined) harmless from and against any and all Claims (hereinafter defined) for injury to persons or property resulting from or relating to Tenant's access to and use of the Premises prior to the Term Commencement Date as provided under this Section 1.4(b). Tenant shall coordinate any access to the Premises prior to the Term Commencement Date with Landlord's property manager.

1.5 No recording // Notice of Lease. Neither party shall record this Lease. Notwithstanding the foregoing, if the Initial Term plus any Extension Term(s) exceed in the aggregate seven (7) years, Landlord agrees to join in the execution, in recordable form, of a statutory notice of lease and/or written declaration in which shall be stated the Term Commencement Date, the number and length of the Extension Term(s) and the Expiration Date, and a description of Tenant's other rights at the Property, which notice of lease may be recorded by Tenant with the Middlesex South Registry of Deeds and/or filed with the Middlesex South Registry District of the Land Court, as appropriate (alternatively and collectively, the "**Registry**") at Tenant's sole cost and expense. If a notice of lease was previously recorded with the Registry, upon the expiration or earlier termination of this Lease, Landlord shall deliver to Tenant a notice of termination of Lease and Tenant shall promptly execute, acknowledge, and deliver the same (together with any other instrument(s) that may be necessary in order to record and/or file same with the Registry) to Landlord for Landlord's execution and recordation with the Registry, which obligation shall survive the expiration or earlier termination of the Lease.

1.6 Exclusions. The following are expressly excluded from the Premises and reserved to Landlord: all the perimeter walls of the Premises (except the inner surfaces thereof), the Common Areas, and any space in or adjacent to the Premises used for shafts, stacks, pipes, conduits, wires and appurtenant fixtures, fan rooms, ducts, electric or other utilities, sinks or other Building facilities, and the use of all of the foregoing, except as expressly permitted pursuant to Section 1.3(a) above.

1.7 Acid Neutralization Tank.

(a) Tenant shall, as part of Tenant's Work, have the right to install a separate acid neutralization tank ("**Tenant's Acid Neutralization Tank**") within the Premises for Tenant's exclusive use in accordance with the provisions of this Lease, including, without limitation, Section 11 hereof. Tenant shall have the right, throughout the Term of the Lease, as the same may be extended, to use Tenant's Acid Neutralization Tank in accordance with Legal Requirements. Tenant shall obtain, and maintain, all governmental permits and approvals necessary for the operation and maintenance of Tenant's Acid Neutralization Tank. Following the installation and commissioning of Tenant's Acid Neutralization Tank, if applicable, Tenant shall be responsible for all costs, charges and expenses incurred from time to time in connection with or arising out of the operation, use, maintenance and repair of Tenant's Acid Neutralization Tank, including all clean-up costs relating to Tenant's Acid Neutralization Tank (collectively, "**Tank Costs**"), except, subject to Section 14.5, to the extent such costs are caused by the negligence or willful misconduct of any of the Landlord Parties.

(b) If Tenant elects to install Tenant's Acid Neutralization Tank, Tenant shall be responsible for assuring that the maintenance and operation of Tenant's Acid Neutralization Tank shall in no way damage any portion of the Building or Property. Except for Landlord's or

any Landlord Parties' negligence or willful misconduct, and to the maximum extent permitted by Law, Tenant's Acid Neutralization Tank and all appurtenances thereto shall be at the sole risk of Tenant, and Landlord shall have no liability to Tenant if Tenant's Acid Neutralization Tank or any appurtenant installations are damaged for any reason following the installation of Tenant's Acid Neutralization Tank. Except for Landlord's or any Landlord Parties' negligence or willful misconduct, Tenant agrees to be responsible for any damage caused to the Building or Property in connection with the maintenance and operation of Tenant's Acid Neutralization Tank. Except (subject to Section 14.5) with respect to Claims, to the extent caused by the negligence or willful misconduct of Landlord or any Landlord Parties, Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold the Landlord Parties, as hereinafter defined, harmless from and against any and all Claims (as hereinafter defined), including (i) diminution in value of the Premises or any portion thereof, (ii) damages for the loss of or restriction on use of rentable or usable space of the Premises, (iii) damages arising from any adverse impact on marketing of space in the Premises or any portion thereof, and (iv) sums paid in settlement of Claims that arise during or after the Term as a result of Tenant's improper use of Tenant's Acid Neutralization Tank in violation of applicable Legal Requirements. This indemnification by Tenant includes costs actually incurred by Landlord: (1) in connection with any investigation required by any Governmental Authority of site conditions, (2) in connection with any investigation required by Landlord pursuant to which it is determined that Tenant has breached its obligations with respect to Tenant's Acid Neutralization Tank, and (3) any clean-up, remediation, and/or removal of any Hazardous Materials and/or restoration of the Property required by any Governmental Authority caused by Tenant's improper use of Tenant's Acid Neutralization Tank.

(c) Tenant shall be responsible for the operation, cleanliness and maintenance of Tenant's Acid Neutralization Tank and the appurtenances. Tenant shall repair any damage caused by such removal, including the patching of any holes to match, as closely as possible, the color surrounding the area where Tenant's Acid Neutralization Tank and appurtenances were attached. Such maintenance and operation shall be performed in a manner to avoid any unreasonable interference with any other tenants or Landlord. Landlord makes no warranties or representations to Tenant as to the suitability of the Premises for the installation and operation of Tenant's Acid Neutralization Tank. Tenant agrees to maintain Tenant's Acid Neutralization Tank in good condition and repair.

(d) Landlord shall have no obligation to provide any services, including, without limitation, electric current, to Tenant's Acid Neutralization Tank.

(e) Tenant's Surrender Plan, as required pursuant to Section 21.2, shall include the decommissioning of Tenant's Acid Neutralization Tank.

2. RIGHTS RESERVED TO LANDLORD

2.1 Additions and Alterations. Landlord reserves the right, at any time and from time to time, to make such changes, alterations, additions, improvements, repairs or replacements in or to the Property (including the Premises but, with respect to the Premises, only for purposes of repairs, maintenance, replacements and the exercise of any other rights expressly reserved to Landlord herein) and the fixtures and equipment therein, as well as in or to the street entrances

and/or the Common Areas, as it may deem necessary or desirable, provided, however, that there be no obstruction of permanent access to, or material interference with the use and enjoyment of, the Premises by Tenant. Subject to the foregoing, Landlord expressly reserves the right to temporarily close all, or any portion, of the Common Areas for the purpose of making repairs or changes thereto.

2.2 Additions to the Property.

(a) Landlord may at any time or from time to time (i) construct additional building(s) and improvements and related site improvements (collectively, "**Future Development**") in all or any part of the Property and/or (ii) change the location or arrangement of any improvement outside the Building in or on the Property or all or any part of the Common Areas, or add or deduct any land to or from the Property; provided that (x) there shall be no material increase in Tenant's obligations or material interference with Tenant's rights under this Lease and no material adverse effect on Tenant's operations in the Premises, or any reduction in parking spaces in connection with the exercise of the foregoing reserved rights, and (y) Landlord agrees that in no event shall any Future Development include the addition of a second (2nd) floor immediately above the Premises without Tenant's prior written consent, which may be withheld in Tenant's sole discretion. Landlord shall coordinate any such work with Tenant so as to ensure that Tenant's operations are not materially adversely impacted.

(b) In case any excavation shall be made for building or improvements or for any other purpose upon the land adjacent to or near the Premises, Tenant will afford without charge to Landlord, or the person or persons, firms or corporations causing or making such excavation, license to enter upon the Premises for the purpose of doing such work as Landlord or such person or persons, firms or corporation shall deem to be necessary to preserve the walls or structures of the Building from injury, and to protect the Building by proper securing of foundations, provided that such access and work shall not adversely affect Tenant's normal operations in the Premises and shall be effected in coordination with Tenant's confidentiality and security requirements, including any such requirements under Legal Requirements applicable to Tenant's operations.

(c) Landlord, on behalf of itself and its successors and assigns, reserves the right to convert the Property, and all of the buildings now or hereafter located thereon, to the condominium form of ownership pursuant to Massachusetts General Laws Chapter 183A (the "**Condominium**"), so long as such Condominium does not, by more than a de minimis amount: (x) adversely affect Tenant's rights under this Lease, or (y) increase Tenant's obligations under this Lease. In the event of the conversion of the Property to the Condominium, Tenant will cooperate in the negotiation and execution of commercially reasonable documentation which confirms that the Premises will be described in the Master Deed of the Condominium (the "**Master Deed**") as part or all of a unit in the Condominium (the "**Unit**") and shall be subject to said Master Deed and also to an agreement which governs the rights and obligations of the owners of such units (the "**Declaration of Trust**") (the Master Deed, the Declaration of Trust and any by-laws and rules or regulations promulgated thereunder are referred to collectively as the "**Condominium Documents**"). Landlord and its successors and assigns shall be subject to the Condominium Documents. Tenant agrees that in connection with the creation of the Condominium, Tenant will cooperate in the negotiation and execution of commercially reasonable documentation which confirms that this Lease shall be subject and subordinate to the Condominium Documents and that

Tenant's leasehold interest will be converted to a leasehold interest in all or a demised portion of an individual unit in the Condominium and an interest in common with others to use common areas of the Condominium that are ancillary to Tenant's Premises under this Lease. If Landlord subjects the Project and this Lease to a Condominium, either (x) the Condominium Documents for such Condominium shall include commercially reasonable nondisturbance and recognition requirements for the condominium association with respect to this Lease, or (y) the condominium association shall enter into a commercially reasonable nondisturbance and recognition agreement with Tenant contemporaneously with the creation of the Condominium, at no additional cost to Tenant wherein the condominium association will agree to recognize this Lease and the right of Tenant to use and occupy the Premises provided that there is then no Event of Default hereunder, and wherein Tenant shall agree to attorn to such condominium association as its Landlord and to perform and observe all of the tenant obligations hereunder, in the event the condominium association succeeds to the interest of Landlord hereunder.

(d) Landlord and Tenant each hereby acknowledges and agrees that, in connection with any Future Development, (i) Landlord shall have the right to enter into, and subject the Property to the terms and conditions of, a commercially reasonable reciprocal easement agreement with any one or more of the neighboring property owners in order to create a commercial campus-like setting ("**REA**"); (ii) upon Landlord's request in connection with the recording of the REA, Tenant shall execute a commercially reasonable instrument in recordable form making this Lease subject and subordinate to the REA (at no additional cost to Tenant) and provided that there shall be no material increase in Tenant's obligations or material interference with Tenant's rights under this Lease and no material adverse effect on Tenant's operations in the Premises, or any reduction in parking spaces in connection with the exercise of the foregoing reserved rights; (iii) Landlord shall have the right to subdivide the Property so long as Tenant continues to have all of the rights and obligations contained in this Lease (e.g., the appurtenant right to use all Common Areas); and (iv) Tenant shall execute such reasonable documents (which may be in recordable form) evidencing the foregoing promptly upon Landlord's request and at no additional cost to Tenant.

2.3 Name and Address of Building. Landlord reserves the right at any time and from time to time to change the name or address of the Building and/or the Property, provided Landlord gives Tenant at least three (3) months' prior written notice thereof.

2.4 Landlord's Access. Subject to the terms hereof, Tenant shall (a) upon reasonable advance notice, which may be by email to Tenant's designated representatives (except that only notice reasonable under the circumstances shall be required in emergency situations), permit Landlord and any holder of a Mortgage (hereinafter defined) (each such holder, a "**Mortgagee**"), and the agents, representatives, employees and contractors of each of them, to have reasonable access to the Premises during normal business hours (or, in coordination with Tenant, after business hours with respect to performing any repairs or other work that would interfere with Tenant's normal business operations) for the purposes of inspection and exercising any right reserved to Landlord under this Lease, including making repairs, replacements or improvements in or to the Premises or the Building or equipment therein (including, without limitation, sanitary, electrical, heating, air conditioning or other systems), and complying with Legal Requirements; (b) permit Landlord and its agents and employees, at reasonable times, upon reasonable advance notice, to show the Premises during normal business hours (i.e. Monday – Friday 7 A.M. - 6 P.M.,

Saturday 7 A.M. – 12 P.M., excluding holidays) to any prospective Mortgagee or purchaser of the Building and/or the Property or of the interest of Landlord therein, and, during the last twelve (12) months of the Term, prospective tenants; and (c) upon reasonable prior written notice from Landlord, permit Landlord and its agents, at Landlord's sole cost and expense, to perform environmental audits, environmental site investigations and environmental site assessments ("**Site Assessments**") in, on, under and at the Premises and the Land, it being understood that Landlord shall repair any damage arising as a result of the Site Assessments, and such Site Assessments may include both above and below the ground testing and such other tests as may be necessary or appropriate to conduct the Site Assessments. In addition, to the extent that it is necessary to enter the Premises in order to access any area that serves any portion of the Building outside the Premises, then Tenant shall, upon as much advance notice as is practical under the circumstances, and in any event at least twenty-four (24) hours' prior written notice (except that only notice reasonable under the circumstances shall be required in emergency situations), permit contractors engaged by other occupants of the Building to pass through the Premises in order to access such areas but only if accompanied by a representative of Landlord. Access by any individual permitted under this Section shall be accompanied by a representative of Tenant, provided that Tenant shall make available said representative upon reasonable advance notice from Landlord, and shall be subject to Tenant's confidentiality and security requirements, including any such requirements under Legal Requirements applicable to Tenant's operations Such access and work shall not adversely affect Tenant's normal operations in the Premises.

2.5 Pipes, Ducts and Conduits. Tenant shall permit Landlord to erect, use, maintain and relocate pipes, ducts and conduits in and through the Premises, provided the same do not reduce the usable area of the Premises or adversely affect the appearance or utility thereof, in either case by more than a de minimis amount.

2.6 Minimize Interference. Except in the event of an emergency, Landlord shall use commercially reasonable efforts to minimize any interference with Tenant's business operations and use and occupancy of the Premises in connection with the exercise any of the foregoing rights under this Section 2.

3. CONDITION OF PREMISES; CONSTRUCTION.

3.1 Condition of Premises. Tenant acknowledges and agrees that Tenant is leasing the Premises in their "**AS IS**," "**WHERE IS**" condition and with all faults on the Term Commencement Date, without representations or warranties, express or implied, in fact or by law, of any kind, and without recourse to Landlord, except that Landlord shall perform Landlord's Work in accordance with the provisions of this Section 3 and Exhibit 4.

3.2 Landlord's Work.

(a) Landlord shall perform Landlord's Work in order to prepare the Premises for Tenant's use and occupancy in accordance with Exhibit 4 attached hereto. Landlord shall use diligent efforts to achieve Substantial Completion of Landlord's Work by March 15, 2021 (the "**Estimated Delivery Date**"), provided that the Estimated Delivery Date shall be extended by one (1) day for each day of any delay due to Force Majeure, a Tenant Delay or a Permitting Delay (further provided that Landlord shall use commercially reasonable efforts to mitigate the impacts

of any Force Majeure or Permitting Delay). If Substantial Completion (defined below) has not occurred on or before the Outside Rent Credit Date (defined below), then, as Tenant's sole remedy, based upon any delay in Substantial Completion, Tenant shall be entitled to a rent credit against Tenant's obligation to pay Base Rent equal to one (1) day for each of the first thirty (30) days between the Outside Rent Credit Date and Substantial Completion, and two (2) days for each day thereafter, until Substantial Completion occurs. The "**Outside Rent Credit Date**" shall mean the date that is thirty (30) days after the Estimated Delivery Date, as such date may be extended pursuant to this Section 3.2(a). If Substantial Completion has not occurred on or before the Outside Termination Date, as hereinafter defined, then Tenant shall have the right to terminate the Lease, which shall be exercisable by a written thirty (30) day termination notice given on or after the Outside Termination Date but before the date that Substantial Completion occurs. If Substantial Completion occurs on or before the thirtieth (30th) day after Landlord receives such termination notice, Tenant's termination notice shall be deemed to be void and of no force or effect. If Substantial Completion does not occur on or before such thirtieth (30th) day, this Lease shall terminate and shall be of no further force or effect, and, except for provisions of the lease which are intended to survive termination of the Lease (e.g., indemnification provisions), neither party shall have any further obligation to the other party. For the purposes hereof, the "**Outside Termination Date**" shall be defined as six (6) months after the initial Estimated Delivery Date, plus one (1) day for each day of any delay in the occurrence of Substantial Completion due to Force Majeure, up to a maximum of sixty (60) days, and one (1) day for each day of any delay in the occurrence of Substantial Completion due to a Tenant Delay or a Permitting Delay (for the avoidance of doubt, if a given event could constitute both a Force Majeure event and a Permitting Delay, for the purposes of determining the Outside Termination Date such event shall only be treated as a Permitting Delay, such that no event shall be double-counted). Further, notwithstanding anything herein to the contrary, in the event of any Landlord Delays or Permitting Delays, the Rent Commencement Date shall be delayed by one (1) day for each day after the Estimated Delivery Date that Substantial Completion has not occurred owing to any such Landlord Delay(s) or Permitting Delay(s). Except for the foregoing, Tenant shall have no claim or rights against Landlord, and Landlord shall have no liability or obligation to Tenant in the event of delay in Landlord's Work, and no delay in Landlord's Work shall have any effect on the parties rights or obligations under this Lease.

(b) Definitions.

(i) "**Tenant Delay**" shall mean any act or omission by Tenant and/or Tenant's agents, employees or contractors (collectively with Tenant, the "**Tenant Parties**") which causes a delay in the commencement or performance of Landlord's Work or the issuance of a certificate of occupancy for the Premises. Notwithstanding the foregoing, except where a Tenant Delay arises from Tenant's failure timely to act on or before a date or within a time period expressly set forth in this Lease (in which event no Tenant Delay Notice shall be required): (x) in no event shall any act or omission be deemed to be a Tenant Delay until and unless Landlord has given Tenant written notice (the "**Tenant Delay Notice**") advising Tenant (a) that a Tenant Delay is occurring, and (b) of the basis on which Landlord has determined that a Tenant Delay is occurring, and (y) no period of time prior to the date that is three (3) business days after Tenant receives a Tenant Delay Notice shall be included in the period of time charged to Tenant pursuant to such Tenant Delay Notice.

(ii) "**Landlord Delay**" shall have the meaning set forth in Exhibit 4.

(iii) "**Permitting Delay**" shall have the meaning set forth in Exhibit 4.

(iv) "**Substantially Complete**" or "**Substantial Completion**," when referring to Landlord's Work shall mean that: (1) Landlord's Work is completed, other than Punchlist Items, (2) the Premises and those portions of the Common Areas of the Building which affect Tenant's occupancy are in conformance with all applicable building codes, permits, laws and regulations, including without limitation, ADA, (3) all structural elements and subsystems of the Building, including but not limited to HVAC, mechanical, electrical, lighting, plumbing, and life safety systems, will be in good working condition and repair, and (4) Landlord has delivered to Tenant a certificate from Landlord's architect stating that Landlord's Work is substantially complete, subject only to the completion of the Punchlist Items (as hereinafter defined). No costs incurred by Landlord in satisfying the definition of Substantial Completion shall be included in Operating Costs. Notwithstanding anything to the contrary herein contained, in the event that Landlord's Work is delayed by reason of any Tenant Delay, then Landlord shall be deemed to have achieved Substantial Completion of Landlord's Work on the date that Landlord would have achieved Substantial Completion of Landlord's Work, but for such Tenant Delay.

(c) Performance and Coordination of Landlord's Work. Subject to the provisions of this Lease, including without limitation Section 3.2, Section 11.4, and Exhibit 4, each party shall take necessary reasonable measures to the end that each party's contractors shall cooperate in all ways with the other party's contractors in such manner as may be reasonably requested to avoid any delay to the work being performed by each party's contractors or conflict in any other way with the performance of each party's work. Landlord shall respond, in writing, to any written requests from Tenant or Tenant's architect for information within five (5) business days of Tenant's receipt of such request to the extent such information is then available to Landlord, and otherwise reasonably promptly after Landlord's receipt of such request. Tenant acknowledges that, notwithstanding Tenant's right to access the Premises prior to the Estimated Delivery Date in accordance with Section 1.4(b), Landlord may still be in the process of completing the Landlord's Work, and that Landlord shall have priority access to the Premises during such period; provided that Landlord and Tenant shall cooperate in good faith to coordinate such access with Tenant's Work in a manner that does not unreasonably impact or delay Landlord's Work and Tenant's Work during such period. Without limiting the generality of the foregoing, Tenant expressly acknowledges that the contractor engaged by Landlord to perform Landlord's Work is a non-union contractor, and Tenant shall ensure that Tenant's contractor will not cause any disruption or interference in the performance of Landlord's Work by Landlord's contractor as a result of said contractor's non-union status.

(d) Punchlist. Promptly following Substantial Completion of Landlord's Work, Landlord shall provide Tenant with a punchlist prepared by Landlord's architect (the "**Punchlist**") incorporating those items jointly identified by Landlord and Tenant during their joint inspection of Landlord's Work, of outstanding items (the "**Punchlist Items**") which will not materially affect Tenant's use of, or access to, the Premises for the purposes of commencing Tenant's Work and which can be completed within 30 days. Promptly after Substantial Completion of Landlord's Work, Landlord and Tenant shall jointly inspect the Premises. Subject to Force Majeure (as defined in Section 25.16) and Tenant Delays, Landlord shall complete all Punchlist Items within

thirty (30) days of the date of the Punchlist (other than seasonal items, such as landscaping, requiring a longer period), provided that Tenant reasonably cooperates in connection with the completion of such Punchlist Items.

4. USE OF PREMISES

4.1 Permitted Uses. During the Term, Tenant shall use the Premises only for the Permitted Uses and for no other purposes. Service and utility areas (whether or not a part of the Premises) shall be used only for the particular purpose for which they are designed. Tenant shall keep the Premises equipped with appropriate safety appliances to the extent required by applicable laws or insurance requirements as a result of Tenant's particular manner of use and not required generally for a combination laboratory, research and development and office building.

4.2 Prohibited Uses.

(a) Notwithstanding any other provision of this Lease, Tenant shall not use the Premises or the Building, or any part thereof, or suffer or permit the use or occupancy of the Premises or the Building or any part thereof by any of the Tenant Parties (i) in a manner which would violate any of the covenants, agreements, terms, provisions and conditions of this Lease or otherwise applicable to or binding upon the Premises; (ii) for any unlawful purposes or in any unlawful manner; (iii) which, in the reasonable judgment of Landlord (taking into account the use of the Building as a combination laboratory, cGMP manufacturing, research and development and office building and the Permitted Uses) shall (a) impair the appearance or reputation of the Building; (b) impair, interfere with or otherwise diminish the quality of any of the Building services or the proper and economic heating, cleaning, ventilating, air conditioning or other servicing of the Building or Premises, or the use or occupancy of any of the Common Areas; (c) constitute a nuisance or cause any injury or damage to any occupants of the Premises or other tenants or occupants of the Building or their property; or (d) cause harmful air emissions, laboratory odors or noises or any unusual or other objectionable odors, noises or emissions to emanate from the Premises; or (iv) in a manner which shall increase such insurance rates on the Building or on property located therein over that applicable when Tenant first took occupancy of the Premises hereunder.

(b) With respect to the use and occupancy of the Premises and the Common Areas, Tenant will not: (i) place or maintain any signage (except as set forth in Section 12.2 below), trash, refuse or other articles in any vestibule or entry of the Premises, on the footwalks or corridors adjacent thereto or elsewhere on the exterior of the Premises, nor obstruct any driveway, corridor, footwalk, parking area, mall or any other Common Areas; (ii) permit undue accumulations of or burn garbage, trash, rubbish or other refuse within or without the Premises; (iii) permit the parking of vehicles so as to interfere with (x) the ability of others, entitled thereto, to park in the common parking areas, or (y) the use of any driveway, corridor, footwalk, parking area, or other Common Areas; (iv) conduct or permit to be conducted any auction, going out of business sale, bankruptcy sale (unless directed by court order), or other similar type sale in or connected with the Premises; (v) use the name of Landlord, or any of Landlord's affiliates in any publicity, promotion, trailer, press release, advertising, printed, or display materials without Landlord's prior written consent; or (vi) except in connection with Alterations (hereinafter

defined) approved by Landlord, cause or permit any hole to be drilled or made in any part of the Building.

4.3 Intentionally Omitted.

4.4 MWRA Permit. Tenant shall establish and maintain with respect to its use of wastewater facilities exclusively serving the Premises, an MWRA waste water discharge program administered by a licensed, qualified individual (which individual may be (i) a third party contractor/consultant approved by Landlord, which approval shall not be unreasonably withheld, or (ii) an employee of Tenant or Tenant's affiliate) in accordance with the requirements of the Massachusetts Water Resources Authority ("**MWRA**") and any other applicable governmental authority. Tenant shall be solely responsible for all costs incurred in connection with such MWRA waste water discharge, and Tenant shall provide Landlord with such documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) the MWRA and any other applicable governmental authority with respect to such chemical safety program and (b) this Section. Tenant shall obtain and maintain during the Term (i) any permit required by the MWRA ("**MWRA Permit**") and (ii) a wastewater treatment operator license from the Commonwealth of Massachusetts with respect to Tenant's use of any acid neutralization tank exclusively serving the Premises in the Building. Landlord shall cooperate with Tenant as needed (but at no cost to Landlord) to provide information and execute documents required to obtain the MWRA Permit. Tenant shall not introduce anything into the acid neutralization tank serving the Premises, if any (x) in violation of the terms of the MWRA Permit, (y) in violation of Legal Requirements or (z) that would interfere with the proper functioning of any such acid neutralization tank.

4.5 Parking and Traffic Demand Management Plan. The Property is subject to a Transportation Demand Management Program as a condition of a decision of the City of Framingham Planning Board dated April 30, 2018 and recorded at Book 71157, Page 432 of the Middlesex (South) Registry of Deeds, relevant portions of said decision being attached hereto as Exhibit 15 (the "**TDM**"). Tenant agrees, at its sole expense, to comply with the requirements of the TDM, insofar as they apply to the Premises and/or Tenant's use and occupancy thereof. In the event that the TDM is ever modified, supplemented, amended or replaced ("**TDM Modifications**"), Tenant agrees, at its sole expense, to comply with the requirements of the TDM Modifications, insofar as they apply to the Premises and/or Tenant's use and occupancy thereof. Tenant shall, at Tenant's sole expense, for so long as the TDM remains applicable to the Property, (a) to the extent required by the TDM, allow employees at the Premises to set-aside pre-tax funds as allowable under the Commuter Choice provision of the Federal tax code, and (b) reasonably cooperate with Landlord in (i) connection with Landlord's reporting obligations under the TDM and any amendments thereto, and (ii) to the extent required by the TDM, encouraging employees to avoid vehicle trips at peak commuting hours and to seek alternate modes of transportation. The costs incurred by Landlord in connection with compliance with the TDM (and expressly excluding any capital expenditures) shall be included in Operating Costs.

5. RENT; ADDITIONAL RENT

5.1 Base Rent; Additional Rent. Commencing as of the Rent Commencement Date and continuing thereafter throughout the remainder of the Term, Tenant shall pay Base Rent to

Landlord in equal monthly installments, in advance and without demand on the first day of each month for and with respect to such month. Unless otherwise expressly provided herein, the payment of Base Rent, Additional Rent and other charges reserved and covenanted to be paid under this Lease with respect to the Premises (collectively, "**Rent**") shall commence on the Rent Commencement Date, and shall be prorated for any partial months. Rent shall be payable to Landlord or, if Landlord shall so direct in writing, to Landlord's agent or nominee, in lawful money of the United States which shall be legal tender for payment of all debts and dues, public and private, at the time of payment.

5.2 Operating Costs.

(a) "**Operating Costs**" shall mean all costs incurred and expenditures of whatever nature made by Landlord in the operation, management, repair, replacement, maintenance and insurance (including, without limitation, environmental liability insurance and property insurance on Landlord-supplied leasehold improvements for tenants, but not property insurance on tenants' equipment) of the Property or allocated to the Property, including without limitation all costs of labor (wages, salaries, fringe benefits, etc.) up to and including the Director of Property Management, however denominated (provided that any labor costs associated with the Director of Property Management shall be equitably distributed among each of the properties owned by Landlord or Landlord's affiliates for which such position is responsible), any costs for utilities supplied to exterior areas and the Common Areas, and any costs for repair and replacements, cleaning and maintenance of exterior areas and the Common Areas, related equipment, facilities and appurtenances and HVAC equipment, security services, a management fee in the amount of four percent (4%) of gross Building revenues (increased, if applicable, in accordance with Section 5.2(g)), the costs, including, without limitation, a commercially reasonable rental factor, of Landlord's management office for the Property, which management office may be located outside the Property and which may serve other properties in addition to the Property (in which event such costs shall be equitably allocated among the properties served by such office), the cost of any subsidy provided by Landlord for or with respect to any amenities in the Property available to all tenants of the Property (net of any income derived from the tenants' use of such amenities), and the Annual Charge-Off (as hereinafter defined) with respect to a Permitted Capital Expenditure (as hereinafter defined). Operating Costs shall not include Excluded Costs (hereinafter defined).

(b) **Capital Expenditures**. Permitted Capital Expenditures (as hereinafter defined) shall only be included in Operating Costs for each fiscal year during the Term to the extent of the Annual Charge-Off, as hereinafter defined, for such fiscal year with respect to such capital expenditure. Operating Costs shall not include any Annual Charge-Off with respect to Excluded Costs, as hereinafter defined. For the purposes hereof:

(i) "**Annual Charge-Off**" means the annual amount of principal and interest payments which would be required to repay a loan in equal monthly installments over the Useful Life, as defined below, of the capital item in question on a direct reduction basis at an annual interest rate equal to the Capital Interest Rate, as defined below, where the initial principal balance is the cost of the capital item in question, provided that with respect to Permitted Capital Expenditures that effect savings, in no event shall the Annual Charge Off exceed the annual savings realized.

(ii) "**Useful Life**" shall be reasonably determined by Landlord in accordance with generally accepted accounting principles and practices in effect at the time of acquisition of the capital item.

(iii) "**Capital Interest Rate**" shall be defined as an annual rate of either one percentage point over the AA bond rate (Standard & Poor's corporate composite or, if unavailable, its equivalent) as reported in the financial press at the time the capital expenditure is made or, if the capital item is acquired through third-party financing, then the actual (including fluctuating) rate paid by Landlord in financing the acquisition of such capital item.

(c) "**Excluded Costs**" shall be defined as (i) any fixed or percentage ground rent payable to any ground lessor, or any mortgage charges (including interest, principal, points and fees); (ii) brokerage commissions; (iii) salaries of executives and owners not directly employed in the management/operation of the Property; (iv) the cost of work done by Landlord for a particular tenant; (v) the cost of items which, by generally accepted accounting principles, would be capitalized on the books of Landlord or are otherwise not properly chargeable against income, except to the extent such capital item is (A) required by any Legal Requirements, (B) reasonably projected to reduce Operating Costs ("**Permitted Capital Expenditures**"); (vi) the costs of Landlord's Work and any contributions made by Landlord to any tenant of the Property in connection with the build-out of its premises; (vii) franchise or income taxes imposed on Landlord; (viii) costs paid directly by individual tenants to suppliers, including tenant electricity, telephone and other utility costs; (ix) increases in premiums for insurance when such increase is caused by the use of the Building by Landlord or any other tenant of the Building; (x) depreciation of the Building; (xi) costs relating to maintaining Landlord's existence as a corporation, partnership or other entity; (xii) advertising and other fees and costs incurred in procuring tenants; (xiii) the cost of any items for which Landlord is reimbursed by insurance, condemnation awards, refund, rebate or otherwise, and any expenses for repairs or maintenance to the extent covered by warranties, guaranties and service contracts; and (xiv) costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Building management, or between Landlord and other tenants or occupants, (xv) Taxes, (xvi) any liabilities, costs or expenses associated with or incurred in connection with the removal, enclosure, encapsulation or other handling of Hazardous Materials and the cost of defending against claims in regard to the existence or release of Hazardous Materials at the Property; provided however, that with respect to the costs or expenses associated with or incurred in connection with the removal, enclosure, encapsulation or other handling of (a) any material or substance located in the Building on the date of this Lease and which, as of the date of this Lease, is not considered, as a matter of law, to be a Hazardous Substance, but which is subsequently determined to be a Hazardous Substance as a matter of law, and (b) any material or substance located in the Building after the date of this Lease and which, when placed in the Building, was not considered, as a matter of law, to be a Hazardous Substance, but which is subsequently determined to be a Hazardous Substance as a matter of law, the costs thereof may be included in Operating Costs, except to the extent that such cost is treated as a capital expenditure; (xvii) the cost of installing any specialty service, such as a cafeteria, conference center, child or daycare; (xviii) cost of any work or service performed on an extra cost basis for any tenant in the Building or the Land to a materially greater extent or in a materially more favorable manner than furnished generally to the tenants and other occupants; (xix) any cost representing an amount paid to a person, firm, corporation or other entity related to Landlord that is in excess of the amount which would have been paid in the absence of such relationship

(provided however, that this clause shall not apply to the management fee); (xx) lease payments for rental equipment (other than equipment for which depreciation is properly charged as an expense) that would constitute a capital expenditure if the equipment were purchased; (xxi) late fees or charges incurred by Landlord due to late payment of expenses, except to the extent attributable to Tenant's actions or inactions; (xxii) charitable or political contributions; (xxiii) reserve funds; (xxiv) all other items for which another party compensates or pays so that Landlord shall not recover any item of cost more than once; (xxv) Landlord's general overhead and any other expenses not directly attributable to the operation and management of the Building and the Land (e.g. the activities of Landlord's officers and executives or professional development expenditures), except to the extent included in the management fee permitted hereby; (xxvi) costs and expenses incurred in connection with compliance with or contesting or settlement of any claimed violation of law or requirements of law which are in existence as of the Term Commencement Date, except to the extent attributable to Tenant's actions or inactions; and (xxvii) costs of mitigation or impact fees or subsidies (however characterized), imposed or incurred prior to the date of the Lease or imposed or incurred solely as a result of another tenant's or tenants' use of the Land or their respective premises.

(d) **Payment of Operating Costs**. Commencing as of the Rent Commencement Date and continuing thereafter throughout the remainder of the Term of the Lease, Tenant shall pay to Landlord, as Additional Rent, Tenant's Share of Operating Costs. Landlord may make a good faith estimate of Tenant's Share of Operating Costs for any fiscal year or part thereof during the Term, and Tenant shall pay to Landlord, on the Rent Commencement Date and on the first (1st) day of each calendar month thereafter, an amount equal to Tenant's Share of Operating Costs for such fiscal year and/or part thereof divided by the number of months therein. Landlord may estimate and re-estimate Tenant's Share of Operating Costs and deliver a copy of the estimate or re-estimate to Tenant. Thereafter, the monthly installments of Tenant's Share of Operating Costs shall be appropriately adjusted in accordance with the estimations so that, by the end of the fiscal year in question, Tenant shall have paid all of Tenant's Share of Operating Costs as estimated by Landlord. Any amounts paid based on such an estimate shall be subject to adjustment as herein provided when actual Operating Costs are available for each fiscal year. As of the Execution Date, the Property's fiscal year is January 1 – December 31.

(e) **Annual Reconciliation**. Landlord shall, within one hundred twenty (120) days after the end of each fiscal year, deliver to Tenant a reasonably detailed statement in line item detail pursuant to GAAP or customary local real estate accounting practices consistently applied of the actual amount of Operating Costs for such fiscal year ("**Year End Statement**"). Failure of Landlord to provide the Year End Statement within the time prescribed shall not relieve Tenant from its obligations hereunder unless such Year End Statement is not delivered within twenty-four (24) months after the end of the applicable fiscal year. If the total of such monthly remittances on account of any fiscal year is greater than Tenant's Share of Operating Costs actually incurred for such fiscal year, then, provided no Event of Default then exists, Tenant may credit the difference against the next installment of Rent due hereunder, except that if such difference is determined after the end of the Term, Landlord shall refund such difference to Tenant within thirty (30) days after such determination to the extent that such difference exceeds any amounts then due from Tenant to Landlord. If the total of such remittances is less than Tenant's Share of Operating Costs actually incurred for such fiscal year, Tenant shall pay the difference to Landlord, as Additional Rent hereunder, within thirty (30) days of Tenant's receipt of an invoice therefor. Landlord's

estimate of Operating Costs for the next fiscal year shall be based upon the Operating Costs actually incurred for the prior fiscal year as reflected in the Year-End Statement plus a reasonable adjustment based upon estimated increases in Operating Costs. The provisions of this Section 5.2(e) shall survive the expiration or earlier termination of this Lease.

(f) **Part Years**. If the Term Commencement Date or the Expiration Date occurs in the middle of a calendar year, Tenant shall be liable for only that portion of the Operating Costs with respect to such calendar year within the Term.

(g) **Gross-Up**. If, during any fiscal year, less than 95% of the Building is occupied by tenants or if Landlord was not supplying all tenants with the services being supplied to Tenant hereunder, actual Operating Costs incurred shall be reasonably extrapolated by Landlord on an item-by-item basis to the reasonable Operating Costs that would have been incurred if the Building was 95% occupied and such services were being supplied to all tenants, and such extrapolated Operating Costs shall, for all purposes hereof, be deemed to be the Operating Costs for such fiscal year. This "gross up" treatment shall be applied only with respect to Operating Costs that vary based on the occupancy of the Property or if Landlord is providing services to less than all of the tenants in order to allocate equitably such variable Operating Costs to the tenants receiving the benefits thereof.

(h) **Audit Right**. Provided there is no Event of Default, Tenant may, upon prior written notice, inspect or audit Landlord's records relating to Operating Costs for any periods of time within the previous fiscal year before the audit or inspection. However, no audit or inspection shall extend to periods of time before the Rent Commencement Date. If Tenant fails to object to the calculation of Tenant's Share of Operating Costs on the Year-End Statement within one hundred fifty (150) days after such statement has been delivered to Tenant and/or fails to complete any such audit or inspection within ninety (90) days after receipt of the applicable books and records for the Year End Statement, then Tenant shall be deemed to have waived its right to object to the calculation of Tenant's Share of Operating Costs for the year in question and the calculation thereof as set forth on such statement shall be final. Tenant's audit or inspection shall be conducted only at the offices of Landlord's property manager during business hours reasonably designated by Landlord. Tenant may not conduct an inspection or have an audit performed more than once during any fiscal year. If, after such inspection or audit has been performed, it is finally determined or mutually agreed that there has been an underpayment by Tenant, then Tenant shall pay to Landlord, as Additional Rent hereunder, any underpayment of any such costs, as the case may be, within thirty (30) days after receipt of an invoice therefor. In the event the Landlord disagrees in good faith with the results of the audit, Landlord shall notify Tenant within fifteen (15) days of the audit, and Landlord and Tenant shall mutually select a neutral third party to evaluate the charges for Tenant's Share of Operating Costs, and the results of such third party's evaluation shall bind Landlord and Tenant and shall be final. Costs charged by any such third party shall be shared equally by Landlord and Tenant, except as provided below. If, after such inspection or audit has been performed, it is finally determined or mutually agreed that that there has been overpayment by Tenant, then Landlord shall credit such overpayment against the next installment(s) of Base Rent thereafter payable by Tenant, except that if such overpayment is determined after the termination or expiration of the Term, Landlord shall promptly refund to Tenant the amount of such overpayment less any amounts then due from Tenant to Landlord. Tenant shall maintain the results of any such audit or inspection confidential and shall not be permitted to use any third party

to perform such audit or inspection, other than Tenant's employees or an independent firm of certified public accountants or qualified real estate consultant having at least ten (10) years' relevant experience in the review of commercial real estate operating expenses and real estate tax statements (A) reasonably acceptable to Landlord, (B) which is not compensated on a contingency fee basis or in any other manner which is dependent upon the results of such audit or inspection, and (C) which executes Landlord's standard confidentiality agreement whereby it shall agree to maintain the results of such audit or inspection confidential. All expenses of such audit shall be borne by Tenant unless such audit shall disclose an overstatement of Tenant's share of Operating Costs of five percent (5%) or more, in which case all reasonable expenses of such audit and the costs of any third party auditor shall be borne by Landlord. The provisions of this Section 5.2(h) shall survive the expiration or earlier termination of this Lease.

5.3 Taxes.

(a) "**Taxes**" shall mean the real estate taxes and other taxes, levies and assessments imposed by any governmental authority upon the Building and the Land, and upon any personal property of Landlord used in the operation thereof, or on Landlord's interest therein or such personal property; charges, fees and assessments for transit, housing, police, fire or other services or purported benefits to the Building and the Land (including without limitation any community preservation assessments); service or user payments in lieu of taxes; and any and all other taxes, levies, betterments, assessments and charges arising from the ownership, leasing, operation, use or occupancy of the Building and the Land or based upon rentals derived therefrom, which are or shall be imposed by federal, state, county, municipal or other governmental authorities. The amount of special taxes or special assessments to be included shall be limited to the amount of the installment (plus any interest other than penalty interest payable thereon) of such special tax or special assessment required to be paid during the year in respect of which such taxes are being determined. Taxes shall not include any inheritance, estate, succession, gift, transfer, franchise, rental, income or profit tax, capital stock tax, capital levy or excise, or any income taxes arising out of or related to the ownership and operation of the Building and the Land or any tax penalties or late fees, due to the fault of Landlord or to the failure of Landlord to make timely payments of such taxes as and when due, provided, however, that any of the same and any other tax, excise, fee, levy, charge or assessment, however described, that may in the future be levied or assessed as a substitute for or an addition to, in whole or in part, any tax, levy or assessment which would otherwise constitute Taxes, whether or not now customary or in the contemplation of the parties on the Execution Date of this Lease, shall constitute Taxes, but only to the extent calculated as if the Building and the Land were the only real estate owned by Landlord. "Taxes" shall also include reasonable expenses (including without limitation legal and consultant fees) of tax abatement or other proceedings contesting assessments or levies. From and after substantial completion of any occupiable improvements constructed as part of a Future Development, if such improvements are not separately assessed, Landlord shall reasonably allocate Taxes between the Building and such improvements and the land area associated with the same.

(b) "**Tax Period**" shall be any fiscal/tax period in respect of which Taxes are due and payable to the appropriate governmental taxing authority (i.e., as mandated by the governmental taxing authority), any portion of which period occurs during the Term of this Lease.

(c) **Payment of Taxes**. Commencing as of the Rent Commencement Date and continuing thereafter throughout the remainder of the Term of the Lease, Tenant shall pay to Landlord, as Additional Rent, Tenant's Share of Taxes. Landlord may make a good faith estimate of the Taxes to be due by Tenant for any Tax Period or part thereof during the Term, and Tenant shall pay to Landlord, on the Rent Commencement Date and on the first (1st) day of each calendar month thereafter, an amount equal to Tenant's Share of Taxes for such Tax Period or part thereof divided by the number of months therein. Landlord may estimate and re-estimate Tenant's Share of Taxes and deliver a copy of the estimate or re-estimate to Tenant. Thereafter, the monthly installments of Tenant's Share of Taxes shall be appropriately adjusted in accordance with the estimations so that, by the end of the Tax Period in question, Tenant shall have paid all of Tenant's Share of Taxes as estimated by Landlord. Any amounts paid based on such an estimate shall be subject to adjustment as herein provided when actual Taxes are available for each Tax Period. If the total of such monthly remittances is greater than Tenant's Share of Taxes actually due for such Tax Period, then, provided no Event of Default then exists, Tenant may credit the difference against the next installment of Rent due hereunder, except that if such difference is determined after the end of the Term, Landlord shall refund such difference to Tenant within thirty (30) days after such determination to the extent that such difference exceeds any amounts then due from Tenant to Landlord. If the total of such remittances is less than Tenant's Share of Taxes actually due for such Tax Period, Tenant shall pay the difference to Landlord, as Additional Rent hereunder, within ten (10) days of Tenant's receipt of an invoice therefor. Landlord's estimate for the next Tax Period shall be based upon actual Taxes for the prior Tax Period plus a reasonable adjustment based upon estimated increases in Taxes. The provisions of this Section 5.3(c) shall survive the expiration or earlier termination of this Lease.

(d) **Effect of Abatements**. Appropriate credit against Taxes shall be given for any refund obtained by reason of a reduction in any Taxes by the assessors or the administrative, judicial or other governmental agency responsible therefor after deduction of Landlord's expenditures for reasonable legal fees and for other reasonable expenses incurred in obtaining the Tax refund.

(e) **Part Years**. If the Term Commencement Date or the Expiration Date occurs in the middle of a Tax Period, Tenant shall be liable for only that portion of the Taxes, as the case may be, with respect to such Tax Period within the Term.

5.4 Late Payments.

(a) Any payment of Rent due hereunder not paid when due shall bear interest for each month or fraction thereof from the due date until paid in full at the annual rate of twelve percent (12%), or at any applicable lesser maximum legally permissible rate for debts of this nature (the "**Default Rate**"). Notwithstanding the foregoing, Landlord shall not charge such interest with respect to the first late payment in any twelve (12) month period so long as received by Landlord within five (5) business days after the due date therefor.

(b) Additionally, if Tenant fails to make any payment of Rent within five (5) days after the due date therefor, Landlord may charge Tenant a fee, which shall constitute liquidated damages, equal to three percent (3%) of any such late payment. Landlord shall not

charge such fee with respect to the first late payment in any twelve (12) month period so long as received by Landlord within five (5) business days after the due date therefor.

(c) For each Tenant payment check to Landlord that is returned by a bank for any reason, Tenant shall pay a returned check charge equal to the amount as shall be customarily charged by Landlord's bank at the time.

(d) Money paid by Tenant to Landlord shall be applied to Tenant's account in the following order: first, to any unpaid Additional Rent, including without limitation late charges, returned check charges, legal fees and/or court costs chargeable to Tenant hereunder; and then to unpaid Base Rent.

(e) The parties agree that the late charge referenced in Section 5.4(b) represents a fair and reasonable estimate of the costs that Landlord will incur by reason of any late payment by Tenant, and the payment of late charges and interest are distinct and separate in that the payment of interest is to compensate Landlord for the use of Landlord's money by Tenant, while the payment of late charges is to compensate Landlord for Landlord's processing, administrative and other costs incurred by Landlord as a result of Tenant's delinquent payments. Acceptance of a late charge or interest shall not constitute a waiver of Tenant's default with respect to the overdue amount or prevent Landlord from exercising any of the other rights and remedies available to Landlord under this Lease or at law or in equity now or hereafter in effect.

5.5 No Offset; Independent Covenants; Waiver. Rent shall be paid without notice or demand, and without setoff, counterclaim, defense, abatement, suspension, deferment, reduction or deduction, except as expressly provided herein. **TENANT WAIVES ALL RIGHTS (I) TO ANY ABATEMENT, SUSPENSION, DEFERMENT, REDUCTION OR DEDUCTION OF OR FROM RENT, AND (II) TO QUIT, TERMINATE OR SURRENDER THIS LEASE OR THE PREMISES OR ANY PART THEREOF, EXCEPT AS EXPRESSLY PROVIDED HEREIN. TENANT HEREBY ACKNOWLEDGES AND AGREES THAT THE OBLIGATIONS OF TENANT HEREUNDER SHALL BE SEPARATE AND INDEPENDENT COVENANTS AND AGREEMENTS, THAT RENT SHALL CONTINUE TO BE PAYABLE IN ALL EVENTS AND THAT THE OBLIGATIONS OF TENANT HEREUNDER SHALL CONTINUE UNAFFECTED, UNLESS THE REQUIREMENT TO PAY OR PERFORM THE SAME SHALL HAVE BEEN TERMINATED OR ABATED PURSUANT TO AN EXPRESS PROVISION OF THIS LEASE. LANDLORD AND TENANT EACH ACKNOWLEDGES AND AGREES THAT THE INDEPENDENT NATURE OF THE OBLIGATIONS OF TENANT HEREUNDER REPRESENTS FAIR, REASONABLE, AND ACCEPTED COMMERCIAL PRACTICE WITH RESPECT TO THE TYPE OF PROPERTY SUBJECT TO THIS LEASE, AND THAT THIS AGREEMENT IS THE PRODUCT OF FREE AND INFORMED NEGOTIATION DURING WHICH BOTH LANDLORD AND TENANT WERE REPRESENTED BY COUNSEL SKILLED IN NEGOTIATING AND DRAFTING COMMERCIAL LEASES IN MASSACHUSETTS, AND THAT THE ACKNOWLEDGEMENTS AND AGREEMENTS CONTAINED HEREIN ARE MADE WITH FULL KNOWLEDGE OF THE HOLDING IN WESSON V. LEONE ENTERPRISES, INC., 437 MASS. 708 (2002). SUCH ACKNOWLEDGEMENTS,**

AGREEMENTS AND WAIVERS BY TENANT ARE A MATERIAL INDUCEMENT TO LANDLORD ENTERING INTO THIS LEASE.

5.6 Survival. Any obligations under this Section 5 which shall not have been paid at the expiration or earlier termination of the Term shall survive such expiration or earlier termination and shall be paid when and as the amount of same shall be determined and be due.

6. INTENTIONALLY OMITTED.

7. LETTER OF CREDIT

7.1 Amount. Contemporaneously with the execution of this Lease, Tenant shall deliver to Landlord an irrevocable letter of credit (the "**Letter of Credit**") that shall (a) be in the initial amount of $1,260,412.44; (b) be issued on the Approved Issuer's form approved by Landlord; (c) name Landlord as its beneficiary; (d) be drawn on an FDIC insured financial institution reasonably satisfactory to Landlord ("**Approved Issuer**") that both (x) has an office in the continental United States that will accept presentation of, and payment against, the Letter of Credit by either fax or overnight delivery, and (y) satisfies both the Minimum Rating Agency Threshold and the Minimum Capital Threshold (as those terms are defined below). The "**Minimum Rating Agency Threshold**" shall mean that the issuing bank has outstanding unsecured, uninsured and unguaranteed senior long-term indebtedness that is then rated (without regard to qualification of such rating by symbols such as "+" or "-" or numerical notation) "Baa" or better by Moody's Investors Service, Inc. and/or "BBB" or better by Standard & Poor's Rating Services, or a comparable rating by a comparable national rating agency designated by Landlord in its discretion. The "**Minimum Capital Threshold**" shall mean that the issuing bank has combined capital, surplus and undivided profits of not less than $10,000,000,000. Notwithstanding the foregoing, Landlord hereby agrees that, as of the Execution Date, Silicon Valley Bank is an Approved Issuer. The Letter of Credit (and any renewals or replacements thereof) shall be for a term of not less than one (1) year. The Approved Issuer shall be required to give notice of its election not to renew such Letter of Credit for any additional period at least forty-five (45) days prior to the then applicable expiration date, and Tenant shall be required to deliver a substitute Letter of Credit satisfying the conditions hereof at least twenty (20) days prior to the expiration of the term of such Letter of Credit. If the issuer of the Letter of Credit fails to satisfy either or both of the Minimum Rating Agency Threshold or the Minimum Capital Threshold, Tenant shall be required to deliver a substitute letter of credit from another issuer reasonably satisfactory to the Landlord and that satisfies both the Minimum Rating Agency Threshold and the Minimum Capital Threshold not later than thirty (30) days after Landlord notifies Tenant of such failure. Tenant agrees that it shall from time to time, as necessary, whether as a result of a draw on the Letter of Credit by Landlord pursuant to the terms hereof or as a result of the expiration of the Letter of Credit then in effect, renew or replace the original and any subsequent Letter of Credit so that a Letter of Credit, in the amount required hereunder, is in effect until a date which is at least sixty (60) days after the Expiration Date. If Tenant fails to furnish such renewal or replacement at least twenty (20) days prior to the stated expiration date of the Letter of Credit then held by Landlord, Landlord may draw upon such Letter of Credit and hold the proceeds thereof (and such proceeds need not be segregated) as a Security Deposit pursuant to the terms of this Article 7. Any renewal or replacement of the original or any subsequent Letter of Credit shall meet the

requirements for the original Letter of Credit as set forth above, except that such replacement or renewal shall be issued by an Approved Issuer.

7.2 Application of Proceeds of Letter of Credit. Upon an Event of Default, or if any proceeding shall be instituted by or against Tenant pursuant to any of the provisions of any Act of Congress or State law relating to bankruptcy, reorganizations, arrangements, compositions or other relief from creditors (and, in the case of any proceeding instituted against it, if Tenant shall fail to have such proceedings dismissed within thirty (30) days) or if Tenant is adjudged bankrupt or insolvent as a result of any such proceeding, Landlord at its sole option may draw down all or a part of the Letter of Credit. The balance of any Letter of Credit cash proceeds shall be held in accordance with Section 7.5 below. Should the entire Letter of Credit, or any portion thereof, be drawn down by Landlord, Tenant shall, upon the written demand of Landlord, deliver a replacement Letter of Credit in the amount drawn, and Tenant's failure to do so within ten (10) days after receipt of such written demand shall constitute an additional Event of Default hereunder. The application of all or any part of the cash proceeds of the Letter of Credit to any obligation or default of Tenant under this Lease shall not deprive Landlord of any other rights or remedies Landlord may have nor shall such application by Landlord constitute a waiver by Landlord.

7.3 Transfer of Letter of Credit. In the event that Landlord transfers its interest in the Premises, Tenant shall upon notice from and at no cost to Landlord, deliver to Landlord an amendment to the Letter of Credit or a replacement Letter of Credit naming Landlord's successor as the beneficiary thereof. If Tenant fails to deliver such amendment or replacement within ten (10) days after written notice from Landlord, Landlord shall have the right to draw down the entire amount of the Letter of Credit and hold the proceeds thereof in accordance with Section 7.5 below.

7.4 Cash Proceeds of Letter of Credit. Landlord shall hold the balance of proceeds remaining after a draw on the Letter of Credit (each hereinafter referred to as the "**Security Deposit**") as security for Tenant's performance of all its Lease obligations; provided that within thirty (30) days after the delivery to Landlord of a replacement Letter of Credit that complies with the provisions of Section 7.1, above, Landlord shall refund to Tenant any amounts drawn hereunder (less any portion thereof which may have been utilized by Landlord to cure any default or applied to any actual damage suffered by Landlord). After an Event of Default, Landlord may apply the Security Deposit, or any part thereof, to Landlord's damages without prejudice to any other Landlord remedy. Landlord has no obligation to pay interest on the Security Deposit and may co-mingle the Security Deposit with Landlord's funds. If Landlord conveys its interest under this Lease, the Security Deposit, or any part not applied previously, may be turned over to the grantee in which case Tenant shall look solely to the grantee for the proper application and return of the Security Deposit.

7.5 Return of Security Deposit or Letter of Credit. Should Tenant comply with all of such terms, covenants and conditions and promptly pay all sums payable by Tenant to Landlord hereunder, the Security Deposit and/or Letter of Credit or the remaining proceeds therefrom, as applicable, shall (less any portion thereof which may have been utilized by Landlord to cure any default or applied to any actual damage suffered by Landlord) be returned to Tenant within sixty (60) days after the end of the Term.

7.6 Reduction in Letter of Credit. Subject to the remaining terms of this Article 7, and provided that (x) there has been no monetary or material non-monetary Event of Default within the twelve (12) months prior to the applicable Reduction Date, and (y) there is no then-current Event of Default under the Lease as of the applicable Reduction Date (the "**Reduction Conditions**"), Tenant shall have the right to reduce the amount of the Security Deposit and/or Letter of Credit to the following amounts on the following dates: (i) $1,080,353.52 upon the issuance to Tenant of a full certificate of occupancy for the Premises by the City of Framingham Building Department; and (ii) $540,176.76 as of the first day of the third (3rd) Lease Year, provided that Tenant's publicly traded parent entity has a market capitalization of at least Two and One Half Billion Dollars ($2,500,000,000) on such date, as evidenced by supporting documentation reasonably acceptable to Landlord (each, a "**Reduction Date**"). The reduction in the Security Deposit shall be accomplished as follows: Tenant shall request such reduction in a written notice to Landlord, and if the Reduction Conditions have been met, Landlord shall so notify Tenant, whereupon Tenant shall provide Landlord with a Substitute Letter of Credit in the reduced amount, or an amendment to the Letter of Credit reducing it to the reduced amount and if Tenant provides Landlord with a Substitute Letter of Credit, Landlord shall simultaneously return the existing Letter of Credit to Tenant together with a letter to the issuing bank authorizing its cancellation. The Security Deposit, as it may be reduced in accordance with the foregoing, shall continue to be held by Landlord throughout the Term of the Lease.

8. WAIVER OF SECURITY INTEREST IN TENANT'S PROPERTY.

Landlord hereby waives the right to obtain a lien, encumbrance or a security interest in Tenant's Property (hereinafter defined).

9. UTILITIES, LANDLORD'S SERVICES

9.1 Electricity. Landlord shall contract with the utility provider for electric service to the Property, including the Premises. Commencing on the Term Commencement Date, Tenant shall pay all charges for electricity furnished to the Premises without mark-up and any equipment exclusively serving the Premises, as Additional Rent, as measured by a check meter, with such metering equipment to be installed by Landlord, at Landlord's cost, prior to Tenant's completion of Tenant's Work. At Tenant's request, Landlord shall provide Tenant with reasonable back-up documentation regarding the total charges and the method of allocating the charges to Tenant. Tenant shall, at Tenant's sole cost and expense, maintain and keep in good order, condition and repair the metering equipment used to measure electricity furnished to the Premises and any equipment exclusively serving the same.

9.2 Water. Tenant shall pay all charges for water furnished to the Premises and/or any equipment exclusively serving the Premises as Additional Rent, based on separate check meters installed by Landlord at Landlord's cost prior to Tenant's completion of Tenant's Work. Tenant shall, at Tenant's sole cost and expense, maintain and keep in good order, condition and repair the metering equipment used to measure water furnished to the Premises and any equipment exclusively serving the same. Tenant shall pay to Landlord the full amount of any charges attributable to such meter based on Landlord's reading of such check meter (without mark-up to Landlord), on or before the later to occur of the due date therefor or thirty (30) days following delivery of an invoice for such costs from Landlord.

9.3 Gas. Tenant shall pay all charges for gas furnished to the Premises and/or any equipment exclusively serving the Premises as Additional Rent, based on separate check meters installed by Landlord at Landlord's cost prior to Tenant's completion of Tenant's Work. Tenant shall, at Tenant's sole cost and expense, maintain and keep in good order, condition and repair the metering equipment used to measure gas furnished to the Premises and any equipment exclusively serving the same. Tenant shall pay to Landlord the full amount of any charges attributable to such meter based on Landlord's reading of such check meter (without mark-up to Landlord), on or before the later to occur of the due date therefor or thirty (30) days following delivery of an invoice for such costs from Landlord.

9.4 Other Utilities. Subject to Landlord's reasonable rules and regulations governing the same, Tenant shall obtain and pay, as and when due, for all other utilities and services consumed in and/or furnished to the Premises, together with all taxes, penalties, surcharges and maintenance charges pertaining thereto.

9.5 Interruption or Curtailment of Utilities. When necessary by reason of accident or emergency, or for repairs, alterations, replacements or improvements which in the reasonable judgment of Landlord are desirable or necessary to be made, Landlord reserves the right, upon no less than fifteen (15) days' notice and at times mutually acceptable to Landlord and Tenant, except in the event of an emergency, to interrupt, curtail, or stop (i) the furnishing of hot and/or cold water, and (ii) the operation of the plumbing and electric systems. Landlord shall exercise reasonable diligence to eliminate the cause of any such interruption, curtailment, stoppage or suspension, but, except as set forth in Section 10.7, there shall be no diminution or abatement of Rent or other compensation due from Landlord to Tenant hereunder, nor shall this Lease be affected or any of Tenant's obligations hereunder reduced, and Landlord shall have no responsibility or liability for any such interruption, curtailment, stoppage, or suspension of services or systems.

9.6 Landlord's Services. Landlord shall provide the services described in Exhibit 7 attached hereto and made a part hereof ("**Landlord's Services**"). All costs incurred in connection with the provision of Landlord's Services shall be included in Operating Costs subject to, and in accordance with Section 5.2.

9.7 [Intentionally Omitted].

10. MAINTENANCE AND REPAIRS

10.1 Maintenance and Repairs by Tenant. Tenant shall keep neat and clean and free of insects, rodents, vermin and other pests and in good repair, order and condition (reasonable wear and tear and damage by Casualty excepted): the Premises, including without limitation the entire interior of the Premises, all electronic, phone and data cabling and related equipment (other than building service equipment) that is installed by or for the exclusive benefit of the Tenant (whether located in the Premises or other portions of the Building), all fixtures, equipment and specialty lighting therein, any HVAC and humidification equipment exclusively serving the Premises, electrical equipment wiring, doors, non-structural walls, windows and floor coverings, and all laboratory specific systems and equipment that exclusively serve the Premises, including, without limitation, equipment critical to laboratory operations. Without limiting the foregoing,

Tenant agrees that it shall maintain in the same repair, order, and condition as on the Term Commencement Date (reasonable wear and tear and damage by Casualty excepted) any equipment installed is the Premises or Building by or on behalf of Tenant (including as part of the Tenant Improvement Work), subject to Tenant's right to remove and/or replace any such equipment from time to time during the Term.

10.2 Maintenance and Repairs by Landlord. Except as otherwise provided in Section 15, and subject to Tenant's obligations in Section 10.1 above, Landlord shall maintain and keep in good repair, order and condition the Building foundation, the roof and roof membrane, Building structure (including foundation, exterior walls, and exterior windows), the common mechanical, plumbing, HVAC and fire/life safety systems serving the Building, the structural floor slabs and columns in good repair, order and condition. In addition, Landlord shall operate and maintain the Common Areas in substantially the same manner as comparable combination office and laboratory facilities in the vicinity of the Premises. All costs incurred by Landlord under this Section 10.2 shall be included in Operating Costs, subject to, and in accordance with Section 5.2.

10.3 Accidents to Sanitary and Other Systems. Tenant shall give to Landlord prompt notice of any fire or accident in the Premises or in the Building and of any damage to, or defective condition in, any part or appurtenance of the Building of which Tenant is aware, including, without limitation, sanitary, electrical, ventilation, heating and air conditioning or other systems located in, or passing through, the Premises. Except as otherwise provided in Section 15, and subject to Tenant's obligations in Section 10.1 above, such damage or defective condition shall be remedied by Landlord with reasonable diligence, but, subject to Section 14.5 below, if such damage or defective condition was caused by any of the Tenant Parties, the cost to remedy the same shall be paid by Tenant.

10.4 Floor Load--Heavy Equipment. Tenant shall not place a load upon any floor of the Premises exceeding the floor load per square foot of area which such floor was designed to carry and which is allowed by Legal Requirements. Landlord reserves the right, at the time it consents to a Tenant Alteration pursuant to Section 11.1, below, to reasonably prescribe the position of all safes, heavy machinery, heavy equipment, freight, bulky matter or fixtures (collectively, "**Heavy Equipment**"), which shall be placed so as to distribute the weight and in settings designed to minimize vibration, noise and annoyance. Tenant shall not move any Heavy Equipment into or out of the Building without giving Landlord prior written notice thereof and observing all of Landlord's Rules and Regulations with respect to the same. If such Heavy Equipment requires special handling, Tenant agrees to employ only persons holding a Master Rigger's License to do said work, and that all work in connection therewith shall comply with Legal Requirements. Any such moving shall be at the sole risk and hazard of Tenant and Tenant will defend, indemnify and save Landlord and Landlord's agents (including without limitation its property manager), contractors and employees (collectively with Landlord, the "**Landlord Parties**") harmless from and against any and all claims, damages, losses, penalties, costs, expenses and fees (including without limitation reasonable legal fees) (collectively, "**Claims**") resulting directly or indirectly from such moving. Proper placement of all Heavy Equipment in the Premises shall be Tenant's responsibility.

10.5 Premises Cleaning. Tenant shall be responsible, at its sole cost and expense, for janitorial and trash removal services and other biohazard disposal services for the Premises,

including the laboratory areas thereof. Such services shall be performed by licensed (where required by Legal Requirements), insured and qualified contractors approved in advance, in writing, by Landlord (which approval shall not be unreasonably withheld, delayed or conditioned) and on a sufficient basis to ensure that the Premises are at all times kept neat and clean. Landlord shall provide a dumpster and/or compactor at the Building loading dock for Tenant's disposal of non-hazardous and non-controlled substances. All costs incurred by Landlord in connection with such dumpster and/or compactor shall be included in Operating Costs subject to, and in accordance with Section 5.2.

10.6 Pest Control. Tenant, at Tenant's sole cost and expense, shall cause the Premises to be exterminated as necessary to keep the Premises free of insects, rodents, vermin and other pests and shall cause all portions of the Premises used for the storage, preparation, service or consumption of food or beverages to be cleaned daily, and to be treated against infestation by insects, rodents and other vermin and pests whenever there is evidence of any infestation. Tenant shall not permit any person to enter the Premises for the purpose of providing such extermination services, unless such persons have been approved by Landlord.

10.7 Service Interruptions.

(a) Abatement of Rent. In the event that: (i) there shall be an interruption, curtailment or suspension of any service or failure to perform any obligation required to be provided or performed by Landlord pursuant to Sections 9 and/or 10 (and no reasonably equivalent alternative service or supply is provided by Landlord) that shall materially interfere with Tenant's use and enjoyment of the Premises, or any portion thereof (any such event, a "**Service Interruption**"), and (ii) such Service Interruption shall continue for three (3) consecutive business days following receipt by Landlord of written notice (the "**Service Interruption Notice**") from Tenant describing such Service Interruption ("**Abatement Service Interruption Cure Period**"), and (iii) such Service Interruption shall not have been caused by an act or omission of Tenant or Tenant's agents, employees, or contractors (an event that satisfies the foregoing conditions (i)-(iii) being referred to hereinafter as a "**Material Service Interruption**") then, Tenant, subject to the next following sentence, shall be entitled to an equitable abatement of Rent based on the nature and duration of the Material Service Interruption and the area of the Premises affected, for any and all days following the Material Service Interruption Cure Period that the Material Service Interruption is continuing and (y) Tenant does not use such affected areas of the Premises for a bona fide business purpose. Any efforts by Tenant to respond or react to any Material Service Interruption, including, without limitation, any activities by Tenant to remove its personal property from the affected areas of the Premises, shall not constitute a use that precludes abatement pursuant to this Section 10.7(a). The Abatement Service Interruption Cure Period shall be extended by reason of any delays in Landlord's ability to cure the Service Interruption in question caused by Force Majeure, provided however, that in no event shall the Abatement Service Interruption Cure Period with respect to any Service Interruption be longer than fifteen (15) consecutive business days after Landlord receives the applicable Service Interruption Notice.

(b) The provisions of this Section 10.7 shall not apply in the event of a Service Interruption caused by Casualty or Taking (see Section 15 below).

(c) The provisions of this Section 10.7 set forth Tenant's sole rights and remedies, both in law and in equity, in the event of any Service Interruption.

10.8 Tenant's Self-Help. If Landlord's failure to perform any of its obligations set forth in Section 10.2 creates a condition which poses an imminent risk of serious damage or injury to persons or property, and if such failure or condition materially adversely affects Tenant's ability to operate its business in the ordinary course in accordance with the terms of this Lease, then upon not less than forty-eight (48) hours prior written notice to Landlord (which notice may be via email) Tenant shall have the right to cure such condition or perform such obligation which Landlord failed to perform or cure, as the case may be, on Landlord's behalf. In connection with any performance of Landlord's obligations by Tenant hereunder (i) in no event shall any work or repairs performed by Tenant materially adversely affect the structure of the Building or any Building systems; (ii) the insurance and indemnity provisions of this Lease shall apply to Tenant's performance of such work or repairs; (iii) Tenant shall perform all such work or repairs in accordance with all applicable Legal Requirements; (iv) Tenant shall retain to effect such work or repairs only reputable and qualified contractors and suppliers as are duly licensed; (v) Tenant shall effect such work or repairs in a good and workmanlike manner, consistent with the standards of the Building, using new or like new materials; and (vi) Tenant shall use diligent efforts to minimize any material interference or impact on the other tenants and occupants of the Building. Landlord shall reimburse Tenant for the amount of all reasonable costs actually incurred by Tenant in performing such obligation of Landlord within thirty (30) days following Landlord's receipt of an invoice therefor from Tenant. In the event Landlord fails to reimburse such Tenant's costs and expenses within thirty (30) days after delivery of a second Notice to Landlord, then Tenant may apply such amount as a credit against up to 25% of Tenant's next payment(s) of Base Rent until Tenant is fully repaid.

11. ALTERATIONS AND IMPROVEMENTS BY TENANT

11.1 Landlord's Consent Required. Tenant shall not make any alterations, decorations, installations, removals, additions or improvements (collectively with Tenant's Work, "**Alterations**") in or to the Premises without Landlord's prior written approval of the contractor(s) and, if applicable, written plans and specifications therefor, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord reserves the right to require that Tenant use Landlord's preferred vendor(s) for any Alterations that involve roof penetrations, alarm tie-ins, sprinklers, fire alarm and other life safety equipment that connect to common Building systems. Tenant shall not make any amendments or additions to plans and specifications approved by Landlord without Landlord's prior written consent. Landlord's approval of non-structural Alterations shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, Landlord may withhold its consent in its sole discretion (a) to any Alteration that would adversely affect the roof or the common building systems, and (b) to any Alteration affecting the Building structure. Tenant shall be responsible for all elements of the design of Tenant's plans (including, without limitation, compliance with Legal Requirements, functionality of design, the structural integrity of the design, the configuration of the Premises and the placement of Tenant's furniture, appliances and equipment), and Landlord's approval of Tenant's plans shall in no event relieve Tenant of the responsibility for such design. In seeking Landlord's approval, Tenant shall provide Landlord, at least fourteen (14) business days in advance of any proposed construction, with plans, specifications, bid proposals, certified stamped engineering drawings and calculations

by Tenant's engineer of record or architect of record (including connections to the Building's structural system, the Building's mechanical, electrical and plumbing systems, modifications to the Building's envelope, non-structural penetrations in slabs or walls, and modifications or tie-ins to life safety systems), requests for laydown areas and such other information concerning the nature of the Alterations as Landlord may reasonably request. Landlord shall have no liability or responsibility for any claim, injury or damage alleged to have been caused by the particular materials (whether building standard or non-building standard), appliances or equipment selected by Tenant in connection with any work performed by or on behalf of Tenant. Except as otherwise expressly set forth herein, all Alterations shall be done at Tenant's sole cost and expense and at such times and in such manner as Landlord may from time to time reasonably designate. If Tenant shall make any Alterations, other that Tenant's Work, then, if Landlord, in Landlord's reasonable judgment, determines that the Alterations require unusual expense to restore and/or redapt the Premises to usual use as a biotechnology office and research and development facility, Landlord may elect to require Tenant at the expiration or sooner termination of the Term to restore the Premises to substantially the same condition as existed immediately prior to the Alterations. Landlord agrees that it will make such election with respect to any Alteration at the time that Landlord approves Tenant's plans and specifications for an Alteration. Tenant shall provide Landlord with reproducible record drawings (in CAD format) of all Alterations within sixty (60) days after completion thereof.

11.2 Permitted Alterations. Notwithstanding anything to the contrary herein contained, Tenant shall have the right without obtaining the prior consent of Landlord, but upon prior notice to Landlord as provided below, to make Alterations to the Premises where: (i) the same are within the interior of the Premises, and do not affect the exterior of the Building and do not adversely affect any of the Building's systems or the ceiling of the Premises; (ii) the same do not affect the roof or any structural element of the Building, or the fire protection systems of the Building; (iii) the cost of any individual Alteration shall not exceed $500,000.00 in cost; (iv) Tenant shall comply with the provisions of this Lease, and if such work increases the cost of insurance or taxes, Tenant shall pay for any such increase in cost; and (v) Tenant gives Landlord at least thirty (30) days' prior notice describing such work in reasonable detail, accompanied by copies of plans and specifications therefor (to the extent plans and specifications are typically prepared in accordance with such work (the "**Permitted Alterations**").

11.3 After-Hours. Landlord and Tenant recognize that to the extent Tenant elects to perform some or all of the Alterations during times other than normal construction hours (i.e., Monday-Friday, 7:00 a.m. to 6:00 p.m., excluding holidays), Landlord may need to make arrangements to have supervisory personnel on site. Accordingly, Landlord and Tenant agree as follows: Tenant shall give Landlord at least two (2) business days' prior written notice of any time outside of normal construction hours when Tenant intends to perform any Alterations (the "**After-Hours Work**"). Tenant shall reimburse Landlord, within thirty (30) days after demand therefor, for the reasonable out-of-pocket cost of Landlord's supervisory personnel overseeing the After-Hours Work. In addition, if construction during normal construction hours unreasonably disturbs other tenants of the Building, in Landlord's reasonable discretion, Landlord may require Tenant to stop the performance of Alterations during normal construction hours and to perform the same after hours, subject to the foregoing requirement to pay for the cost of Landlord's supervisory personnel.

11.4 Harmonious Relations. Provided that Landlord agrees that Tenant shall not be required to use union labor for work at the Property, Tenant agrees that it will not, either directly or indirectly, use any contractors and/or materials if their use will create any labor dispute with other contractors and/or labor engaged by Tenant or Landlord or others in the construction, maintenance and/or operation of the Building, the Property or any part thereof. In the event of any such dispute, upon Landlord's request, Tenant shall cause all contractors, mechanics or laborers causing such difficulty to leave the Property immediately.

11.5 Liens. No Alterations shall be undertaken by Tenant until Tenant has made provision for written waiver of liens from all general contractors and major subcontractors providing work and services in excess of $50,000 for such Alteration. Any mechanic's lien filed against the Premises or the Building for work claimed to have been done for, or materials claimed to have been furnished to, Tenant shall be discharged by Tenant within ten (10) days thereafter, at Tenant's expense by filing the bond required by law or otherwise.

11.6 General Requirements. Unless Landlord and Tenant otherwise agree in writing, Tenant shall (a) procure or cause others to procure on its behalf all necessary permits before undertaking any Alterations in the Premises (and provide copies thereof to Landlord); (b) perform all of such Alterations in a good and workmanlike manner, employing materials of good quality and in compliance with Landlord's construction rules and regulations, all insurance requirements of this Lease, and Legal Requirements; and (c) defend, indemnify and hold the Landlord Parties harmless from and against any and all Claims occasioned by or growing out of such Alterations.

12. SIGNAGE

12.1 Restrictions. Tenant shall have the right, at Tenant's expense, to install Building standard signage identifying Tenant's business at the entrance to the Premises, which signage shall be subject to Landlord's prior written consent (which consent shall not be unreasonably withheld, conditioned or delayed). Notwithstanding the foregoing, Tenant may elect to use a portion of the Landlord's Contribution for purposes of installing such signage, as provided in Exhibit 4. Subject to the foregoing, and subject to Section 12.2 below, Tenant shall not place or suffer to be placed or maintained on the exterior of the Premises, or any part of the interior visible from the exterior thereof, any sign, banner, advertising matter or any other thing of any kind (including, without limitation, any hand-lettered advertising), and shall not place or maintain any decoration, letter or advertising matter on the glass of any window or door of the Premises without first obtaining Landlord's written approval. No signs may be put on or in any window or elsewhere if visible from the exterior of the Building.

12.2 Exterior Signage. Subject to the provisions of this Section 12.2, for so long as: (x) there is no Event of Default of Tenant, (y) the Lease is in full force and effect, and (z) Tenant, an Affiliated Entity and/or a Successor is then occupying at least fifty-one percent (51%) of the Premises (the "**Signage Conditions**"), then Tenant shall have the right to require Landlord to list, at Landlord's initial cost and expense, Tenant's name ("**Tenant's Monument Signage**") on the exterior monument sign serving the Property along New York Avenue. Such monument sign shall be a common monument (i.e. other tenant(s) in the Building may have identification signage installed on such monument). The right to the Tenant's Monument Signage granted pursuant to this Section 12.2 is personal to Tenant, and may not be exercised by any occupant, subtenant, or

other assignee of Tenant, other than an Affiliated Entity or Successor (the parties hereby agreeing that Tenant shall be responsible for the cost of any change in Tenant's Monument Signage). The parties hereby agree that the maintenance and removal of such Tenant's Monument Signage (including, without limitation, the repair and cleaning of the existing monument façade upon removal of Tenant's Monument Signage) shall be performed at Landlord's sole cost and expense, except that Tenant shall be responsible for the cost of any change in Tenant's Monument Signage during the initial Term of the lease.

In addition to Tenant's Monument Signage, provided that and for so long as Tenant satisfies the Signage Conditions, Tenant shall have the right to erect and maintain one (1) sign on the exterior of the Building at the entrance to the Premises (the "**Exterior Signage**"), provided (i) the Exterior Signage complies with the signage guidelines attached hereto as Exhibit 10 (the "**Signage Guidelines**") and all Legal Requirements (and Tenant shall have obtained any necessary permits, which Landlord agrees to cooperate reasonably with Tenant, but at no cost to Landlord, in obtaining, prior to erecting the Exterior Signage), (ii) the location of the Exterior Signage shall be at the main entrance to the Premises, (iii) the materials, design, lighting and method of installation of the Exterior Signage, and any requested changes thereto, shall be subject to Landlord's prior written approval, which approval shall not be unreasonably withheld, conditioned or delayed, and (iv) Tenant shall at all times maintain the Exterior Signage in good order, condition and repair and shall remove the Exterior Signage at the expiration or earlier termination of the Term hereof or upon Landlord's written demand after the failure of Tenant to satisfy the Signage Conditions, and shall repair any damage to the Building caused by the Exterior Signage or the installation or removal thereof. Tenant shall have the right, from time to time throughout the Term of this Lease, to replace its signage (if any) with signage which is equivalent to the signage being replaced, subject to all of the terms and conditions of this Section 12.2.

12.3 Building Directory.

Landlord shall list Tenant within the directory in the Building lobby. The initial listing shall be at Landlord's cost and expense, and any changes to such directory listing shall be at Tenant's cost and expense. Tenant shall have the right, at Tenant's cost and expense, to install a Building standard Tenant identification sign at the entrance to the Premises.

13. ASSIGNMENT, MORTGAGING AND SUBLETTING

13.1 Landlord's Consent Required. Tenant shall not mortgage or encumber this Lease or in whole or in part whether at one time or at intervals, operation of law or otherwise. Except as expressly otherwise set forth herein, Tenant shall not, without Landlord's prior written consent, assign, sublet, license or transfer this Lease or the Premises in whole or in part whether by changes in the ownership or direct or indirect control of Tenant, whether at one time or at intervals, by sale or transfer of stock, partnership or beneficial interests, operation of law or otherwise, or permit the occupancy of all or any portion of the Premises by any person or entity other than Tenant's employees (each of the foregoing, a "**Transfer**"). Any purported Transfer made without Landlord's consent, if required hereunder, shall be void and confer no rights upon any third person, provided that if there is a Transfer, Landlord may collect rent from the transferee without waiving the prohibition against Transfers, accepting the transferee, or releasing Tenant from full performance under this Lease. In the event of any Transfer in violation of this Section 13, Landlord

shall have the right to terminate this Lease upon thirty (30) days' written notice to Tenant given within sixty (60) days after receipt of written notice from Tenant to Landlord of any Transfer, or within one (1) year after Landlord first learns of the Transfer if no notice is given. No Transfer shall relieve Tenant of its primary obligation as party Tenant hereunder, nor shall it reduce or increase Landlord's obligations under this Lease. Notwithstanding the foregoing, if during the Term Tenant's stock is traded on a public exchange, the sale or transfer of such stock shall not be deemed a Transfer.

13.2 Landlord's Recapture Right.

Subject to Section 13.7 below, Tenant shall, prior to offering or advertising the Premises or any portion thereof for a Transfer, give a written notice (the "**Transfer Notice**") to Landlord which: (i) states that Tenant desires to make a Transfer, (ii) identifies the affected portion of the Premises (the "**Transfer Premises**"), (iii) identifies the period of time (the "**Transfer Period**") during which Tenant proposes to sublet the Transfer Premises, or indicates that Tenant proposes to assign its interest in this Lease, and (iv) offers to Landlord to (x) terminate this Lease with respect to the Transfer Premises, but only in the case of a proposed assignment of Tenant's interest in this Lease or a subletting of all or a portion of the Premises for greater than five (5) years), or (y) terminate this Lease with respect to the Transfer Premises during the Transfer Period (i.e., the Term with respect to the Transfer Premises shall be terminated during the Transfer Period and Tenant's rental obligations shall be proportionately reduced), after which this Lease shall be reinstated with respect to the Transfer Premises (but only in the case of a proposed sublease of all or a portion of the Premises for a period of less than or equal to five (5) years) (in either case, a "**Recapture Offer**"). Landlord shall have fifteen (15) business days within which to respond to the Transfer Notice.

13.3 Standard of Consent to Transfer. If Landlord does not timely give written notice to Tenant accepting a Recapture Offer or declines to accept the same, then Landlord agrees that, subject to the provisions of this Section 13, Landlord shall not unreasonably withhold, condition or delay its consent to a Transfer on the applicable terms required to be contained in the Transfer Notice to an entity which will use the Premises for the Permitted Uses and, in Landlord's reasonable opinion: (a) has a tangible net worth and other financial indicators sufficient to meet the Transferee's obligations under the Transfer instrument in question; (b) has a business reputation compatible with the operation of a first-class combination laboratory, research, development and office building; and (c) the intended use of such entity does not violate any restrictive use provisions then in effect with respect to space in the Building.

13.4 Listing Confers no Rights. The listing of any name other than that of Tenant, whether on the doors of the Premises or on the Building directory, or otherwise, shall not operate to vest in any such other person, firm or corporation any right or interest in this Lease or in the Premises or be deemed to effect or evidence any consent of Landlord, it being expressly understood that any such listing is a privilege extended by Landlord revocable at will by written notice to Tenant.

13.5 Profits In Connection with Transfers. Except as for Permitted Transfers, Tenant shall, within thirty (30) days of receipt thereof, pay to Landlord fifty percent (50%) of any rent, sum or other consideration paid or given in connection with any Transfer, either initially or over

time, after deducting reasonable actual out-of-pocket costs and expenses incurred with respect to such Transfer, including, without limitation, legal and brokerage expenses, unamortized improvements paid for by Tenant in connection therewith and the unamortized costs and expenses incurred by Tenant for the initial improvements in the Transfer Premises, in excess of Rent hereunder as if such amount were originally called for by the terms of this Lease as Additional Rent.

13.6 Prohibited Transfers. Notwithstanding any contrary provision of this Lease, Tenant shall have no right to make a Transfer unless on the date on which Tenant notifies Landlord of its intention to enter into a Transfer Tenant is not in default of any of its obligations under this Lease beyond applicable notice and cure periods. Notwithstanding anything to the contrary contained herein, Tenant agrees that in no event shall Tenant make a Transfer to (a) any government agency; (b) any tenant, subtenant or occupant of other space in the Building at a time when Landlord has comparable space available to lease to such entity; or (c) any entity with whom Landlord is currently negotiating, or shall have negotiated in the six (6) months immediately preceding such proposed Transfer, for space in the Property.

13.7 Exceptions to Requirement for Consent. Notwithstanding anything to the contrary herein contained, Tenant shall have the right, without obtaining Landlord's consent and without giving Landlord a Transfer Notice, to (a) make a Transfer to an Affiliated Entity (hereinafter defined) so long as the transfer to such Affiliated Entity is for legitimate business purposes (and not for the purpose of avoiding the provisions of this Section 13), and (b) make a Transfer to a Successor or otherwise assign all of Tenant's interest in and to the Lease to a Successor, provided that prior to or simultaneously with any assignment pursuant to this **Section 13.7** (except as the result of a merger or other corporate reorganization of Tenant or Tenant's parent or ultimate parent entity, whereby Tenant shall continue to be the originally named Tenant hereunder), such Affiliated Entity or Successor, as the case may be, and Tenant execute and deliver to Landlord an assignment and assumption agreement in form and substance reasonably acceptable to Landlord whereby such Affiliated Entity or Successor, as the case may be, shall agree to be independently bound by and upon all the covenants, agreements, terms, provisions and conditions set forth in the Lease on the part of Tenant to be performed, and whereby such Affiliated Entity or Successor, as the case may be, shall expressly agree that the provisions of this **Article 13** shall, notwithstanding such Transfer, continue to be binding upon it with respect to all future Transfers. Additionally, Tenant shall have the right, without obtaining Landlord's consent, to permit Affiliated Vendors (hereinafter defined) to occupy portions of the Premises from time to time during the Term, in each case on a temporary basis, without such occupancy constituting a Transfer hereunder (subject to the terms and conditions of this Lease, including without limitation Sections 4.1 and 4.2, above). For the purposes hereof, an "**Affiliated Entity**" shall be defined as any entity which is controlled by, is under common control with, or which controls Tenant. For the purposes hereof, a "**Successor**" shall be defined as any entity (1) into or with which Tenant or Tenant's parent or ultimate parent entity is merged; or (2) with which Tenant or Tenant's parent or ultimate parent entity is consolidated; or (3) which acquires all or substantially all of the assets, stock or other ownership interests of Tenant or Tenant's parent or ultimate parent entity; or (4) acquires Tenant or Tenant's parent or ultimate parent entity via any other merger or other business combination, provided that the surviving entity shall have a net worth and other financial indicators sufficient to meet Tenant's obligations hereunder. Except to the extent such Transfer is subject to confidentiality requirements (in which case such notice shall be given within ten (10) days after

the Transfer), Tenant shall give Landlord at least ten (10) days' prior written notice of any Permitted Transfer, such notice to include evidence, reasonably satisfactory to Landlord, that the conditions to the Permitted Transfer in question have been satisfied. Transfers to Affiliated Entities and to Successor which are permitted pursuant to this Section 13.7, are referred to collectively herein as "**Permitted Transfers**", and such Affiliated Entities and Successors are referred to herein as "**Permitted Transferees**". For the purposes hereof, an "**Affiliated Vendor**" shall be defined as a contractor, vendor or other service provider that is either engaged in a direct contractual relationship with Tenant or engaged in a direct contractual relationship with a contractor of Tenant .

14. INSURANCE; INDEMNIFICATION; EXCULPATION

14.1 Tenant's Insurance.

(a) Tenant shall procure, pay for and keep in force throughout the Term (and for so long thereafter as Tenant remains in occupancy of the Premises) commercial general liability insurance insuring Tenant on an occurrence basis against all claims and demands for personal injury liability (including, without limitation, bodily injury, sickness, disease, and death) or damage to property which may be claimed to have occurred from and after the time any of the Tenant Parties shall first enter the Premises, of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in the aggregate annually, and from time to time thereafter (provided that no change shall be required during the Initial Term) shall be not less than such higher amounts, if procurable, as may be reasonably required by Landlord based on comparable requirements of owners of comparable buildings in the area in which the Property is located. Tenant shall also carry umbrella liability coverage in an amount of no less than Ten Million Dollars ($10,000,000). Such policy shall also include contractual liability coverage covering Tenant's liability assumed under this Lease, including without limitation Tenant's indemnification obligations. Such insurance policy(ies) shall name Landlord, Landlord's managing agent and persons claiming by, through or under them, if any, as set out in a written notice to Tenant from time to time, as additional insureds.

(b) Tenant shall take out and maintain throughout the Term a policy of fire, vandalism, malicious mischief, extended coverage and so-called "all risk" coverage insurance in an amount equal to one hundred percent (100%) of the replacement cost insuring (i) all items or components of Alterations (collectively, the "**Tenant-Insured Improvements**"), and (ii) all of Tenant's furniture, equipment, fixtures and property of every kind, nature and description related or arising out of Tenant's leasehold estate hereunder, which may be in or upon the Premises or the Building, including without limitation Tenant's Rooftop Equipment (collectively, "**Tenant's Property**"). The insurance required to be maintained by Tenant pursuant to this Section 14.1(b) (referred to herein as "**Tenant Property Insurance**") shall insure the interests of both Landlord and Tenant as their respective interests may appear from time to time.

(c) Tenant shall take out and maintain a policy of business interruption insurance throughout the Term sufficient to cover at least twelve (12) months of Rent due hereunder and Tenant's business losses during such 12-month period.

(d) During periods when any Tenant's Work or Alterations are being performed, Tenant shall maintain, or cause to be maintained, so-called all risk or special cause of loss property insurance or its equivalent and/or builders risk insurance on 100% replacement cost coverage basis, including hard and soft costs coverages. Such insurance shall protect and insure Landlord, Landlord's agents, Tenant and Tenant's contractors, as their interests may appear, against loss or damage by fire, water damage, vandalism and malicious mischief, and such other risks as are customarily covered by so-called all risk or special cause of loss property / builders risk coverage or its equivalent.

(e) Tenant shall procure and maintain at its sole expense such additional insurance as may be necessary to comply with any Legal Requirements.

(f) Tenant shall cause all contractors and subcontractors to maintain during the performance of any Alterations the insurance described in Exhibit 9-2 attached hereto.

(g) The insurance required pursuant to Sections 14.1(a), (b), (c), (d) and (e) (collectively, "**Tenant's Insurance Policies**") shall be effected with insurers approved by Landlord, with a rating of not less than "A-XI" in the current *Best's Insurance Reports*, and authorized to do business in the Commonwealth of Massachusetts under valid and enforceable policies. Tenant's Insurance Policies shall each provide that it shall not be canceled or modified without at least thirty (30) days' prior written notice to each insured named therein, except for notice of cancellation due to non-payment of premium which shall be ten (10) days. Tenant's Insurance Policies may include deductibles in an amount no greater than the greater of $25,000 or commercially reasonable amounts. On or before the date on which any of the Tenant Parties shall first enter the Premises and thereafter prior to the expiration date of each expiring policy, Tenant shall deliver to Landlord customary certificates evidencing the required coverages issued by the respective insurers together with evidence satisfactory to Landlord of the payment of all premiums for such policies. In the event of any claim, Tenant shall deliver to Landlord complete copies of Tenant's Insurance Policies.

14.2 Indemnification. Except to the extent caused by the negligence or willful misconduct of any of the Landlord Parties, Tenant shall defend, indemnify and save the Landlord Parties harmless from and against any and all Claims asserted by or on behalf of any person, firm, corporation or public authority arising from:

(a) Tenant's breach of any covenant or obligation under this Lease;

(b) Any injury to or death of any person, or loss of or damage to property, sustained or occurring in, upon, or at the Premises;

(c) Any injury to or death of any person, or loss of or damage to property arising out of the use or occupancy of the Premises by or the negligence or willful misconduct of any of the Tenant Parties; and

(d) On account of or based upon any work or thing whatsoever done (other than by Landlord or any of the Landlord Parties) at the Premises during the Term and during the period of time, if any, prior to the Term Commencement Date that any of the Tenant Parties may have been given access to the Premises.

14.3 Property of Tenant. Tenant covenants and agrees that, to the maximum extent permitted by Legal Requirements, all of Tenant's Property at the Premises shall be at the sole risk and hazard of Tenant, and that if the whole or any part thereof shall be damaged, destroyed, stolen or removed from any cause or reason whatsoever, no part of said damage or loss shall be charged to, or borne by, Landlord, except, subject to Section 14.5 hereof, to the extent such damage or loss is due to the negligence or willful misconduct of any of the Landlord Parties.

14.4 Limitation of Landlord's Liability for Damage or Injury. Landlord shall not be liable for any injury or damage to persons or property resulting from fire, explosion, falling plaster, steam, gas, air contaminants or emissions, electricity, electrical or electronic emanations or disturbance, water, rain or snow or leaks from any part of the Building or from the pipes, appliances, equipment or plumbing works or from the roof, street or sub-surface or from any other place or caused by dampness, vandalism, malicious mischief or by any other cause of whatever nature, except, subject to Section 14.5, to the extent caused by or due to the negligence or willful misconduct of any of the Landlord Parties, and then, where notice and an opportunity to cure are appropriate (i.e., where Tenant is aware of such condition sufficiently in advance of the occurrence of any such injury or damage resulting therefrom as would have enabled Landlord to prevent such damage or loss had Tenant notified Landlord of such condition) only after (i) notice to Landlord of the condition claimed to constitute negligence or willful misconduct, and (ii) the expiration of a reasonable time after such notice has been received by Landlord without Landlord having commenced to take all reasonable and practicable means to cure or correct such condition; and pending such cure or correction by Landlord, Tenant shall take all reasonably prudent temporary measures and safeguards to prevent any injury, loss or damage to persons or property. Notwithstanding the foregoing, in no event shall any of the Landlord Parties be liable for any damage or injury in connection with any latent defect in the Premises or in the Building, provided, however, that the foregoing shall not release Landlord from its obligations to perform maintenance or repairs pursuant to Section 10.2 of the Lease.

14.5 Waiver of Subrogation; Mutual Release. Landlord and Tenant each hereby waives on behalf of itself and its property insurers (none of which shall ever be assigned any such claim or be entitled thereto due to subrogation or otherwise) any and all rights of recovery, claim, action, or cause of action against the other and its agents, officers, servants, partners, shareholders, or employees (collectively, the "**Related Parties**") for any loss or damage that may occur to or within the Premises or the Building or any improvements thereto, or any personal property of such party therein which is insured against under any Property Insurance (as defined in Section 14.7) policy actually being maintained by the waiving party from time to time, even if not required hereunder, or which would be insured against under the terms of any Property Insurance policy required to be carried or maintained by the waiving party hereunder, whether or not such insurance coverage is actually being maintained, including, in every instance, such loss or damage that may be caused by the negligence of the other party hereto and/or its Related Parties. Landlord and Tenant each agrees to cause appropriate clauses to be included in its Property Insurance policies necessary to implement the foregoing provisions.

14.6 Tenant's Acts--Effect on Insurance. Tenant shall not do or permit any Tenant Party to do any act or thing upon the Premises or elsewhere in the Building which will invalidate or be in conflict with any insurance policies covering the Building and the fixtures and property therein; and shall not do, or permit to be done, any act or thing upon the Premises which shall

subject Landlord to any liability or responsibility for injury to any person or persons or to property by reason of any business or operation being carried on upon said Premises or for any other reason. If by reason of the failure of Tenant to comply with the provisions hereof the insurance rate applicable to any policy of insurance shall at any time thereafter be higher than it otherwise would be, Tenant shall reimburse Landlord upon demand for that part of any insurance premiums which shall have been charged because of such failure by Tenant, together with interest at the Default Rate until paid in full, within ten (10) days after receipt of an invoice therefor. Landlord represents and warrants to Tenant that the use of the Premises for the Permitted Use will not invalidate or be in conflict with any insurance policies covering the Building or increase the premiums for such insurance policies.

14.7 Landlord's Insurance. Landlord shall carry at all times during the Term of this Lease: (i) commercial general liability insurance with respect to the Building, the Land and the Common Areas thereof in an amount not less than Five Million Dollars ($5,000,000) combined single limit per occurrence, (ii) with respect to the Building, excluding Tenant-Insured Improvements and improvements made by other tenants or occupants, insurance against loss or damage caused by any peril covered under fire, extended coverage and all risk insurance with coverage against vandalism, malicious mischief and such other insurable hazards and contingencies as are from time to time normally insured against by owners of similar first class offices/research/laboratory buildings/campuses in the Market Area or which are required by Landlord's mortgagee, in an amount equal to one hundred percent (100%) of the full replacement cost thereof above foundation walls ("**Landlord Property Insurance**"), and (iii) rent interruption insurance covering at least eighteen (18) months. Any and all such insurance: (x) may be maintained under a blanket policy affecting other properties of Landlord and/or its affiliated business organizations, and (y) may be written with commercially reasonable deductibles as reasonably determined by Landlord. The costs incurred by Landlord related to such insurance shall be included in Operating Costs subject to, and in accordance with Section 5.2. Tenant Property Insurance and Landlord Property Insurance are referred to collectively herein as "**Property Insurance**".

15. CASUALTY; TAKING

15.1 Damage. If the Premises are damaged in whole or part because of fire or other casualty ("**Casualty**"), or if the Premises are subject to a taking in connection with the exercise of any power of eminent domain, condemnation, or purchase under threat or in lieu thereof (any of the foregoing, a "**Taking**"), then unless this Lease is terminated in accordance with Section 15.2 below, Landlord shall restore the Building and/or the Premises to substantially the same condition as existed immediately following completion of Landlord's Work, or in the event of a partial Taking which affects the Building and the Premises, restore the remainder of the Building and the Premises not so Taken to substantially the same condition as is reasonably feasible. Landlord shall, within sixty (60) days after any Casualty, provide an engineering estimate (the "**Restoration Estimate**") from a reputable contractor or engineer, setting forth an estimate of the period of time (the "**Restoration Period**") that it will take for Landlord to restore the Building and/or Premises, as aforesaid. Subject to rights of Mortgagees, Tenant Delays, Legal Requirements then in existence and to delays for adjustment of insurance proceeds or Taking awards, as the case may be, and instances of Force Majeure, Landlord shall substantially complete such restoration within one (1) year after Landlord's receipt of all required permits therefor with respect to substantial

reconstruction of at least 50% of the Building, or, within one hundred eighty (180) days after Landlord's receipt of all required permits therefor in the case of restoration of less than 50% of the Building. Upon substantial completion of such restoration by Landlord, Tenant shall use diligent efforts to complete restoration of the Premises to substantially the same condition as existed immediately prior to such Casualty or Taking, as the case may be, as soon as reasonably possible. Tenant agrees to cooperate with Landlord in such manner as Landlord may reasonably request to assist Landlord in collecting insurance proceeds due in connection with any Casualty which affects the Premises or the Building. In no event shall Landlord be required to expend more than the Net (hereinafter defined) insurance proceeds Landlord receives for damage to the Premises and/or the Building or the Net Taking award attributable to the Premises and/or the Building. "**Net**" means the insurance proceeds or Taking award actually paid to Landlord (and not paid over to a Mortgagee) less all costs and expenses, including adjusters and attorney's fees, of obtaining the same. In the Operating Year in which a Casualty occurs, there shall be included in Operating Costs Landlord's deductible under its property insurance policy, but in no event more than $50,000.00. Under no circumstances shall Landlord be required to repair any damage to, or make any repairs to or replacements of, any Tenant-Insured Improvements.

15.2 Termination Rights.

(a) Landlord's Termination Rights. Landlord may terminate this Lease upon thirty (30) days' prior written notice to Tenant if the estimated time to complete restoration exceeds one (1) year from the date on which Landlord receives all required permits for such restoration.

(b) Tenant's Termination Right. If (i) Landlord is so required but fails to complete restoration of the Premises within the time frames and subject to the conditions set forth in Section 15.1 above, or (ii) if the estimated Restoration Period, as set forth in the Restoration Estimate, exceeds two hundred seventy (270) days from the date of the Casualty, then in either case Tenant may terminate this Lease upon thirty (30) days' written notice to Landlord; provided, however, that if Landlord completes such restoration within thirty (30) days after receipt of any such termination notice, such termination notice shall be null and void and this Lease shall continue in full force and effect. The remedies set forth in this Section 15.2(b) and in Section 15.2(c) below are Tenant's sole and exclusive rights and remedies based upon Landlord's failure to complete the restoration of the Premises as set forth herein.

(c) Either Party May Terminate. In the case of any Casualty or Taking affecting the Premises and occurring during the last twelve (12) months of the Term, then (i) if such Casualty or Taking results in more than twenty-five percent (25%) of the floor area of the Premises being unsuitable for the Permitted Uses, or (ii) the damage to the Premises will require more than thirty (30) days to restore, then either Landlord or Tenant shall have the option to terminate this Lease upon thirty (30) days' written notice to the other. In addition, if Landlord's Mortgagee does not release sufficient insurance proceeds to cover the cost of Landlord's restoration obligations, then Landlord shall (i) notify Tenant thereof, and (ii) have the right to terminate this Lease. If Landlord does not terminate this Lease pursuant to the previous sentence and such notice by Landlord does not include an agreement by Landlord to pay for the difference between the cost of such restoration and such released insurance proceeds, then Tenant may terminate this Lease by written notice to Landlord on or before the date that is thirty (30) days after such notice.

(d) Automatic Termination. In the case of a Taking of the entire Premises, then this Lease shall automatically terminate as of the date of possession by the Taking authority.

15.3 Rent Abatement. In the event of a Casualty affecting the Premises, there shall be an equitable adjustment of Base Rent, Operating Costs and Taxes based upon the degree to which Tenant's ability to conduct its business in the Premises is impaired by reason of such Casualty from and after the date of a Casualty, and continuing until the following portions of the repair and restoration work to be performed by Landlord, as set forth above, are substantially completed: (i) any repair and restoration work to be performed by Landlord within the Premises, and (ii) repair and restoration work with respect to the Common Areas to the extent that damage to the Common Areas caused by such Casualty materially adversely affects Tenant's use of, or access to, the Premises.

15.4 Taking for Temporary Use. If the Premises are Taken for temporary use, this Lease and Tenant's obligations, including without limitation the payment of Rent, shall continue. For purposes hereof, a "**Taking for temporary use**" shall mean a Taking of ninety (90) days or less.

15.5 Disposition of Awards. Except for any separate award for Tenant's movable trade fixtures, relocation expenses, and unamortized leasehold improvements paid for by Tenant (provided that the same may not reduce Landlord's award), and except for any award under Section 15.4 above to Tenant, all Taking awards to Landlord or Tenant shall be Landlord's property without Tenant's participation, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant may pursue its own claim against the Taking authority.

16. ESTOPPEL CERTIFICATE.

Each party shall at any time and from time to time upon not less than ten (10) days' prior notice from the other party (the "**Requesting Party**"), execute, acknowledge and deliver to the Requesting Party a statement in writing certifying that this Lease is unmodified and in full force and effect (or if there have been modifications, that the same is in full force and effect as modified and stating the modifications), and the dates to which Rent has been paid in advance, if any, stating whether or not the Requesting Party is in default in performance of any covenant, agreement, term, provision or condition contained in this Lease and, if so, specifying each such default, and such other facts as the Requesting Party may reasonably request, it being intended that any such statement delivered pursuant hereto may be relied upon by the Requesting Party, any prospective purchaser of the Building or of any interest of Landlord therein, any Mortgagee or prospective Mortgagee thereof, any lessor or prospective lessor thereof, any lessee or prospective lessee thereof, any prospective assignee of any mortgage thereof, or any prospective transferee of Tenant's interest in the Lease or the Premises, or any portion thereof. *Time is of the essence with respect to any such requested certificate*, each party hereby acknowledging the importance of such certificates in mortgage financing arrangements, prospective sales and the like.

17. HAZARDOUS MATERIALS

17.1 Prohibition.

(a) Tenant shall not, without the prior written consent of Landlord, bring or permit to be brought or kept in or on the Premises or elsewhere in the Building or the Property (i) any inflammable, combustible or explosive fluid, material, chemical or substance (except for standard office supplies stored in proper containers); and (ii) any Hazardous Material (hereinafter defined), other than the types and quantities of Hazardous Materials which are initially listed on Exhibit 8 attached hereto and otherwise used by Tenant in the ordinary course of business in compliance with Environmental Laws and the requirements of this Lease ("**Tenant's Hazardous Materials**"), provided that the same shall at all times be:

(i) brought upon, kept or used in Tenant's Control Areas (as hereinafter defined);

(ii) in compliance with the Control Area Limitations, as hereinafter defined;

(iii) in accordance with all applicable Legal Requirements, including, without limitation, all applicable Environmental Laws (hereinafter defined); and

(iv) in accordance with prudent environmental practice and (with respect to medical waste and so-called "biohazard" materials) good scientific and medical practice.

(b) "**Tenant's Control Areas**" consist of the entirety of the Prime Premises and the Storage Area. The "**Control Areas Limitations**" are determined in accordance with the International Building Code (2018) ("**IBC**"), and are as follows:

(i) Prime Premises. The parties acknowledge that the Prime Premises shall be deemed to consist of one (1) Control Area, as defined by the IBC, and Tenant shall not, in the Prime Premises, exceed the limitations which are imposed by the IBC on use and storage of Hazardous Materials for premises consisting of one Control Area located on the first (1st) floor of a building, and

(ii) Storage Area. Tenant shall not, at any time, exceed in the Storage Area, ten percent (10%) of the solvent storage capacity permitted for a Control Area located on the ground floor of a building under the IBC.

(c) Tenant shall be responsible for assuring that all laboratory uses are adequately and properly vented. On or before each anniversary of the Term Commencement Date, and on any earlier date during the 12-month period on which Tenant intends to add a new Hazardous Material or materially increase the quantity of any Hazardous Material to the list of Tenant's Hazardous Materials, Tenant shall submit to Landlord an updated list of Tenant's Hazardous Materials. Landlord shall have the right, from time to time, to inspect the Premises for compliance with the terms of this Section 17.1. Notwithstanding the foregoing, with respect to any of Tenant's Hazardous Materials which Tenant does not properly handle, store or dispose of in compliance with all applicable Environmental Laws (hereinafter defined), prudent

environmental practice and (with respect to medical waste and so-called "biohazard materials") good scientific and medical practice, Tenant shall, upon written notice from Landlord, no longer have the right to bring such material into the Building or the Property until Tenant has demonstrated, to Landlord's reasonable satisfaction, that Tenant has implemented programs to thereafter properly handle, store or dispose of such material. In order to induce Landlord to waive its otherwise applicable requirement that Tenant maintain insurance in favor of Landlord against liability arising from the presence of radioactive materials in the Premises, and without limiting the foregoing, Tenant hereby represents and warrants to Landlord that at no time during the Term will Tenant bring upon, or permit to be brought upon, the Premises any radioactive materials whatsoever.

17.2 Environmental Laws. For purposes hereof, "**Environmental Laws**" shall mean all laws, statutes, ordinances, rules and regulations of any local, state or federal governmental authority having jurisdiction concerning environmental, health and safety matters, including but not limited to any discharge by any of the Tenant Parties into the air, surface water, sewers, soil or groundwater whether within or outside the Premises, including, without limitation (a) the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq., (b) the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., (c) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq., (d) the Toxic Substances Control Act of 1976, 15 U.S.C. Section 2601 et seq., and (e) Chapter 21E of the General Laws of Massachusetts. Tenant, at its sole cost and expense, shall comply with (i) Environmental Laws, and (ii) any rules, requirements and safety procedures of the Massachusetts Department of Environmental Protection, the City of Framingham and any insurer of the Building or the Premises with respect to Tenant's use, storage and disposal of any Hazardous Materials (as hereinafter defined).

17.3 Hazardous Material Defined. As used herein, the term "**Hazardous Material**" means asbestos, oil or any hazardous, radioactive or toxic substance, material or waste or petroleum derivative which is or becomes regulated by any Environmental Law, including without limitation live organisms, viruses and fungi, medical waste and any so-called "biohazard" materials. The term "**Hazardous Material**" includes, without limitation, oil and/or any material or substance which is (i) designated as a "hazardous substance," "hazardous material," "oil," "hazardous waste" or toxic substance under any Environmental Law.

17.4 Chemical Safety Program. Tenant shall establish and maintain a chemical safety program administered by a licensed, qualified individual in accordance with the requirements of any applicable governmental authority. Tenant shall be solely responsible for all costs incurred in connection with such chemical safety program, and Tenant shall provide Landlord with such non-confidential documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) any applicable governmental authority with respect to such chemical safety program and (b) this Section. Tenant shall obtain and maintain during the Term any permit required by any such applicable governmental authority.

17.5 Testing. If any Mortgagee or governmental authority requires testing to determine whether there has been any release of Hazardous Materials and such testing demonstrates a failure of Tenant to comply with the requirements of this Lease, then Tenant shall reimburse Landlord upon demand, as Additional Rent, for the reasonable out of pocket costs thereof within thirty (30)

days. Tenant shall execute a reasonable form of affidavits, certifications and the like, as may be reasonably requested by Landlord from time to time concerning Tenant's best knowledge and belief concerning the presence of Hazardous Materials in or on the Premises, the Building or the Property. In addition to the foregoing, if Landlord reasonably believes that any Hazardous Materials have been released on the Premises in violation of this Lease or any Legal Requirement, Landlord shall have the right to conduct appropriate tests of the Premises or any portion thereof to demonstrate that Hazardous Materials are present or that contamination has occurred due to the acts or omissions of any of the Tenant Parties. Tenant shall pay all reasonable costs of such tests if such tests reveal that Hazardous Materials exist at the Premises in violation of this Lease or any Legal Requirement. Further, Landlord shall have the right to cause a third party consultant retained by Landlord, at Landlord's expense, to review, but not more than once in any calendar year, Tenant's lab operations, procedures and permits to ascertain whether or not Tenant is complying with law and adhering to best industry practices. Tenant agrees to cooperate in good faith with any such review and to provide to such consultant information requested by such consultant and reasonably required in order for such consultant to perform such review, but nothing contained herein shall require Tenant to provide proprietary or confidential information to such consultant.

17.6 Indemnity; Remediation.

(a) Tenant hereby covenants and agrees to indemnify, defend and hold the Landlord Parties harmless from and against any and all Claims against any of the Landlord Parties arising out of contamination of any part of the Property or other adjacent property, which contamination arises as a result of: (i) the presence of Hazardous Material in the Premises, the presence of which is caused by any act or omission of any of the Tenant Parties, or (ii) from a breach by Tenant of its obligations under this Section 17. This indemnification of the Landlord Parties by Tenant includes, without limitation, reasonable costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work or any other response actions required by any federal, state or local governmental agency or political subdivision because of Hazardous Material present in the soil, soil vapor or ground water on or under or any indoor air in the Building based upon the circumstances identified in the first sentence of this Section 17.6. The indemnification and hold harmless obligations of Tenant under this Section 17.6 shall survive the expiration or any earlier termination of this Lease.

(b) Without limiting the obligations set forth in Section 17.6(a) above, if any Hazardous Material is in, on, under, at or about the Building or the Property as a result of the acts or omissions of any of the Tenant Parties and results in any contamination of any part of the Property or any adjacent property that is in violation of any applicable Environmental Law or that requires the performance of any response action pursuant to any Environmental Law, Tenant shall promptly take all actions at Tenant's sole cost and expense as are necessary to reduce such Hazardous Material to amounts below any applicable Reportable Quantity, any applicable Reportable Concentration and any other applicable standard set forth in any Environmental Law such that no further response actions are required; provided that Tenant shall first obtain Landlord's written approval of such actions, which approval shall not be unreasonably withheld, conditioned or delayed so long as such actions would not be reasonably expected to have an adverse effect on the market value or utility of the Property for the Permitted Uses, and in any event, Landlord shall not withhold its approval of any proposed actions which are required by applicable Environmental Laws (such approved actions, "**Tenant's Remediation**").

(c) In the event that Tenant fails to complete Tenant's Remediation prior to the end of the Term, then:

(i) until the completion of Tenant's Remediation (as evidenced by the certification of Tenant's Licensed Site Professional (as such term is defined by applicable Environmental Laws), who shall be reasonably acceptable to Landlord) (the "**Remediation Completion Date**"), Tenant shall pay to Landlord, with respect to the portion of the Premises which reasonably cannot be occupied by a new tenant until completion of Tenant's Remediation, (A) Additional Rent on account of Operating Costs and Taxes and (B) Base Rent in an amount equal to Base Rent attributable to such portion of the Premises in effect immediately prior to the end of the Term; and

(ii) Tenant shall maintain responsibility for Tenant's Remediation and Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with Environmental Laws. If Tenant does not diligently pursue completion of Tenant's Remediation, Landlord shall have the right to either (A) assume control for overseeing Tenant's Remediation, in which event Tenant shall pay all reasonable costs and expenses of Tenant's Remediation (it being understood and agreed that all costs and expenses of Tenant's Remediation incurred pursuant to contracts entered into by Tenant shall be deemed reasonable) within thirty (30) days of demand therefor (which demand shall be made no more often than monthly), and Landlord shall be substituted as the party identified on any governmental filings as the party responsible for the performance of such Tenant's Remediation or (B) require Tenant to maintain responsibility for Tenant's Remediation, in which event Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with Environmental Laws, it being understood that Tenant's Remediation shall not contain any requirement that Tenant remediate any contamination to levels or standards more stringent than those associated with the Property's current office, research and development, and laboratory uses.

(d) The provisions of this Section 17.6 shall survive the expiration or earlier termination of this Lease.

17.7 Disclosures. Prior to bringing any Hazardous Material into any part of the Property, Tenant shall deliver to Landlord the following information with respect thereto: (a) a description of handling, storage, use and disposal procedures; (b) all plans or disclosures and/or emergency response plans which Tenant has prepared, including without limitation Tenant's Spill Response Plan, and all plans which Tenant is required to supply to any governmental agency or authority pursuant to any Environmental Laws; (c) copies of all Required Permits relating thereto; and (d) other information reasonably requested by Landlord, but nothing contained herein shall require Tenant to provide proprietary or confidential information to Landlord.

17.8 Removal. Tenant shall be responsible, at its sole cost and expense, for Hazardous Material and other biohazard disposal services for the Premises. Such services shall be performed by contractors reasonably acceptable to Landlord and on a sufficient basis to ensure that the Premises are at all times kept neat, clean and free of Hazardous Materials and biohazards except in appropriate, specially marked containers reasonably approved by Landlord.

17.9 Landlord's Remediation Obligations. Landlord covenants that neither Landlord nor any of the Landlord Parties shall bring any Hazardous Materials in or on to the Property or discharge any Hazardous Materials in or on to the Property which are, in either case, in violation of applicable Environmental Laws. If Hazardous Materials are discovered in, on or under the Property which are not in compliance with applicable Environmental Laws or that require reporting, investigation, remediation or other response under Chapter 21E or other Environmental Laws, and which are not the responsibility of Tenant pursuant to this Article 17, then Landlord shall remove or remediate (or cause to be removed or remediated) the same, when, if, and in the manner required by applicable Environmental Laws. Landlord hereby indemnifies and shall defend and hold Tenant, its officers, directors, employees, and agents harmless from any Claims arising as result of any breach by Landlord of its representations, warranties, or covenants under this Section 17.9.

18. RULES AND REGULATIONS.

18.1 Rules and Regulations. Tenant will faithfully observe and comply with the Rules and Regulations attached hereto as Exhibits 9, 9-1, and 9-2 (collectively, the "**Current Rules and Regulations**") and reasonable rules and regulations as may be promulgated in writing to Tenant, from time to time, with respect to the Building, the Property and construction within the Property (collectively, the "**Rules and Regulations**"). The Current Rules and Regulations consist of the Building Rules and Regulations attached hereto as Exhibit 9, the Contractor Rules and Regulations attached hereto as Exhibit 9-1, and the Tenant Work Insurance Schedule attached hereto as Exhibit 9-2. In the case of any conflict between the provisions of this Lease and the Rules and Regulations or any future rules and regulations, the provisions of this Lease shall control. Landlord agrees to uniformly enforce the Rules and Regulations or the terms, covenants or conditions in any other lease as against any other tenant, provided that Landlord shall not be liable to Tenant for violation of the same by any other tenant, its servants, employees, agents, contractors, visitors, invitees or licensees.

18.2 Energy Conservation. Landlord may institute upon written notice to Tenant such policies, programs and measures as may be necessary, required, or expedient for the conservation and/or preservation of energy or energy services (collectively, the "**Conservation Program**"), provided however, that the Conservation Program does not, by reason of such policies, programs and measures, reduce the level of energy or energy services being provided to the Premises below the level of energy or energy services then being provided in comparable combination laboratory, research and development and office buildings in the vicinity of the Premises (provided that the same shall not come at a material cost to Tenant or materially adversely affect Tenant's use of the Premises for any of the Permitted Uses), or as may be necessary or required to comply with Legal Requirements or standards or the other provisions of this Lease. Upon receipt of such notice, Tenant shall comply with the Conservation Program.

18.3 Recycling. Upon written notice, Landlord may establish reasonable policies, programs and measures for the recycling of paper, products, plastic, tin and other materials (a "**Recycling Program**"). Tenant will comply with Landlord's reasonable Recycling Program at Tenant's sole cost and expense.

19. LAWS AND PERMITS.

19.1 Legal Requirements. Tenant shall not cause or permit the Premises, or cause the Property or the Building to be used in any way that violates any Legal Requirement, order, permit, approval, variance, covenant or restrictions of record as of the date of this Lease or any provisions of this Lease, interferes with the rights of tenants of the Building, or constitutes a nuisance or waste. Tenant shall obtain, maintain and pay for all permits and approvals needed for the operation of Tenant's business and/or Tenant's Rooftop Equipment, as soon as reasonably possible, and in any event shall not undertake any operations or use of Tenant's Rooftop Equipment unless all applicable permits and approvals are in place and shall, promptly take all actions necessary to comply with all Legal Requirements, including, without limitation, the Occupational Safety and Health Act, applicable to Tenant's use of the Premises, the Property or the Building. Tenant shall maintain in full force and effect all certifications or permissions required by any authority having jurisdiction to authorize, franchise or regulate Tenant's use of the Premises. Tenant shall be solely responsible for procuring and complying at all times with any and all necessary permits and approvals directly or indirectly relating or incident to: the conduct of its activities on the Premises; its scientific experimentation, transportation, storage, handling, use and disposal of any chemical or radioactive or bacteriological or pathological substances or organisms or other hazardous wastes or environmentally dangerous substances or materials or medical waste or animals or laboratory specimens. Within ten (10) days of a request by Landlord, which request shall be made not more than once during each period of twelve (12) consecutive months during the Term hereof, unless otherwise requested by any mortgagee of Landlord or unless Landlord reasonably suspects that Tenant has violated the provisions of this Section 19.1, Tenant shall furnish Landlord with copies of all such permits and approvals that Tenant possesses or has obtained together with a certificate certifying that such permits are all of the permits that Tenant possesses or has obtained with respect to the Premises. Tenant shall promptly give written notice to Landlord of any warnings or violations relative to the above received from any federal, state or municipal agency or by any court of law and shall promptly cure the conditions causing any such violations. Tenant shall not be deemed to be in default of its obligations under the preceding sentence to promptly cure any condition causing any such violation in the event that, in lieu of such cure, Tenant shall contest the validity of such violation by appellate or other proceedings permitted under applicable law, provided that: (i) any such contest is made reasonably and in good faith, (ii) Tenant shall agree to indemnify, defend (with counsel reasonably acceptable to Landlord) and hold Landlord harmless from and against any and all liability, costs, damages, or expenses arising in connection with such condition and/or violation, (iii) Tenant shall promptly cure any violation in the event that its appeal of such violation is overruled or rejected, and (iv) Tenant's decision to delay such cure shall not, in Landlord's good faith determination, be likely to result in any actual or threatened bodily injury, property damage, or any civil or criminal liability to Landlord, any tenant or occupant of the Building or the Property, or any other person or entity. Nothing contained in this Section 19.1 shall be construed to expand the uses permitted hereunder beyond the Permitted Uses. Landlord shall comply with any Legal Requirements and with any direction of any public office or officer relating to the maintenance or operation of the structural elements of the Building, common Building systems, and the Common Areas, and the costs so incurred by Landlord shall be included in Operating Costs, subject to and in accordance with the provisions of Section 5.2.

20. DEFAULT

20.1 Events of Default. The occurrence of any one or more of the following events shall constitute an "**Event of Default**" hereunder by Tenant:

(a) If Tenant fails to make any payment of Rent or any other payment required hereunder, as and when due, and such failure shall continue for a period of seven (7) business days after notice thereof from Landlord to Tenant; provided, however, an Event of Default shall occur hereunder without any obligation of Landlord to give any notice if (i) Tenant fails to make any payment within seven (7) business days after the due date therefor, and (ii) Landlord has given Tenant written notice under this Section 20.1(a) on more than one (1) occasion during the twelve (12) month interval preceding such failure by Tenant;

(b) If Tenant shall abandon the Premises (whether or not the keys shall have been surrendered or the Rent shall have been paid) (which shall not be deemed to have occurred if the Premises is vacant, so long as Tenant is then complying with its obligations under this Lease);

(c) If Tenant shall fail to execute and deliver to Landlord an estoppel certificate pursuant to Section 16 above or a subordination and attornment agreement pursuant to Section 22 below, within the timeframes set forth therein;

(d) If Tenant shall fail to maintain any insurance required hereunder and such failure is not cured within ten (10) business days;

(e) If Tenant shall fail to restore the Security Deposit to its original amount or deliver a replacement Letter of Credit as required under Section 7 above;

(f) If Tenant causes or suffers any release of Hazardous Materials in or near the Property and fails to remediate in accordance with Section 17;

(g) If Tenant shall make a Transfer in violation of the provisions of Section 13 above, or if any event shall occur or any contingency shall arise whereby this Lease, or the term and estate thereby created, would (by operation of law or otherwise) devolve upon or pass to any person, firm or corporation other than Tenant, except as expressly permitted under Section 13 hereof;

(h) The failure by Tenant to observe or perform any of the covenants or provisions of this Lease to be observed or performed by Tenant, other than as specified above, and such failure continues for more than thirty (30) days after notice thereof from Landlord; provided, further, that if the nature of Tenant's default is such that more than thirty (30) days are reasonably required for its cure, then Tenant shall not be deemed to be in default if Tenant shall commence such cure within said thirty (30) day period and thereafter diligently prosecute such cure to completion;

(i) Tenant shall be involved in financial difficulties as evidenced by an admission in writing by Tenant of Tenant's inability to pay its debts generally as they become due, or by the making or offering to make a composition of its debts with its creditors;

(j) Tenant shall make an assignment or trust mortgage, or other conveyance or transfer of like nature, of all or a substantial part of its property for the benefit of its creditors,

(k) an attachment on mesne process, on execution or otherwise, or other legal process shall issue against Tenant or its property and a sale of any of its assets shall be held thereunder;

(l) the leasehold hereby created shall be taken on execution or by other process of law and shall not be revested in Tenant within ninety (90) days thereafter;

(m) a receiver, sequesterer, trustee or similar officer shall be appointed by a court of competent jurisdiction to take charge of all or any part of Tenant's Property and such appointment shall not be vacated within ninety (90) days; or

(n) any proceeding shall be instituted by or against Tenant pursuant to any of the provisions of any Act of Congress or State law relating to bankruptcy, reorganizations, arrangements, compositions or other relief from creditors, and, in the case of any proceeding instituted against it, if Tenant shall fail to have such proceedings dismissed within ninety (90) days or if Tenant is adjudged bankrupt or insolvent as a result of any such proceeding;

20.2 Remedies. Upon an Event of Default, Landlord may, by notice to Tenant, elect to terminate this Lease; and thereupon (and without prejudice to any remedies which might otherwise be available for arrears of Rent or preceding breach of covenant or agreement and without prejudice to Tenant's liability for damages as hereinafter stated), upon the giving of such notice, this Lease shall terminate as of the date specified therein as though that were the Expiration Date. Upon such termination, Landlord shall have the right to utilize the Security Deposit or draw down the entire Letter of Credit, as applicable, and apply the proceeds thereof to its damages hereunder. Without being taken or deemed to be guilty of any manner of trespass or conversion, and without being liable to indictment, prosecution or damages therefor, Landlord may, by lawful process, enter into and upon the Premises (or any part thereof in the name of the whole); repossess the same, as of its former estate; and expel Tenant and those claiming under Tenant. The words "re-entry" and "re-enter" as used in this Lease are not restricted to their technical legal meanings.

20.3 Damages - Termination.

(a) Upon the termination of this Lease under the provisions of this Section 20, Tenant shall pay to Landlord Rent up to the time of such termination, shall continue to be liable for any preceding breach of covenant, and in addition, shall pay to Landlord as damages, at the election of Landlord, either:

(i) the amount (discounted to present value at the rate of five percent (5%) per annum) by which, at the time of the termination of this Lease (or at any time thereafter if Landlord shall have initially elected damages under Section 20.3(a)(ii) below), (x) the aggregate of Rent projected over the period commencing with such termination and ending on the Expiration Date, exceeds (y) the aggregate projected rental value of the Premises for such period, taking into account a reasonable time period during which the Premises shall be unoccupied, plus all Reletting Costs (hereinafter defined); or

(ii) amounts equal to Rent which would have been payable by Tenant had this Lease not been so terminated, payable upon the due dates therefor specified herein following such termination and until the Expiration Date, *provided*, *however*, if Landlord shall re-let the Premises during such period, that Landlord shall credit Tenant with the net rents received by Landlord from such re-letting, such net rents to be determined by first deducting from the gross rents as and when received by Landlord from such re-letting the expenses incurred or paid by Landlord in terminating this Lease, as well as the expenses of re-letting, including altering and preparing the Premises for new tenants, brokers' commissions, and all other similar and dissimilar expenses properly chargeable against the Premises and the rental therefrom (collectively, "**Reletting Costs**"), it being understood that any such re-letting may be for a period equal to or shorter or longer than the remaining Term; and *provided*, *further*, that (x) in no event shall Tenant be entitled to receive any excess of such net rents over the sums payable by Tenant to Landlord hereunder and (y) in no event shall Tenant be entitled in any suit for the collection of damages pursuant to this Section 20.3(a)(ii) to a credit in respect of any net rents from a re-letting except to the extent that such net rents are actually received by Landlord prior to the commencement of such suit. If the Premises or any part thereof should be re-let in combination with other space, then proper apportionment on a square foot area basis shall be made of the rent received from such re-letting and of the expenses of re-letting.

(b) In calculating the amount due under Section 20.3(a)(i), above, there shall be included, in addition to the Base Rent, all other considerations agreed to be paid or performed by Tenant, including without limitation Tenant's Share of Operating Costs and Taxes, on the assumption that all such amounts and considerations would have increased at the average annual rate of increase of such amounts over the prior three years, not to exceed five percent (5%) per annum, for the balance of the full term hereby granted.

(c) Suit or suits for the recovery of such damages, or any installments thereof, may be brought by Landlord from time to time at its election, and nothing contained herein shall be deemed to require Landlord to postpone suit until the date when the Term would have expired if it had not been terminated hereunder.

(d) Nothing herein contained shall be construed as limiting or precluding the recovery by Landlord against Tenant of any sums or damages to which, in addition to the damages particularly provided above, Landlord may lawfully be entitled by reason of any Event of Default hereunder.

(e) After a termination of this Lease pursuant to this Section 20, Landlord will use reasonable efforts to relet the Premises after Tenant vacates the Premises; however, the marketing of the Premises in a manner similar to the manner in which Landlord markets other premises in the Building shall be deemed to have satisfied Landlord's obligation to use "reasonable efforts." In no event shall Landlord be required to (i) solicit or entertain negotiations with any other prospective tenants for the Premises unless and until Landlord obtains full and complete possession of the Premises, including the final and unappealable legal right to relet the Premises free of any claim of Tenant, (ii) lease the Premises to a tenant whose proposed use, in Landlord's reasonable judgment, will be unacceptable, (iii) relet the Premises prior to leasing any other vacant space in the Building, suitable for the use of the prospective tenant, (iv) lease the Premises for a rental rate less than the current fair market rent then prevailing for similar space in the Building,

or (v) enter into a lease with any proposed tenant that does not have, in Landlord's reasonable opinion, sufficient financial wherewithal and resources to satisfy its financial obligations under the prospective lease. Landlord shall be entitled to take into account in connection with any such reletting of the Premises all relevant factors which would be taken into account by a sophisticated landlord in securing a replacement tenant for the Premises including the first class quality of the Property, and the financial responsibility of any such replacement tenant.

20.4 Landlord's Self-Help; Fees and Expenses. If Tenant shall default in the performance of any covenant on Tenant's part to be performed in this Lease contained beyond applicable notice and cure periods, including without limitation the obligation to maintain the Premises in the required condition pursuant to Section 10.1 above, Landlord may, upon reasonable advance notice, except that no notice shall be required in an emergency, immediately, or at any time thereafter, perform the same for the account of Tenant. Tenant shall pay to Landlord upon demand therefor any reasonable costs incurred by Landlord in connection therewith, together with interest at the Default Rate until paid in full.

In addition, as between Landlord and Tenant, the prevailing party shall pay all of the unsuccessful party's costs and expenses, including without limitation reasonable attorneys' fees, incurred (i) in successfully enforcing any obligation of such unsuccessful under this Lease or (ii) as a result of such prevailing party or any of the Landlord Parties or Tenant Parties (whichever may be the case), without its fault, being made party to any litigation pending by or against the unsuccessful party and the Landlord Parties or Tenant Parties (whichever may be the case).

20.5 Waiver of Redemption, Statutory Notice and Grace Periods. Tenant does hereby waive and surrender all rights and privileges which it might have under or by reason of any present or future Legal Requirements to redeem the Premises or to have a continuance of this Lease for the Term hereby demised after being dispossessed or ejected therefrom by process of law or under the terms of this Lease or after the termination of this Lease as herein provided.

20.6 Landlord's Remedies Not Exclusive. The specified remedies to which Landlord may resort hereunder are cumulative and are not intended to be exclusive of any remedies or means of redress to which Landlord may at any time be lawfully entitled, and Landlord may invoke any remedy (including the remedy of specific performance) allowed at law or in equity as if specific remedies were not herein provided for.

20.7 No Waiver. Landlord's failure to seek redress for violation, or to insist upon the strict performance, of any covenant or condition of this Lease, or any of the Rules and Regulations promulgated hereunder, shall not prevent a subsequent act, which would have originally constituted a violation, from having all the force and effect of an original violation. The receipt by Landlord of Rent with knowledge of the breach of any covenant of this Lease shall not be deemed a waiver of such breach. The failure of Landlord to enforce any of such Rules and Regulations against Tenant and/or any other tenant in the Building shall not be deemed a waiver of any such Rules and Regulations. No provisions of this Lease shall be deemed to have been waived by either party unless such waiver be in writing signed by such party. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent herein stipulated shall be deemed to be other than on account of the stipulated Rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and

satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy in this Lease provided.

20.8 Restrictions on Tenant's Rights. During the continuation of any uncured monetary or material non-monetary Event of Default, (a) Landlord shall not be obligated to provide Tenant with any notice pursuant to Sections 2.3 and 2.4 above; and (b) Tenant shall not have the right to make, nor to request Landlord's consent or approval with respect to, any Alterations or Transfers.

20.9 Landlord Default. Notwithstanding anything to the contrary contained in the Lease, Landlord shall in no event be in default in the performance of any of Landlord's obligations under this Lease unless Landlord shall have failed to perform such obligations within thirty (30) days (or such additional time as is reasonably required to correct any such default, provided Landlord commences cure within 30 days) after notice by Tenant to Landlord properly specifying wherein Landlord has failed to perform any such obligation (such period of time, the "**Landlord Cure Period**"). Except as expressly set forth in this Lease, Tenant shall not have the right to terminate or cancel this Lease or to withhold rent or to set-off or deduct any claim or damages against rent as a result of any default by Landlord or breach by Landlord of its covenants or any warranties or promises hereunder, except in the case of a wrongful eviction of Tenant from the Premises (constructive or actual) by Landlord, and then only if the same continues after notice to Landlord thereof and a opportunity for Landlord to cure the same as set forth above. In addition, Tenant shall not assert any right to deduct the cost of repairs or any monetary claim against Landlord from rent thereafter due and payable under this Lease.

If Landlord fails to undertake any work or repairs that Landlord is obligated to perform under this Lease (excluding the Landlord Work and the Expansion Premises Work) within the Landlord Cure Period and such failure has a material adverse impact on Tenant or the Premises, then Tenant may perform such obligations. Notwithstanding the preceding sentence to the contrary, Tenant shall not have the right to perform Landlord's maintenance, repair or other obligation, unless Landlord fails to commence the required action within the Landlord Cure Period and such failure continues for an additional period of five (5) business days after Tenant delivers to Landlord a second Landlord Default Notice (the "**Second Default Notice**") which shall include the following caption, in bold and capitalized letters: LANDLORD'S FAILURE TO RESPOND TO THIS SECOND DEFAULT NOTICE WITHIN FIVE (5) BUSINESS DAYS AFTER RECEIPT OF THIS NOTICE SHALL RESULT IN TENANT'S ELECTION TO EXERCISE ITS SELF-HELP RIGHTS PURSUANT TO Section 20.9 OF THE LEASE." In connection with any performance of Landlord's obligations by Tenant hereunder (i) in no event shall any work or repairs performed by Tenant materially adversely affect the structure of the Building or any Building systems; (ii) the insurance and indemnity provisions of this Lease shall apply to Tenant's performance of such work or repairs; (iii) Tenant shall perform all such work or repairs in accordance with all applicable Legal Requirements; (iv) Tenant shall retain to effect such work or repairs only reputable and qualified contractors and suppliers as are duly licensed; (v) Tenant shall effect such work or repairs in a good and workmanlike manner, consistent with the standards of the Building, using new or like new materials; and (vi) Tenant shall use diligent efforts to minimize any material interference or impact on the other tenants and occupants of the Building. Landlord shall reimburse Tenant for the amount of all reasonable costs actually incurred by Tenant in curing any such failure of Landlord within thirty (30) days following Landlord's receipt of an invoice

therefor from Tenant. In the event Landlord fails to reimburse such Tenant's costs and expenses within thirty (30) days after delivery of a second Notice to Landlord, then Tenant may apply such amount as a credit against up to 25% of Tenant's next payment(s) of Base Rent until Tenant is fully repaid.

21. SURRENDER; ABANDONED PROPERTY; HOLD-OVER

21.1 Surrender

(a) Upon the expiration or earlier termination of the Term, Tenant shall (i) peaceably quit and surrender to Landlord the Premises (including, without limitation, all fixed lab benches, fume hoods, electric, plumbing, heating and sprinkling systems, fixtures and outlets, vaults, paneling, molding, shelving, radiator enclosures, cork, rubber, linoleum and composition floors, ventilating, silencing, air conditioning and cooling equipment therein, Landlord's Work, and all other furniture, fixtures, and equipment that was either provided by Landlord or paid for in whole or in part by any allowance provided to Tenant by Landlord under this Lease) broom clean, in good order, repair and condition excepting only ordinary wear and tear and damage by fire or other insured Casualty; (ii) remove all of Tenant's Property and, at Landlord's election, any Alterations made by Tenant (subject to and in accordance with Section 11.1); and (iii) repair any damages to the Premises or the Building caused by the installation or removal of Tenant's Property and/or such Alterations. Notwithstanding the foregoing and anything in this Lease to the contrary, with the exception of any Specialty Alterations (as hereinafter defined) and any Alteration for which Landlord elected to require Tenant to remove in accordance with Section 11.1, Landlord agrees that Tenant shall not be required to remove any improvements that were constructed and/or installed in the Premises as part of either the Landlord's Work (which for the avoidance of any doubt shall include restoring the roof line to its pre-existing location and/or condition) or the Tenant's Work. Tenant's obligations under this Section 21.1(a) shall survive the expiration or earlier termination of this Lease. As used herein, "**Specialty Alterations**" shall mean those which, in Landlord's reasonable judgment, require unusual expense to restore and/or readapt the Premises to usual use as a biotechnology office and research and development facility (provided that upon Tenant's request therefor, Landlord shall notify Tenant, in connection with Landlord's approval of Tenant's Design/Development Plans, whether Landlord considers an element shown on such Design/Development Plans to constitute a Specialty Alteration).

(b) Prior to the expiration of this Lease (or within thirty (30) days after any earlier termination), Tenant shall (x) clean and otherwise decommission all interior surfaces (including floors, walls, ceilings, and counters), piping, supply lines, waste lines, acid neutralization systems and plumbing in and/or exclusively serving the Premises, and all exhaust or other ductwork in and/or exclusively serving the Premises, in each case which has carried or released or been contacted by any Hazardous Materials or other chemical or biological materials used in the operation of the Premises; (y) remove from the Premises any item installed by or for Tenant and which, pursuant to Legal Requirements, must be removed therefrom before the Premises may be used by a subsequent Tenant; and (z) otherwise clean the Premises so as to permit the Surrender Plan (defined below) to be issued. At least thirty (30) days prior to the expiration of the Term (or, if applicable, within five (5) business days after any earlier termination of this Lease), Tenant shall deliver to Landlord a reasonably detailed narrative description of the actions proposed (or required by any Legal Requirements) to be taken by Tenant in order to render the Premises

(including any Alterations permitted or required by Landlord to remain therein) free of Hazardous Materials and otherwise released for unrestricted use and occupancy including without limitation causing the Premises to be decommissioned in accordance with the regulations of the U.S. Nuclear Regulatory Commission and/or the Massachusetts Department of Public health (the "**MDPH**") for the control of radiation, and cause the Premises to be released for unrestricted use by the Radiation Control Program of the MDPH (the "**Surrender Plan**"). The Surrender Plan (i) shall be accompanied by a current list of (A) all Required Permits held by or on behalf of any Tenant Party with respect to Hazardous Materials in, on, under, at or about the Premises, and (B) Tenant's Hazardous Materials, and (ii) shall be subject to the review and approval of Landlord's environmental consultant. In connection with review and approval of the Surrender Plan, upon request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning the use of and operations within the Premises as Landlord shall request. On or before the expiration of the Term (or within thirty (30) days after any earlier termination of this Lease, during which period Tenant's use and occupancy of the Premises shall be governed by Section 21.3 below), Tenant shall (i) perform or cause to be performed all actions described in the approved Surrender Plan, and (ii) deliver to Landlord a certification from a third party certified industrial hygienist reasonably acceptable to Landlord certifying that the Premises do not contain any Hazardous Materials and evidence that the approved Surrender Plan shall have been satisfactorily completed by a contractor acceptable to Landlord, and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below if Tenant is not in compliance with the terms of this subparagraph, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises are, as of the expiration of the Term (or, if applicable, the date which is thirty (30) days after any earlier termination of this Lease), free of Hazardous Materials and otherwise available for unrestricted use and occupancy as aforesaid. Landlord shall have the unrestricted right to deliver the Surrender Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties. Such third parties and the Landlord Parties shall be entitled to rely on the Surrender Report. If Tenant shall fail to prepare or submit a Surrender Plan approved by Landlord, or if Tenant shall fail to complete the approved Surrender Plan, or if such Surrender Plan, whether or not approved by Landlord, shall fail to adequately address the use of Hazardous Materials by any of the Tenant Parties in, on, at, under or about the Premises, Landlord shall have the right to take any such actions as Landlord may deem reasonable or appropriate to assure that the Premises and the Property are surrendered in the condition required hereunder, the cost of which actions shall be reimbursed by Tenant as Additional Rent upon demand. Tenant's obligations under this Section 21.1(b) shall survive the expiration or earlier termination of the Term.

(c) No act or thing done by Landlord during the Term shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept such surrender shall be valid, unless in writing signed by Landlord. Unless otherwise agreed by the parties in writing, no employee of Landlord or of Landlord's agents shall have any power to accept the keys of the Premises prior to the expiration or earlier termination of this Lease. The delivery of keys to any employee of Landlord or of Landlord's agents shall not operate as a termination of this Lease or a surrender of the Premises.

21.2 Abandoned Property. After the expiration or earlier termination hereof, if Tenant fails to remove any property from the Building or the Premises which Tenant is obligated by the

terms of this Lease to remove within five (5) business days after written notice from Landlord, such property (the "**Abandoned Property**") shall be conclusively deemed to have been abandoned, and may either be retained by Landlord as its property or sold or otherwise disposed of in such manner as Landlord may see fit. If any item of Abandoned Property shall be sold, Tenant hereby agrees that Landlord may receive and retain the proceeds of such sale and apply the same, at its option, to the expenses of the sale, the cost of moving and storage, any damages to which Landlord may be entitled under Section 20 hereof or pursuant to law, and to any arrears of Rent.

21.3 Holdover. If any of the Tenant Parties holds over (which term shall include, without limitation, the failure of Tenant or any Tenant Party to perform all of its obligations under Section 21.1 above) after the end of the Term, Tenant shall be deemed a tenant-at-sufferance subject to the provisions of this Lease; provided that whether or not Landlord has previously accepted payments of Rent from Tenant, (i) for the first thirty (30) days of any such holding over, Tenant shall pay Base Rent at 150% of the highest rate of Base Rent payable during the Term, and thereafter, Tenant shall pay Base Rent at 200% of the highest rate of Base Rent payable during the Term, (ii) Tenant shall continue to pay to Landlord all Additional Rent, and (iii) Tenant shall be liable for all damages, including without limitation lost business and consequential damages, incurred by Landlord as a result of any holding over that continues for more than sixty (60) days, Tenant hereby acknowledging that Landlord may need the Premises after the end of the Term for other tenants and that the damages which Landlord may suffer as the result of Tenant's holding over cannot be determined as of the Execution Date. Nothing contained herein shall grant Tenant the right to holdover after the expiration or earlier termination of the Term.

21.4 Warranties. Tenant hereby assigns to Landlord any warranties in effect on the last day of the Term with respect to any fixtures and Alterations installed in the Premises. Tenant shall provide Landlord with copies of any such warranties prior to the expiration of the Term (or, if the Lease is earlier terminated, within five (5) days thereafter).

22. MORTGAGEE RIGHTS

22.1 Subordination. Tenant's rights and interests under this Lease shall be (i) subject and subordinate to any ground lease, overleases, mortgage, deed of trust, or similar instrument covering the Premises, the Building and/or the Land and to all advances, modifications, renewals, replacements, and extensions thereof (each of the foregoing, a "**Mortgage**"), or (ii) if any Mortgagee elects, prior to the lien of any present or future Mortgage. Tenant further shall attorn to and recognize any successor landlord, whether through foreclosure or otherwise, as if the successor landlord were the originally named landlord. The provisions of this Section 22.1 shall be self-operative and no further instrument shall be required to effect such subordination or attornment; however, Tenant agrees to execute, acknowledge and deliver such instruments, confirming such subordination and attornment in such form as shall be requested by any such holder within fifteen (15) days of request therefor. Landlord agrees to use commercially reasonable efforts to obtain a subordination, non-disturbance and attornment agreement ("**SNDA**") on the standard form of SNDA then being used by the holder of the Mortgage in question (including, without limitation, the Property's current mortgagee), with such commercially reasonable modifications as may be requested by Tenant (the form of SNDA attached as Exhibit 14 being deemed commercially reasonable). Notwithstanding anything in this Section to the

contrary, it shall be a condition to Tenant's obligation to subordinate the Lease to any future Mortgage that the holder of such future Mortgage enters into an SNDA with Tenant. Tenant shall pay any reasonable charges (including legal fees) required by such holder as a condition to entering into such SNDA.

22.2 Notices. Tenant shall give each Mortgagee a copy of any default notice given to Landlord concurrently with the notice to Landlord, and each Mortgagee shall have a reasonable opportunity thereafter to cure a Landlord default, and Mortgagee's curing of any of Landlord's default shall be treated as performance by Landlord.

22.3 Mortgagee Consent. Tenant acknowledges that, where applicable, any consent or approval hereafter given by Landlord may be subject to the further consent or approval of a Mortgagee.

22.4 Mortgagee Liability. Subject to the terms of any SNDA, Tenant acknowledges and agrees that if any Mortgage shall be foreclosed, (a) the liability of the Mortgagee and its successors and assigns shall exist only so long as such Mortgagee or purchaser is the owner of the Premises, and such liability shall not continue or survive after further transfer of ownership; and (b) such Mortgagee and its successors or assigns shall not be (i) liable for any act or omission of any prior lessor under this Lease; (ii) liable for the performance of Landlord's covenants pursuant to the provisions of this Lease which arise and accrue prior to such entity succeeding to the interest of Landlord under this Lease or acquiring such right to possession; (iii) subject to any offsets or defense which Tenant may have at any time against Landlord; (iv) bound by any base rent or other sum which Tenant may have paid previously for more than one (1) month; or (v) liable for the performance of any covenant of Landlord under this Lease which is capable of performance only by the original Landlord, provided that in no event shall the foregoing clauses (i)-(v) relieve any such Mortgagee and its successors and assigns from ongoing Landlord's obligations to provide maintenance, repair or any other on-going Landlord's Services (defined in Section 9.6 and listed in Exhibit 7 of this Lease) following the date of such succession.

23. QUIET ENJOYMENT.

Landlord covenants that so long as no Event of Default exists, Tenant shall peaceably and quietly hold, occupy and enjoy the Premises during the Term from and against the claims of all persons lawfully claiming by, through or under Landlord subject, nevertheless, to the covenants, agreements, terms, provisions and conditions of this Lease, any matters of record or of which Tenant has knowledge and to any Mortgage to which this Lease is subject and subordinate, as hereinabove set forth.

24. NOTICES.

Any notice, consent, request, bill, demand or statement hereunder (each, a "**Notice**") by either party to the other party shall be in writing and shall be deemed to have been duly given when

either delivered by hand or by nationally recognized overnight courier (in either case with evidence of delivery or refusal thereof) addressed as follows:

If to Landlord:	CRP/King 33 NY Ave. Owner, L.L.C. c/o King Street Properties 800 Boylston Street, Suite 1570 Boston, MA 02199 Attention: Stephen D. Lynch
With a copy to:	Goulston & Storrs PC 400 Atlantic Avenue Boston, MA 02110 Attention: King Street
if to Tenant:	610 Main Street Cambridge, MA 02139 Attention: General Counsel With a copy to the same address, Attention: Chief Financial Officer

Notwithstanding the foregoing, any notice from Landlord to Tenant regarding ordinary business operations (e.g., exercise of a right of access to the Premises, maintenance activities, invoices, etc.) may also be given by written notice delivered by email to those parties listed in Section 2.4 or such other individuals as designated by Tenant in writing from time to time. Either party may at any time change the address or specify an additional address for such Notices by delivering or mailing, as aforesaid, to the other party a notice stating the change and setting forth the changed or additional address, provided such changed or additional address is within the United States. Notices shall be effective upon the date of receipt or refusal thereof.

25. MISCELLANEOUS

25.1 Separability. If any provision of this Lease or portion of such provision or the application thereof to any person or circumstance is for any reason held invalid or unenforceable, the remainder of this Lease (or the remainder of such provision) and the application thereof to other persons or circumstances shall not be affected thereby.

25.2 Captions. The captions are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of this Lease nor the intent of any provisions thereof.

25.3 Broker. Tenant and Landlord each warrants and represents that it has dealt with no broker in connection with the consummation of this Lease other than Cushman & Wakefield (the "**Broker**"). Tenant and Landlord each agrees to defend, indemnify and save the other harmless from and against any Claims arising in breach of the representation and warranty set forth in the immediately preceding sentence. Landlord shall be solely responsible for the payment of any

brokerage commissions to the Broker pursuant to separate agreements between Landlord and each Broker.

25.4 Entire Agreement. This Lease, Lease Summary Sheet and Exhibits 1-14 attached hereto and incorporated herein contain the entire and only agreement between the parties and any and all statements and representations, written and oral, including previous correspondence and agreements between the parties hereto, are merged herein. Tenant acknowledges that all representations and statements upon which it relied in executing this Lease are contained herein and that Tenant in no way relied upon any other statements or representations, written or oral. This Lease may not be modified orally or in any manner other than by written agreement signed by the parties hereto.

25.5 Governing Law. This Lease is made pursuant to, and shall be governed by, and construed in accordance with, the laws of the Commonwealth of Massachusetts and any applicable local municipal rules, regulations, by-laws, ordinances and the like.

25.6 Representation of Authority. Landlord and Tenant each hereby warrants and represents to the other that execution of this Lease is authorized and each individual executing on behalf of such party is duly authorized to execute this Lease on behalf of such party.

25.7 Expenses Incurred by Landlord Upon Tenant Requests. Tenant shall, upon demand, reimburse Landlord for all reasonable out of pocket expenses, including, without limitation, legal fees, incurred by Landlord in connection with all requests by Tenant for consents, approvals or execution of collateral documentation related to this Lease, including, without limitation, costs incurred by Landlord in the review and approval of Tenant's plans and specifications in connection with proposed Alterations to be made by Tenant to the Premises or in connection with requests by Tenant for Landlord's consent to make a Transfer. Such costs shall be deemed to be Additional Rent under this Lease. Notwithstanding the foregoing: (i) the amount of legal fees which Tenant is required to reimburse Landlord with respect to any Transfer shall not exceed the Transfer Legal Fee Cap, as hereinafter defined, with respect to such Transfer, and (ii) with respect any request by Tenant to review and approve Tenant's plans and specifications with respect to any Alteration, Tenant shall only be required to reimburse Landlord for third party consultants engaged by Landlord to review such plans and specifications as Landlord, in good faith determines is necessary (e.g., reviews by structure engineers, MEP engineers, etc.). The "**Transfer Legal Fees Cap**" shall be defined as $2,500.00, except that (a) the Transfer Legal Fees Cap shall increase by $500 every fifth (5th) anniversary of the Rent Commencement Date, and (b) the Transfer Legal Fees Cap shall not apply to Tenant's request for Landlord's approval of any sub-sublease of any tier.

25.8 Survival. Without limiting any other obligation of either party which may survive the expiration or prior termination of the Term, all obligations of each party to indemnify, defend, or hold the other party harmless, as set forth in this Lease shall survive the expiration or prior termination of the Term.

25.9 Limitation of Liability. Tenant shall neither assert nor seek to enforce any claim against Landlord or any of the Landlord Parties, or the assets of any of the Landlord Parties, for breach of this Lease or otherwise, other than against Landlord's interest in the Property and in the

uncollected rents, issues and profits thereof, and Tenant agrees to look solely to such interest for the satisfaction of any liability of Landlord under this Lease. This Section 25.9 shall not limit any right that Tenant might otherwise have to obtain injunctive relief against Landlord. **Landlord and Tenant specifically agree that in no event shall any officer, director, trustee, employee or representative of Landlord or any of the other Landlord Parties, or Tenant or any of the other Tenant Parties, ever be personally liable for any obligation under this Lease, nor shall Landlord or any of the other Landlord Parties, or Tenant or any of the other Tenant Parties, be liable for consequential or incidental damages or for lost profits whatsoever in connection with this Lease (except, with respect to Tenant, as provided in Section 21.3).**

25.10 Binding Effect. The covenants, agreements, terms, provisions and conditions of this Lease shall bind and benefit the successors and assigns of the parties hereto with the same effect as if mentioned in each instance where a party hereto is named or referred to, except that no violation of the provisions of Section 13 hereof shall operate to vest any rights in any successor or assignee of Tenant. A facsimile or electronic signature on this Lease shall be equivalent to, and have the same force and effect as, an original signature.

25.11 Landlord Obligations upon Transfer. Upon any sale, transfer or other disposition of the Building, Landlord shall be entirely freed and relieved from the performance and observance thereafter of all covenants and obligations thereafter arising on the part of Landlord to be performed and observed, it being understood and agreed in such event (and it shall be deemed and construed as a covenant running with the land) that the person succeeding to Landlord's ownership of said reversionary interest shall thereupon and thereafter assume, and perform and observe, any and all of such covenants and obligations of Landlord, except as otherwise agreed in writing.

25.12 No Grant of Interest. Tenant shall not grant any interest whatsoever in any items paid in whole or in part by Landlord's Contribution or by Landlord.

25.13 Financial Information. Unless the Tenant's financial information is then publicly available either separately or on a consolidated basis, Tenant shall deliver to Landlord, within thirty (30) days after Landlord's reasonable request, Tenant's most recently completed balance sheet and related statements of income, shareholder's equity and cash flows statements (audited if available) in form customarily prepared by Tenant from time to time, and certified by an officer of Tenant as being true and correct in all material respects.. Any such financial information may be relied upon by any actual or potential lessor, purchaser, or mortgagee of the Property or any portion thereof.

25.14 OFAC Certificate and Indemnity. Executive Order No. 13224 on Terrorist Financing, effective September 24, 2001 (the "**Executive Order**"), and the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Public Law 10756, the "**Patriot Act**") prohibit certain property transfers. Tenant hereby represents and warrants to Landlord (which representations and warranties shall be deemed to be continuing and re-made at all times during the Term) that neither Tenant nor any stockholder of non-public shares, manager, beneficiary, partner, or principal of Tenant is subject to the Executive Order, that none of them is listed on the United States Department of the Treasury Office of Foreign Assets Control ("OFAC") list of "Specially Designated Nationals and Blocked

Persons" as modified from time to time, and that none of them is otherwise subject to the provisions of the Executive Order or the Patriot Act. The most current list of "**Specially Designated Nationals and Blocked Persons**" can be found at http://www.treas.gov/offices/eotffc/ofac/sdn/index.html. Tenant shall from time to time, within ten days after request by Landlord, deliver to Landlord any certification or other evidence requested from time to time by Landlord in its reasonable discretion, confirming Tenant's compliance with these provisions. No assignment or subletting shall be effective unless and until the assignee or subtenant thereunder delivers to Landlord written confirmation of such party's compliance with the provisions of this subsection, in form and content satisfactory to Landlord. If for any reason the representations and warranties set forth in this subsection, or any certificate or other evidence of compliance delivered to Landlord hereunder, is untrue in any respect when made or delivered, or thereafter becomes untrue in any respect, then an Event of Default hereunder shall be deemed to occur immediately, and there shall be no opportunity to cure. Tenant shall indemnify, defend with counsel reasonably acceptable to Landlord, and hold Landlord harmless from and against, any and all liabilities, losses claims, damages, penalties, fines, and costs (including attorneys' fees and costs) arising from or related to the breach of any of the foregoing representations, warranties, and duties of Tenant. The provisions of this subsection shall survive the expiration or earlier termination of this Lease for the longest period permitted by law.

25.15 Confidentiality. Tenant acknowledges and agrees that the terms of this Lease are confidential. Disclosure of the terms hereof could adversely affect the ability of Landlord to negotiate other leases with respect to the Building and may impair Landlord's relationship with other tenants of the Building. Tenant agrees that it and its partners, officers, directors, employees, brokers, and attorneys, if any, shall not disclose the terms and conditions of this Lease to any other person or entity without the prior written consent of Landlord which may be given or withheld by Landlord, in Landlord's sole discretion, except as required for financial disclosures or securities filings, as required by the order of any court or public body with authority over Tenant, or in connection with any litigation between Landlord and Tenant with respect this Lease and except as required by law, including all regulations applicable to Tenant as a public company. It is understood and agreed that damages alone would be an inadequate remedy for the breach of this provision by Tenant, and Landlord shall also have the right to seek specific performance of this provision and to seek injunctive relief to prevent its breach or continued breach.

25.16 Force Majeure. Other than for each party's obligations under this Lease that can be performed by the payment of money (e.g., payment of Rent and maintenance of insurance), whenever a period of time is herein prescribed for action to be taken by either party hereto, such party shall not be liable or responsible for, and there shall be excluded from the computation of any such period of time, any delays due to strikes, riots, acts of God, shortages of labor or materials, war, acts of terrorism, governmental laws, regulations, or restrictions, national or regional emergency, or pandemic, epidemic or other public health emergency or exigency or any other causes of any kind whatsoever which are beyond the control of such party (collectively "**Force Majeure**"). In no event shall financial inability of a party be deemed to be Force Majeure.

26. RIGHT OF FIRST OFFER.

26.1 Grant of Option. Subject to the provisions of this Section 26, from and after the Execution Date, Tenant shall have an ongoing right of first offer (the "**ROFO**") to lease the ROFO

Premises at the time that the ROFO Premises become available for lease, as hereinafter defined, so long as the ROFO Conditions, as hereinafter defined (which ROFO Conditions Landlord may waive, at its election, by written notice to Tenant at any time), are satisfied both at the time that Landlord is required to give an Offer, as hereinafter defined, and as of the commencement date of the term of the ROFO Premises.

26.2 Definition of ROFO Premises. The "**ROFO Premises**" shall be defined as any leasable space in the Building, when such area becomes available for lease, as hereinafter defined, during the Term of this Lease. For the purposes of this Section 26.2, the ROFO Premises shall be deemed to be "**available for lease**" if, during the Term of this Lease, Landlord, in its sole judgment, determines that such area will become available for leasing to Tenant (i.e. when Landlord determines that the then current tenant of such ROFO Premises will vacate such ROFO Premises, and all Superior Rights (as hereinafter defined) with respect to such ROFO Premises have either lapsed unexercised or have been irrevocably waived by the current tenant of such ROFO Premises, and when Landlord intends to offer such area for lease). "**Superior Rights**" shall be defined as (i) the currently enforceable right of the existing tenant of the ROFO Premises, and (ii) the right of Landlord to enter into an agreement with any existing tenant or occupant of the ROFO Premises, or the applicable portion thereof, renewing or extending such lease or occupancy agreement.

26.3 Procedures for Exercising ROFO. At such time as the ROFO Premises becomes available for lease to Tenant, Landlord shall, subject to the provisions of this Section 26, give a written offer (the "**Offer**") to Tenant of the terms under which Landlord is prepared to lease the ROFO Premises to Tenant, including the Base Rent (which shall be based upon Landlord's good faith judgment of the fair market rental value of the ROFO Premises in question), Tenant's improvement allowance, if any, term, renewal term and all other material business terms. Tenant may lease the ROFO Premises under such terms, by delivering written notice (the "**Acceptance**") to Landlord accepting such Offer within ten (10) business days after Landlord gives such Offer to Tenant, time being of the essence.

26.4 Conditions to ROFO. The ROFO is subject to the following conditions, and, without limiting the foregoing, Landlord shall have no obligation to give an Offer to Tenant with respect to the ROFO Premises, or any portion thereof, if any of the following conditions ("**ROFO Conditions**") are not satisfied:

(i) no Event of Default by Tenant (as said term is defined in Section 20 of the Lease) exists at the time that Landlord would otherwise deliver the Offer; or

(ii) the originally named Tenant (or an Affiliated Entity or Successor, as defined in Section 13.7 of the Lease) is then occupying at least fifty-one percent (51%) of the Premises; or

(iii) the Lease has not been assigned (other than to an Affiliated Entity or Successor) prior to the date Landlord would otherwise deliver the Offer; or

(iv) at least three (3) years remain in the Term, or there would be at least three (3) years if Tenant exercises an available Extension Term with Tenant's Acceptance (and

Tenant does in fact exercise such available Extension Term with Tenant's Acceptance).

26.5 Intentionally Omitted.

26.6 Terms of Lease Applicable ROFO Premises. The terms applicable to Tenant's demise of the ROFO Premises, or any portion thereof, shall be upon the terms set forth in the applicable Offer, and otherwise upon the terms and conditions of the Lease, to the extent that the provisions of the Lease are not inconsistent with such Offer, and as follows:

(i) The term for the ROFO Premises shall, subject to clause (iii) below, commence upon the commencement date stated in the Offer and shall be coterminous with the then remaining Term, provided that at least seven (7) years remain in the Term, or there would be at least seven (7) years if Tenant exercises an available Extension Term with Tenant's Acceptance and Tenant does in fact exercise such available Extension Term with Tenant's Acceptance.

(ii) Tenant shall pay Base Rent and Additional Rent for such ROFO Premises, or portion thereof, in accordance with the terms and conditions of the Offer.

(iii) Such ROFO Premises shall be accepted by Tenant with all Building systems serving the ROFO Premises in good working order, and otherwise in its condition (including improvements and personalty, if any) and as-built configuration existing on the earlier of the date Tenant takes possession of such ROFO Premises, or portion thereof, or as of the date the term for such ROFO Premises, or portion thereof, commences, and Landlord shall have no obligation to provide any Landlord contribution or free rent with respect to such ROFO Premises, or portion thereof, unless otherwise provided in such Offer.

26.7 Offering Amendment. If Tenant exercises the ROFO with respect to the ROFO Premises Landlord shall prepare an amendment (the "**Offering Amendment**") adding such ROFO Premises, or portion thereof, to the Premises on the terms set forth in the Offer and reflecting the changes in the Base Rent, Rentable Square Footage of the ROFO Premises, Tenant's Share, and other mutually agreeable appropriate terms. A copy of the Offering Amendment shall be sent to Tenant within a reasonable time after Landlord's receipt of the Acceptance sent by Tenant to Landlord, and, if the terms and conditions of the Offering Amendment are reasonably acceptable to Tenant, then Tenant shall execute and return the Offering Amendment to Landlord within fifteen (15) days thereafter, but an otherwise valid exercise of the ROFO shall be fully effective whether or not the Offering Amendment is executed.

26.8 Last Acceptance Date. If Tenant does not give Landlord a written Acceptance on or before the date ("**Last Acceptance Date**") which is ten (10) business days after Landlord gives the Offer to Tenant, Landlord shall have the right to enter into a lease the subject ROFO Premises on any terms to any party, and Tenant shall not be entitled to receive an Offer with respect to such ROFO Premises until such ROFO Premises again become available for lease; provided, however, that before Landlord offers such ROFO Premises to any third party tenant at a net effective rent (defined below) that is more than five percent (5%) lower than the net effective rent set forth in the Offer, Landlord shall first re-offer such ROFO Premises to Tenant at such lower net effective rent in accordance with the terms of this Section 26. As used herein, the term "**net effective rent**" shall mean the net present value of the base rent, additional rent, and other charges that would be

payable to Landlord under the terms of any proposed lease for and with respect to such ROFO Premises, taking into account any construction allowance, the cost of any leasehold improvements proposed to be performed by Landlord, any free rent, and any other monetary inducements payable by Landlord under such proposed lease.

27. EXPANSION OPTION

27.1 Grant of Option. On the conditions (which conditions Landlord may waive, at its election, by written notice to Tenant at any time) that: (i) no Event of Default by Tenant exists (x) at the time that Tenant delivers an Exercise Notice (as hereinafter defined) and (y) at the commencement of the term of the Lease with respect to the Expansion Premises (as hereinafter defined); (ii) the originally named Tenant (or an Affiliated Entity or Successor) is then occupying at least fifty-one percent (51%) of the Premises; and (iii) the Lease has not been assigned (other than to an Affiliated Entity or Successor), Tenant shall have the right to lease the Expansion Premises, subject to the provisions of this Section 27.

27.2 Lease of Expansion Premises Subject to Permitting. Tenant acknowledges that as of the Execution Date, the Expansion Premises has not been designed, permitted or constructed. Landlord makes no representations whatsoever with respect to its ability to obtain from the appropriate state and municipal authorities all permits and approvals required to construct the Expansion Premises Base Building Work.

27.3 Definition of Expansion Premises. The "**Expansion Premises**" shall mean an area consisting of between 25,000 and 30,000 rentable square feet, which would be constructed as a standalone structure adjacent to the Building, the approximately location of which is shown on the plan attached hereto as Exhibit 5-2. Landlord and Tenant agree that the actual rentable square footage of the Expansion Premises shall be determined in accordance with Exhibit 5.

27.4 Exercise of Right to Lease Expansion Premises. Tenant may exercise its right to lease the Expansion Premises by giving Landlord written notice of its election to lease the Expansion Premises (the "**Exercise Notice**"), at any time during the period commencing on December 14, 2021, and expiring on the third (3rd) anniversary of the Rent Commencement Date. The Exercise Notice shall include the total amount of rentable square feet desired by Tenant. If Tenant fails to timely give an Exercise Notice, time being of the essence, Tenant shall have no further right to lease the Expansion Premises pursuant to this Section 27.

27.5 Terms Applicable to Expansion Premises. The leasing to Tenant of the Expansion Premises shall be upon all of the same terms and conditions of the Lease applicable to the Premises, except as set forth below:

(a) Term. Upon Tenant's delivery of the Exercise Notice in accordance with this Section 27, but subject to Section III(13) of Exhibit 5, Landlord shall lease to Tenant the Expansion Premises for a term (the "**Expansion Premises Term**") commencing on the Expansion Premises Term Commencement Date and expiring on the last day of the calendar month in which the date fifteen (15) years and six (6) months after the Expansion Premises Term Commencement Date occurs (the "**Expansion Premises Expiration Date**"). The "**Expansion Premises Term**

Commencement Date" shall be the date on which the Expansion Premises Work (as defined in "Exhibit 5") is Substantially Complete.

(b) Base Rent; Additional Security; Rent Commencement Date. Base Rent and any additional security required by Landlord with respect to the Expansion Premises shall be determined in the manner set forth in Section III(2) of Exhibit 5. Payment of Base Rent and Tenant's Share of Operating Costs and Taxes with respect to the Expansion Premises shall be abated for the period commencing on the Expansion Premises Term Commencement Date and expiring on the date that is six (6) months after the Expansion Premises Term Commencement Date (the "**Expansion Premises Rent Commencement Date**"). For the period commencing on the Expansion Premises Rent Commencement Date and expiring on the day immediately prior to the first (1st) anniversary of the Expansion Premises Rent Commencement Date, Annual Base Rent with respect to the Expansion Premises shall be in the amount determined pursuant to Section III(2) of Exhibit 5. On said first (1st) anniversary of the Expansion Premises Rent Commencement Date, and on subsequent anniversary of the Expansion Premises Rent Commencement Date during the Expansion Premises Term, Annual Base Rent with respect to the Expansion Premises shall increase to an amount equal to one hundred and three percent (103%) of the prior period's Annual Base Rent.

(c) Tenant's Share of Operating Costs and Taxes. Tenant's Share with respect to the Expansion Premises shall be a fraction, the numerator of which is the rentable area of the Expansion Premises (as determined pursuant to Section III(1) of Exhibit 5) and the denominator of which is the rentable area of the Property.

(d) Condition of Expansion Premises. Tenant acknowledges and agrees that Tenant is leasing the Expansion Premises in its "**AS IS**," "**WHERE IS**" condition and with all faults on the Expansion Premises Term Commencement Date, without representations or warranties, express or implied, in fact or by law, of any kind, and without recourse to Landlord, except that Landlord shall perform the Expansion Premises Work in accordance with the provisions of this Section 27 and Exhibit 5.

27.6 Execution of Lease Amendment. Notwithstanding the fact that Tenant's exercise of the above-described option to lease the Expansion Premises shall be self-executing, as aforesaid, the parties hereby agree promptly to execute a lease amendment reflecting the addition of the Expansion Premises. The execution of such lease amendment shall not be deemed to waive any of the conditions to Tenant's exercise of the herein option to lease the Expansion Premises, unless otherwise specifically provided in such lease amendment.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF the parties hereto have executed this Lease as of the Execution Date.

LANDLORD

CRP/KING 33 NY AVE. OWNER, L.L.C., a
Delaware limited liability company

By: CRP/King 33 NY Ave. Venture, L.L.C., its sole member

By: King Jackson LLC, its administrative member

By: King Street Properties Investments LLC,
its manager

By: /s/ Thomas Ragno
Name: Thomas Ragno
Its Manager

TENANT

CRISPR THERAPEUTICS, INC.,
a Delaware corporation

By: /s/ Samarth Kulkarni
Name: Samarth Kulkarni
Title: Chief Executive Officer

EXHIBIT 1A

LEASE PLAN – PRIME PREMISES

[***]

EXHIBIT 1B

LEASE PLAN – ROOFTOP EQUIPMENT PREMISES

[***]

EXHIBIT 1C

LEASE PLAN – GENERATOR AREA PREMISES

[***]

EXHIBIT 2

LEGAL DESCRIPTION

[***]

EXHIBIT 3

PARKING AREAS

[***]

EXHIBIT 4

WORK LETTER

[***]

EXHIBIT 4-1

TENANT/LANDLORD RESPONSIBILITY MATRIX

[***]

EXHIBIT 4-2

LOCATION PLANS OF BUILDING EXPANSION WORK

[***]

EXHIBIT 4-3

LOCATION PLANS OF ROOF EXPANSION WORK

[***]

EXHIBIT 4-4

SPACE PLAN OF TENANT'S WORK

[***]

EXHIBIT 5

WORK LETTER – EXPANSION PREMISES WORK

[***]

EXHIBIT 5-1

LEASE PLAN – EXPANSION PREMISES

[***]

EXHIBIT 6

FORM OF LETTER OF CREDIT

[***]

EXHIBIT 7

LANDLORD’S SERVICES & BASE BUILDING CAPACITIES

[***]

EXHIBIT 8

[***]

EXHIBIT 9

BUILDING RULES AND REGULATIONS

[***]

EXHIBIT 9-1

CONTRACTOR RULES AND REGULATIONS

[***]

EXHIBIT 9-2

TENANT WORK INSURANCE SCHEDULE

[***]

EXHIBIT 10

SIGNAGE GUIDELINES

[***]

EXHIBIT 11

LANDLORD'S SCREENING STANDARDS

[***]

EXHIBIT 12

[INTENTIONALLY OMITTED]

EXHIBIT 13

FORM OF NOTICE OF LEASE

[***]

EXHIBIT 14

FORM OF SNDA

[***]

EXHIBIT 15

PARKING AND TRAFFIC DEMAND MANAGEMENT PLAN

[***]

EXHIBIT 16

PARKING RELOCATION RADIUS PLAN

[***]

Exhibit 10.2

33 New York Avenue
Framingham, Massachusetts 01701
(the "Building")

FIRST AMENDMENT

EXECUTION DATE:	December 2, 2020
LANDLORD:	CRP/KING 33 NY AVE. OWNER, L.L.C., a Delaware limited liability company
TENANT:	CRISPR THERAPEUTICS, INC., a Delaware corporation
PREMISES:	Areas on the first (1st) floor of the Building, the Generator Area, the Loading Dock Premises, and the roof of the Building, containing approximately 50,249 rentable square feet of space in the aggregate. The Premises consist of: Prime Premises, which will be located on first (1st) floor in the southerly portion of the Building, closest to New York Avenue; Rooftop Equipment Premises, which will be located on the Building rooftop; and Generator Area, as defined in Section 1.3(c) of the Lease. Loading Dock Premises, which will be located in the Building's loading dock area and will consist of two (2) of the Building's six (6) loading bays, which two loading bays are dedicated to Tenant's exclusive use and shall be enclosed as part of the Landlord's Work pursuant to Exhibit 4 of the Lease. The term "Premises" shall mean the (i) Prime Premises, (ii) Rooftop Equipment Premises, the (iii) Generator Area, and (iv) the Loading Dock Premises, as applicable. The Premises are shown on the Lease Plans attached to the Lease as Exhibit 1A, Exhibit 1B, and Exhibit 1C (the "Lease Plans").
DATE OF LEASE:	May 5, 2020

WHEREAS, Landlord and Tenant desire to amend certain provisions of the above-described lease (the "Existing Lease") relating to certain items of Landlord's Work and Tenant's Work on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the covenants herein reserved and contained, and other good and valuable consideration, the receipt, sufficiency and delivery of which are hereby acknowledged, the Existing Lease is hereby amended as set forth herein (the Existing Lease, as amended by this First Amendment, shall hereafter be referred to as the "Lease"). Any capitalized terms used herein shall have the same definition as set forth in the Existing Lease, except to the extent otherwise set forth in this First Amendment.

1. LANDLORD'S WORK; TENANT CHANGES

Tenant has requested certain Tenant Changes to accommodate Tenant's construction schedule of Tenant's Work, and Landlord has agreed to such Tenant Changes, which provide, among other things, that certain items set forth on Exhibit 4-5 attached hereto and identified as "CE #006 - Deferred work to Commodore for early access, CE #007 - Defer CW2 Entry corridor work to Commodore, CE #016 - Defer Addition SOG pour, and CE #019 - Defer placement of sidewalk outside electrical room" (the "Reallocated Work Items") that were previously included as part of Landlord's Work and shown on the Construction Documents now will be performed by Tenant's contractor as part of Tenant's Work, and will be shown on Tenant's Plans for Tenant's Work. In connection therewith, the definitions of Base Building Work and Landlord's Work are hereby amended to exclude the Reallocated Work Items, and the Substantial Completion of Landlord's Work shall be considered to have occurred upon Substantial Completion of Landlord's Work, as amended hereby to exclude the Reallocated Work Items. Tenant shall perform the Reallocated Work Items as part of Tenant's Work. In addition, Landlord shall provide Tenant with a credit against the Cost Differential payable by Tenant in an amount equal to the cost of the Reallocated Work Items, which such amount is set forth on Exhibit 4-5 attached hereto.

2. EARLY ACCESS

In addition, the Tenant Changes provide that Landlord's contractor perform certain interim additional work set forth on Exhibit 4-5 attached hereto and identified as "CE #012 - Build Temp construction for Commodore Early Access" to facilitate Tenant's and Tenant's contractor's early access into the Premises. In connection with the foregoing Tenant Changes, Tenant shall be permitted early access to the Premises in accordance with Section 1.4(b) of the Existing Lease, except that the Early Access Date is hereby amended to be (i) approximately January 15, 2021 with respect to the portions of the Premises labeled "Jan 15" on Exhibit 4-6 attached hereto and (ii) approximately February 16, 2021 with respect to the portions of the Premises labeled "Feb 16" on Exhibit 4-6 attached hereto, provided that Landlord and Tenant agree to coordinate such access so as not to materially interfere with the performance of the Landlord's Work. All such early access shall be in accordance with the terms and conditions of Section 1.4(b) and Section 3.2 of the Existing Lease.

3. MISCELLANEOUS

A. Broker. Tenant and Landlord each warrants and represents that it has dealt with no broker in connection with the consummation of this First Amendment. Tenant and Landlord each agrees to defend, indemnify and save the other harmless from and against any claims arising in breach of the representation and warranty set forth in the immediately preceding sentence.

B. Ratification. In all other respects, except as expressly modified herein, the Lease is hereby ratified and confirmed and all of the terms, covenants, agreements and provisions of the Existing Lease shall remain unaltered and unmodified and in full force and effect. The submission of drafts of this document for examination and negotiation does not constitute an offer, or a reservation of or option for any of the terms and conditions set forth in this First

Amendment, and this First Amendment shall not be binding upon Landlord or Tenant unless and until Landlord shall have executed and delivered a fully executed copy of this First Amendment to Tenant.

C. Conflict. In the event that any of the provisions of the Existing Lease are inconsistent with this First Amendment or the state of facts contemplated hereby, the provisions of this First Amendment shall control.

D. Counterparts. This First Amendment may be executed in any number of counterparts and by each of the undersigned on separate counterparts, which counterparts taken together shall constitute one and the same instrument. This First Amendment may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, in addition to electronically produced signatures, "electronic signature" shall include faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

[Signatures on following page]

IN WITNESS WHEREOF the parties hereto have executed this First Amendment as of the Execution Date.

LANDLORD:

CRP/KING 33 NY AVE. OWNER, L.L.C.,
a Delaware limited liability company

By: CRP/King 33 NY Ave. Venture, L.L.C., its sole member

By: King Jackson LLC, its administrative member

By: King Street Properties Investments LLC,
its manager

By: /s/ Thomas Ragno
Name: Thomas Ragno
Its Manager

TENANT:

CRISPR THERAPEUTICS, INC.,
a Delaware corporation

By: /s/ Michael Tomsicek
Name: Michael Tomsicek
Title: CFO

EXHIBIT 4-5

TENANT CHANGE ORDER

[***]

EXHIBIT 4-6

TENANT EARLY ACCESS PLAN

[***]

Exhibit 4-6

[***] Certain portions of this exhibit have been omitted because they are not material and the registrant customarily and actually treats that information as private or confidential.

AMENDMENT NO. 1
TO THE
STRATEGIC COLLABORATION AND LICENSE AGREEMENT

This Amendment No. 1 to the Strategic Collaboration and License Agreement (the "**Amendment**") is entered into as of March 17, 2021 ("**Amendment Effective Date**") by and between Vertex Pharmaceuticals Incorporated ("**Vertex**") and CRISPR Therapeutics AG ("**CRISPR**"). Vertex and CRISPR each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**." This Amendment amends the Strategic Collaboration and License Agreement, entered into as of June 6, 2019, between Vertex and CRISPR, as supplemented (the "**Agreement**"). Capitalized terms used but not defined in this Amendment shall have the meanings ascribed to such terms in the Agreement.

RECITALS

WHEREAS, the Parties desire to amend and restate the DM1 guide milestones;

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

ARTICLE 1.
AMENDMENTS

1.1. **DM1 Guide Milestone Criteria**. Schedule C to the Agreement is hereby amended and restated as set forth on Exhibit A attached hereto.

1.2. **Development Milestones**. Section 6.2.1 of the Agreement is hereby amended and restated as set forth below:

6.2.1 **Development Milestones**. Subject to Section 6.6.1 with respect to Alternative Products, Vertex will pay CRISPR the milestone payments set forth in this Section 6.2.1 with respect to the first achievement by Vertex or any of its Affiliates or Sublicensees of the applicable milestone event with respect to a Product. Each milestone payment set forth below is payable only once, regardless of the number of times the relevant event occurs, the number of Products that achieve the relevant milestone event or the number of times a given Product achieves such milestone event such that, (a) [***], and (b) [***].

Milestone Event		[***]			[***]
		[***]	[***]	[***]	
1	[***]				$25,000,000
2	[***]				[***]
3	[***]				[***]
4	[***]	[***]	[***]	[***]	[***]
5	[***]	[***]	[***]	[***]	[***]
6	[***]	[***]	[***]	[***]	[***]
7	[***]	[***]	[***]	[***]	[***]
8	[***]	[***]	[***]	[***]	[***]

[***].

ARTICLE 2.
ACKNOWLEDGMENT

2.1. **Milestone Event 1**. The Parties acknowledge and agree that Milestone Event 1 set forth in Section 6.2.1 has been achieved and Vertex has paid the corresponding milestone payment to CRISPR prior to the Amendment Effective Date.

ARTICLE 3.
MISCELLANEOUS

3.1. **Effect of Amendment**. This Amendment shall not be deemed to be an amendment to any other terms and conditions of the Agreement. Except as expressly amended by this Amendment, the Agreement remains unchanged and in full force and effect.

3.2. **Counterparts**. This Amendment may be executed in one or more counterparts, each of which will be an original and all 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]

* - * - * - *

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		**CRISPR THERAPEUTICS AG**	
By:	/s/ Bastiano Sanna	By:	/s/ Samarth Kulkarni
Name:	Bastiano Sanna	Name:	Samarth Kulkarni
Title:	EVP and Chief VGCT	Title:	CEO

Exhibit A

Schedule C

DM1 Guide Milestone Criteria

[***]

[***] Certain portions of this exhibit have been omitted because they are not material and the registrant customarily and actually treats that information as private or confidential.

AMENDED AND RESTATED

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.

TABLE OF CONTENTS

	Page
ARTICLE 1 DEFINITIONS	2
ARTICLE 2 ANTITRUST FILINGS	12
2.1. Antitrust Filings	12
2.2. Resolution of Any Objections	13
2.3. Provisions Effective As of the Amendment Date	13
ARTICLE 3 GOVERNANCE	14
3.1. Joint Oversight Committee	14
3.2. Transition Committee	14
3.3. Alliance Managers	15
3.4. Disbandment of Committees	16
ARTICLE 4 DEVELOPMENT	16
4.1. Development Plan and Follow-On Research	16
4.2. Regulatory Matters	17
4.3. Quality Agreement	18
4.4. Diligence	18
4.5. Clinical Trial Data	18
ARTICLE 5 MEDICAL AFFAIRS ACTIVITIES	19
ARTICLE 6 COMMERCIALIZATION	19
6.1. Responsibilities	19
6.2. Commercialization Plans	19
6.3. Participation in Significant Commercial Meetings	19
6.4. Reporting	20
6.5. Diligence	20
ARTICLE 7 MANUFACTURING	20
7.1. Transfer of Assigned Contracts to Vertex	20
7.2. Manufacturing Technology Transfer	20
7.3. Vertex Manufacturing Responsibilities	21
ARTICLE 8 TRANSITION ACTIVITIES	21
8.1. Transition Plan	21
8.2. Transition Activities	21
ARTICLE 9 CRISPR ACTIVITIES	22
9.1. CRISPR Activities Plan	22
9.2. Diligence	22
9.3. Reporting	22

ARTICLE 10 FINANCIAL TERMS; ALLOCATION OF NET PROFIT AND NET LOSS 22

10.1. Payments Under Original Agreement 22
10.2. Amendment Upfront Payment 23
10.3. Milestone Payment 23
10.4. Allocation 23
10.5. Calculation 23
10.6. Payment of Expenses; Summary Statements 23
10.7. Reconciliation 24
10.8. Books and Records 25
10.9. Payment Method; Currency 26
10.10. Late Payment 26
10.11. Capital Equipment 26

ARTICLE 11 ADVERSE EVENTS 26

11.1. Pharmacovigilance Agreement 26
11.2. Global Safety Database 26
11.3. Access to Safety Information 26
11.4. Notice of Certain Events 27

ARTICLE 12 SUBCONTRACTING 27

ARTICLE 13 LICENSE GRANTS 27

13.1. Acknowledgment of Option Exercise 27
13.2. License Grants to Vertex 27
13.3. License Grants to CRISPR 28
13.4. Licenses to Improvements 29
13.5. Sublicensing 29
13.6. No Implied Licenses 29
13.7. Third Party Agreements 30

ARTICLE 14 INTELLECTUAL PROPERTY 31

ARTICLE 15 REPRESENTATIONS AND WARRANTIES 31

15.1. Representations and Warranties of Vertex 31
15.2. Representations and Warranties of CRISPR 32
15.3. CRISPR Covenants 33
15.4. Vertex Covenants 35
15.5. Disclaimer 35

ARTICLE 16 INDEMNIFICATION; INSURANCE 35

16.1. Indemnification by Vertex 35
16.2. Indemnification by CRISPR 36
16.3. Procedure 36
16.4. Other Third Party Claims 36
16.5. Insurance 36

16.6. Limitation of Consequential Damages 37

ARTICLE 17 TERM; TERMINATION 38

17.1. Co-Co Agreement Term; Expiration 38
17.2. Termination of the Agreement 38
17.3. Opt-Out 42
17.4. Consequences of Expiration or Certain Terminations of the Agreement 44
17.5. Alternative Remedies for Material Breach 45
17.6. Survival 45

ARTICLE 18 CONFIDENTIALITY 45

18.1. Confidentiality 45
18.2. Authorized Disclosure 46
18.3. SEC Filings and Other Disclosures 46
18.4. Public Announcement; Publications 46
18.5. Site Media Materials 47
18.6. Confidentiality Obligations of CRISPR Personnel 48

ARTICLE 19 MISCELLANEOUS 48

19.1. Assignment 48
19.2. Effects of Change of Control 49
19.3. Force Majeure 49
19.4. Representation by Legal Counsel 49
19.5. Notices 49
19.6. Amendment 51
19.7. Waiver 51
19.8. Severability 51
19.9. Descriptive Headings 51
19.10. Export Control 51
19.11. Data Privacy Matters 51
19.12. Governing Law 52
19.13. Entire Agreement 52
19.14. Independent Contractors 52
19.15. Interpretation 52
19.16. No Third Party Rights or Obligations 53
19.17. Further Actions 53
19.18. Counterparts 53
19.19. CRISPR Entities 53

SCHEDULE A: CRISPR In-License Agreements
SCHEDULE B: Designated Shared Products
SCHEDULE C: Vertex In-License Agreements
SCHEDULE D: Assigned Contracts
SCHEDULE E: Other Manufacturing Contracts
SCHEDULE F: Preliminary Transition Plan
SCHEDULE G: Annual OPEX Cap

SCHEDULE H: CRISPR Disclosure Schedule
SCHEDULE I: Form of Non-Disclosure Agreement
SCHEDULE J: Form of Joint Press Release

AMENDED AND RESTATED

JOINT DEVELOPMENT AND COMMERCIALIZATION AGREEMENT

This AMENDED AND RESTATED JOINT DEVELOPMENT AND COMMERCIALIZATION AGREEMENT (this "**Agreement**") is entered into as of April 16, 2021 (the "**Amendment 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**"), and amends and restates that certain Joint Development and Commercialization Agreement entered into as of December 12, 2017 (the "**Effective Date**") by and between Vertex and CRISPR (the "**Original Agreement**"). 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 and that certain Amendment No. 2 ("**Amendment No. 2**") by and between the Parties dated as of June 6, 2019 (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 Shared 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 the Original Agreement constituted the exercise by Vertex of the Option with respect to [***];

WHEREAS, the Parties have agreed that [***] under the Collaboration Agreement;

WHEREAS, the Parties entered into the Original Agreement in accordance with Section 6.1.2(c) of the Collaboration Agreement in order for the Parties to conduct additional research with respect to and develop and commercialize the Shared Products; and

WHEREAS, the Parties now desire to amend and restate the Original Agreement in its entirety 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
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. [***].

1.3. "**Alliance Manager**" has the meaning set forth in Section 3.3.1.

1.4. "**Amendment Date**" has the meaning set forth in the Preamble.

1.5. "**Amendment Date Provisions**" has the meaning set forth in Section 2.3.

1.6. "**Amendment Effective Date**" means the later of (a) the Amendment Date or (b) the Antitrust Clearance Date, *provided* that the Effective Date shall not occur if either Party has exercised its termination right under Section 17.2.1 prior to the Antitrust Clearance Date.

1.7. "**Amendment No. 2**" has the meaning set forth in the Recitals.

1.8. "**Annual OPEX Cap**" has the meaning set forth in Section 10.7.2.

1.9. "**Antitrust Clearance Date**" means the first date that (a) the waiting period (and any extension thereof) applicable to the transactions contemplated by this Agreement under HSR, and any applicable foreign counterpart(s) thereof, shall have expired or earlier been terminated; (b) no injunction (whether temporary, preliminary or permanent) prohibiting consummation of the transactions contemplated by this Agreement or any material portion hereof shall be in effect; and (c) no judicial or administrative proceeding opposing consummation of all or any part of this Agreement shall be pending.

1.10. "**Approvals**" has the meaning set forth in Section 18.5.3.

1.11. "**Approved Action**" has the meaning set forth in Section 18.5.3.

1.12. "**Assigned Contract**" has the meaning set forth in Section 7.1.

1.13. [***].

1.14. [***].

1.15. "[***] **Third Party Agreement**" has the meaning set forth in Section 13.7.2.

1.16. [***].

1.17. [***].

1.18. "**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.

1.19. "**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.

1.20. "**Challenging Party**" has the meaning set forth in Section 17.2.4.

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

1.22. "**Co-Co Agreement Term**" means the period commencing on the Effective Date and ending on the expiration of this Agreement pursuant to Section 17.1, unless terminated earlier as provided herein.

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

1.24. "**Combination Product**" has the meaning set forth in Section 1.81.

1.25. "**Commercialization Costs**" means [***]:

1.25.1. [***];

1.25.2. [***];

1.25.3. [***];

1.25.4. [***];

1.25.5. [***];

1.25.6. [***];

1.25.7. [***];

1.25.8. [***];

1.25.9. [***]; and

1.25.10. [***].

Commercialization Costs will exclude all of the payments set forth in Section 7.1 of the Collaboration Agreement, Research Costs, Development Costs, Transition Costs, Manufacturing Costs, Medical Affairs Costs, Patent 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.

1.26. "**Commercialize**" or "**Commercializing**" means to market, promote, distribute, offer for sale, sell, have sold, import, export or otherwise commercialize a product, and to conduct activities, other than Research, Development and Manufacturing, in preparation for the foregoing activities, including obtaining Price Approval. When used as a noun, "Commercialization" means any and all activities involved in Commercializing.

1.27. "**Commercially Reasonable Efforts**" means with respect to the efforts to be expended by any Person, with respect to any objective, reasonable, diligent and good faith efforts to accomplish such objective. With respect to any objective relating to the Research, Development or Commercialization of a Shared Product, "Commercially Reasonable Efforts" means [***] taking into account, without limitation, with respect to each Shared Product, [***]. "Commercially Reasonable Efforts" [***].

1.28. [***].

1.29. "[***] **Agreement**" has the meaning set forth in Section 13.7.3.

1.30. [***].

1.31. "**Control**" or "**Controlled**" means, with respect to any Know-How or Patent or other data, information or materials (including [***]), possession of the ability by a Party or its Affiliate(s) (whether by sole or joint ownership, license or otherwise, other than pursuant to this Agreement) to grant, without violating the terms of any agreement with a Third Party, a license, access or other right in, to or under such Know-How or Patent or other data, information or materials. Notwithstanding anything in this Agreement to the contrary, a Party will be deemed to not Control any Patents or Know-How that are owned or controlled by a Third Party described in the definition of "Change of Control," or such Third Party's Affiliates (other than an Affiliate of such Party prior to the Change of Control), (a) prior to the closing of such Change of Control, except to the extent that any such Patents or Know-How were developed prior to such Change of Control through the use of such Party's technology, or (b) after such Change of Control to the extent that such Patents or Know-How are developed or conceived by such Third Party or its Affiliates (other than such Party) after such Change of Control without using or incorporating such Party's technology.

1.32. "**Cost of Goods Sold**" means [***].

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

1.34. "**CRISPR Activities Plan**" has the meaning set forth in ARTICLE 9.

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

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

1.37. "**CRISPR In-License Agreements**" means CRISPR's or its Affiliates' agreements with Third Party licensors or sellers listed on Schedule A, which Schedule shall be updated following filing of the first IND for any Shared Product (other than the Initial 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.

1.38. "**CST**" has the meaning set forth in Section 3.4.

1.39. [***].

1.40. [***].

1.41. "**Designated Personnel**" means [***].

1.42. "**Designated Shared Products**" means those Shared Products initially listed on Schedule B [***].

1.43. [***].

1.44. "**Development**" means, with respect to a Shared Product, all clinical and non-clinical research and development activities conducted after filing of an IND for such Shared Product, including toxicology, pharmacology test method development and stability testing, process development, formulation development, delivery system development, quality assurance and quality control development, statistical analysis, Clinical Trials (including post-Marketing Approval Clinical Trials), regulatory affairs, pharmacovigilance, Clinical Trial regulatory activities and obtaining and maintaining Regulatory Approval. When used as a verb, "Develop" or "Developing" means to engage in Development.

1.45. "**Development Costs**" means, [***]:

1.45.1. [***];

1.45.2. [***];

1.45.3. [***];

1.45.4. [***];

1.45.5. [***]; and

1.45.6. [***].

[***].

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

1.47. "**DOJ**" has the meaning set forth in Section 2.1.

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

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

1.50. "**Exclusive License**" has the meaning set forth in Section 13.2.1.

1.51. "**Executive Officers**" means (a) the Chief Executive Officer of CRISPR, initially Samarth Kulkarni, and (b) the Executive Vice President, Chief of Cell and Genetic Therapies of Vertex, initially Bastiano Sanna or, in the case of this clause (b), any other Executive Vice President-level or higher officer designated in writing by Vertex.

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

1.53. "**FTC**" has the meaning set forth in Section 2.1.

1.54. "**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 the Research, Development, Manufacture or Commercialization of the Shared Products or Transition Activities, 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 [***].

1.55. "**FTE Costs**" means the product of (a) [***], and (b) [***].

1.56. "**GDPR Letter Agreement**" has the meaning set forth in Section 19.11.

1.57. "**Global Commercialization Plan**" has the meaning set forth in Section 6.2.

1.58. "**Global Development Plan**" means the development plan for the Shared Products that has been agreed by the Parties prior to the Amendment Date with respect to the Initial Shared Product, as such development plan may be updated from time to time by Vertex in accordance with Section 4.1.1, including to reflect the anticipated

Development activities for any other Shared Product for which Vertex intends to file an IND.

1.59. "**Global Safety Database**" has the meaning set forth in Section 11.2.

1.60. [***].

1.61. [***].

1.62. [***].

1.63. "**HSR**" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

1.64. "**Initial Shared Product**" means [***].

1.65. "**JOC**" has the meaning set forth in Section 3.1.1.

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

1.67. "**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.

1.68. "**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.

1.69. "**Licensed CRISPR Technology**" means, subject to Section 13.2.3 and Section 13.7.2, any and all Licensed CRISPR Patents and Licensed CRISPR Know-How.

1.70. "**Licensed Vertex Know-How**" means [***].

1.71. "**Licensed Vertex Patents**" means [***].

1.72. "**Licensed Vertex Technology**" means, subject to Section 13.2.3 and Section 13.7.2, any and all Licensed Vertex Patents and Licensed Vertex Know-How.

1.73. "**Major** [***] **Countries**" means [***].

1.74. "**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 Shared Product (including any [***] that comprise such Shared Product).

1.75. "**Manufacturing Costs**" means, [***]:

(a) [***];

(b) [***];

(c) [***]; and

(d) [***];

[***].

1.76. "**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.

1.77. "**Medical Affairs Costs**" means, with respect to a Shared Product, all Expenses incurred by the Parties or their respective Affiliates in connection with the conduct of Medical Affairs Activities for such Shared Product, *provided* that, in the case of CRISPR or its Affiliates, such Expenses are incurred in the performance of activities set forth in a CRISPR Activities Plan.

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

1.79. "**Net Loss**" means, with respect to a Shared Product, for a given period, Net Sales of such Shared Product in the Territory plus Sublicense Revenue for such Shared Product less Program Expenses for such Shared Product, where the result is a negative number.

1.80. "**Net Profit**" means, with respect to a Shared Product, for a given period, Net Sales of such Shared Product in the Territory plus Sublicense Revenue for such Shared Product less Program Expenses for such Shared Product, where the result is a positive number.

1.81. "**Net Sales**" means, with respect to a Shared Product, the gross invoiced price for units of such Shared Product sold by Vertex or its Affiliates (the "**Selling Party**") to Third Parties, less the following deductions from such gross amounts:

(a) [***];

(b) [***];

(c) [***];

(d) [***]; and

(e) [***].

Generally, only items that are deducted from the Selling Party's gross invoiced sales price of such Shared Product, 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 such Shared Product (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 such Shared Product.

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 Vertex and its Affiliates 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 Vertex or any such Affiliates. A Shared Product will not be deemed to be sold if such 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 a Shared Product 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 Selling Party 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 prices weighted in the calculation to reflect the actual relative sales value of such 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 [***].

[***].

1.82. "**Non-Challenging Party**" has the meaning set forth in Section 17.2.4.

1.83. "**OPEX Overage**" has the meaning set forth in Section 10.7.2.

1.84. "**Opt-Out**" has the meaning set forth in Section 17.3.1.

1.85. "**Opt-Out Royalties**" has the meaning set forth in Section 17.3.1.

1.86. "**Opt-Out Shared Product**" has the meaning set forth in Section 17.3.1.

1.87. "**Original Agreement**" has the meaning set forth in the Preamble.

1.88. "**Other Manufacturing Contract**" has the meaning set forth in Section 7.1.

1.89. "**Other Out-of-Pocket Costs**" means, [***]:

1.89.1. [***];

1.89.2. [***];

1.89.3. [***];

1.89.4. [***];

1.89.5. [***]; and

1.89.6. [***].

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

1.91. "**Patent Challenge**" has the meaning set forth in Section 17.2.4.

1.92. "**Patent Costs**" means, with respect to a Shared Product, all Expenses reasonably allocated to such Shared Product for the prosecution, maintenance and enforcement of Patents that Cover such Shared Product.

1.93. "**Pharmacovigilance Agreement**" means [***].

1.94. "**Preliminary Transition Plan**" has the meaning set forth in Section 8.1.

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

1.96. "**Quality Agreement**" has the meaning set forth in Section 4.3.

1.97. "**Quality Costs**" means, [***].

1.98. "**Reconciliation Report**" has the meaning set forth in Section 10.7.

1.99. "**Research Costs**" means, [***].

1.100. "**Selling Party**" has the meaning set forth in Section 1.81.

1.101. "**Senior-Level Employee**" means [***].

1.102. "**Shared Agent**" means [***].

1.103. "**Shared Product**" means (a) the Initial Shared Product and (b) any other pharmaceutical product, medical therapy, preparation, substance, or formulation comprising or employing, in whole or in part, a Shared Agent.

1.104. "**Shared Target**" means (a) [***], (b) [***], (c) the [***] and (d) [***].

1.105. "**Site Media Materials**" has the meaning set forth in Section 18.5.1.

1.106. "**Specified Shared Product Information**" has the meaning set forth in Section 18.1.

1.107. "**Subcontract**" has the meaning set forth in ARTICLE 12.

1.108. "**Subcontractor**" has the meaning set forth in ARTICLE 12.

1.109. "**Sublicense Revenue**" means, [***].

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

1.111. "**Summary Statement**" has the meaning set forth in Section 10.6.

1.112. "**Terminated Shared Product**" has the meaning set forth in Section 17.4.

1.113. "**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 Shared Product or a Shared Target, including field or territory restrictions, covenants, diligence obligations or limitations pertaining to enforcement of intellectual property rights.

1.114. "**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.

1.115. "**Transition Activities**" has the meaning set forth in Section 8.1.

1.116. "**Transition Committee**" has the meaning set forth in Section 3.2.1.

1.117. "**Transition Costs**" means, [***].

1.118. "**Transition Plan**" has the meaning set forth in Section 8.1.

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

1.120. "**Vertex In-License Agreements**" means Vertex's or its Affiliates' agreements with Third Party licensors or sellers listed on Schedule C, which Schedule shall be updated following filing of the first IND for any Shared Product (other than the Initial Shared Product) under this Agreement to include any agreements pursuant to which Vertex or its Affiliates have in-licensed or acquired any Vertex Technology with respect to such Shared Product.

1.121. "**Vertex Know-How**" means (a) any Know-How, other than Joint Program Know-How and Vertex Program Know-How, that (i) [***] and (ii) [***].

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

1.123. "**Vertex Patents**" means (a) any Patent, other than a Joint Program Patent or Vertex Program Patent, that (i) [***] and (ii) [***].

1.124. "**Vertex Technology**" means any and all Vertex Patents and Vertex Know-How.

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

ARTICLE 2
ANTITRUST FILINGS

2.1. **Antitrust Filings**. Each of Vertex and CRISPR agrees to prepare and make appropriate filings under HSR and other antitrust requirements in the Territory relating to this Agreement and the transactions contemplated hereby, as soon as reasonably practicable after the Amendment Date (but no later than [***] Business Days after the Amendment Date), and the filing fees associated with such filings will be borne by Vertex. Each Party will otherwise bear its own costs in connection with such filings. The Parties agree to cooperate in the antitrust clearance process

and to furnish promptly to the Federal Trade Commission ("**FTC**"), the Antitrust Division of the Department of Justice ("**DOJ**") and any other applicable agency or authority in the Territory, any information reasonably requested by them in connection with such filings. With respect to the HSR and other filings made pursuant to this Section 2.1, each of Vertex and CRISPR shall, to the extent practicable: (a) promptly notify the other Party of any material communication to that Party from the FTC, the DOJ, or any other agency or authority and, subject to Applicable Laws, discuss with and permit the other Party to review in advance any proposed written communication to any of the foregoing; (b) not agree to participate in any substantive meeting or discussion with the FTC, the DOJ or any other agency or authority in respect of any filings, investigation or inquiry concerning this Agreement unless it consults with the other Party in advance and, to the extent permitted by such agency or authority, give the other Party the opportunity to attend and participate thereat; and (c) furnish the other Party with copies of all correspondence and communications (and memoranda setting forth the substance thereof) between them and their Affiliates and their respective representatives on the one hand, and the FTC, the DOJ or any other agency or authority or members of their respective staffs on the other hand, with respect to this Agreement.

2.2. **Resolution of Any Objections**. In furtherance of obtaining clearance for an HSR filing or other antitrust filing filed pursuant to this ARTICLE 2, CRISPR and Vertex will use their respective Commercially Reasonable Efforts to resolve as promptly as practicable any objections that may be asserted with respect to this Agreement or the transactions contemplated by this Agreement under any antitrust, competition or trade regulatory law. In connection with obtaining such HSR or other antitrust clearance from the FTC, the DOJ or any other Governmental Authority, Vertex and its Affiliates will not be required to (a) sell, divest (including through a license or a reversion of licensed or assigned rights), hold separate, transfer or dispose of any assets, operations, rights, product lines, businesses or interest therein of Vertex or any of its Affiliates (or consent to any of the foregoing actions); or (b) litigate or otherwise formally oppose any determination (whether judicial or administrative in nature) by a Governmental Authority seeking to impose any of the restrictions referenced in clause (a) above.

2.3. **Provisions Effective As of the Amendment Date**. Other than the provisions of this ARTICLE 2, Section 3.2.1, Section 3.2.2, Section 4.3, Section 7.1, Section 7.2, Section 8.1, Section 11.1, ARTICLE 15, Section 17.2.1, the first sentence of Section 18.1, Section 18.3 and all definitions necessary to give effect to the foregoing provisions (collectively, the "**Amendment Date Provisions**"), each of which shall become effective on the Amendment Date, the rights and obligations of the Parties under this Agreement shall not become effective until the Amendment Effective Date. For the avoidance of doubt, except for those provisions of the Original Agreement that are superseded by the Amendment Date Provisions, the Original Agreement will remain in full force and effect unless and until the Amendment Effective Date occurs.

ARTICLE 3
GOVERNANCE

3.1. **Joint Oversight Committee**.

3.1.1. **Formation**. As of the Amendment Date, the Parties have established a joint oversight committee (the "**JOC**"). Following the Amendment Effective Date, the JOC will solely serve as a forum for discussing and sharing information regarding the activities under this Agreement, and will have no decision-making authority. The JOC will at all times be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The JOC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The JOC will meet (a) on a [***] basis during the period starting on the Amendment Effective Date and ending on December 31, 2021, and (b) on a [***] basis thereafter for the remainder of the Co-Co Agreement Term, except, in each case ((a) and (b)), as otherwise mutually agreed by the Parties in writing. The JOC will meet on such dates and at such times and places as agreed to by the members of the JOC. Each Party will be responsible for its own expenses relating to attendance at or participation in JOC meetings.

3.1.2. **Responsibilities**. Following the Amendment Effective Date, the JOC will:

(a) discuss any near-term operational decisions to be made with respect to the Research, Development or Manufacture of the Shared Products prior to completion of the Transition Activities;

(b) discuss strategy for the Shared Products;

(c) discuss the Global Development Plan and each Global Commercialization Plan, including the cost estimates therein, and any updates thereto;

(d) discuss the updates provided by the Parties regarding the activities under this Agreement;

(e) discuss the updates provided by each Party with respect to [***];

(f) [***];

(g) discuss matters pertaining to the research activities described in Section 4.1.2; and

(h) perform such other information-sharing functions as are specifically assigned to the JOC under this Agreement.

3.2. **Transition Committee**.

3.2.1. **Formation**. Within [***] Business Days after the Amendment Date, the Parties will have established a transition committee (the "**Transition Committee**"). The Transition Committee will exist solely to provide a forum for planning, discussing and sharing information regarding the Transition Activities of the Parties under ARTICLE 8, and will have no decision-making authority. The Transition Committee will be comprised of [***] representatives from each Party, or such other number of equal representatives as the Parties may mutually agree upon. The Transition Committee will conduct its responsibilities hereunder in good faith and with reasonable care and diligence. The Transition Committee will meet [***], or less frequently 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 Transition Committee. Each Party will be responsible for its own expenses relating to attendance at or participation in Transition Committee meetings.

3.2.2. **Responsibilities Prior to the Amendment Effective Date**. Following the Amendment Date and prior to the Amendment Effective Date, the Transition Committee will:

(a) prepare the Transition Plan and submit the Transition Plan to the Parties for approval; and

(b) serve as a forum for discussion of any other planning matters relating to the Transition Activities.

3.2.3. **Responsibilities Following the Amendment Effective Date**. Following the Amendment Effective Date, the Transition Committee will:

(a) coordinate and oversee the Transition Activities of the Parties under ARTICLE 8, including any [***]; and

(b) prepare and discuss any amendments or updates to the Transition Plan and submit such amendments or updates to the Parties for approval.

3.2.4. **Discontinuation of the Transition Committee**. The Transition Committee will disband with respect to this Agreement following the completion of substantive Transition Activities under ARTICLE 8.

3.3. **Alliance Managers.**

3.3.1. **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.

3.3.2. **Specific Responsibilities**. The Alliance Managers will assist the Transition Committee in executing on the Transition Plan, facilitate the flow of information, and promote communication, coordination and collaboration, between the Parties under this Agreement.

3.4. **Disbandment of Committees**. Effective as of the Amendment Effective Date, the Collaboration Strategy Team (the "**CST**") (as defined in that certain New Governance Structure Letter Agreement, dated July 16, 2020, by and between the Parties) and any working groups established by the CST are hereby disbanded.

ARTICLE 4
DEVELOPMENT

4.1. **Development Plan and Follow-On Research**.

4.1.1. **Global Development Plan**. Vertex will control and will have the sole right to conduct, in its sole discretion, all Development of the Shared Products in the Territory, except as expressly set forth in the Transition Plan or a CRISPR Activities Plan. Such Development will be conducted in accordance with the Global Development Plan, which will be updated by Vertex within [***] days after the Amendment Effective Date to reflect the allocation of all activities thereunder to Vertex following the completion of the Transition Activities. Such updated Global Development Plan will set forth at a high level the anticipated Development activities for the Initial Shared Product in the Territory and will include a good faith estimate of the costs to be incurred by Vertex and its Affiliates in the conduct of such Development activities. On [***] basis (or more frequently as determined by Vertex), Vertex will update the Global Development Plan and will provide such updated Global Development Plan to the JOC for discussion. Without limiting the foregoing, prior to filing any IND with respect to any Shared Product (other than the Initial Shared Product), Vertex will provide to the JOC for discussion an updated Global Development Plan reflecting the anticipated Development activities for such Shared Product.

4.1.2. **Follow-On Research**. Vertex will control and will have the sole right to conduct, in its sole discretion, all Research regarding the Designated Shared Products, except as expressly set forth in the Transition Plan or a CRISPR Activities Plan. Notwithstanding anything to the contrary set forth in this Agreement, each Party shall be permitted to conduct Research activities aimed at identifying novel Shared Products [***].

4.1.3. **Bioinformatics**. Except as otherwise set forth in the Transition Plan, CRISPR will be responsible for maintaining [***] and will provide Vertex access as reasonably needed with respect to the Shared Products, including access to validation data and reports. CRISPR will consult with Vertex if any material changes or updates are to be made to [***] and take

reasonable steps to provide such changes or updates to Vertex. Additionally, CRISPR will provide reasonable support to Vertex if [***].

4.1.4. **Participation in Significant Development Meetings**. Subject to Section 18.6, CRISPR will have the opportunity to designate, by written notice to Vertex, one of its Senior-Level Employees to attend as an observer (a) [***] or (b) [***], in each case ((a) and (b)), relating to the Shared Products. Vertex will (i) give CRISPR at least [***] Business Days' prior written notice, to the extent practicable (and, in any event, Vertex will endeavor to provide at least [***] hours' prior written notice, *provided* that notice provided to CRISPR at the same time as notice provided to other participants in the meetings described in this Section 4.1.4 shall be deemed to be sufficient prior notice), regarding any of the meetings described in this Section 4.1.4 and (ii) provide CRISPR access to such portions of any written materials, documents or information prepared in connection with, or to be discussed at, any of the meetings described in this Section 4.1.4 and related to the Shared Products, either at the time Vertex provides notice of such meetings under Section 4.1.4(i) or, if not available at such time, immediately before or promptly after such meetings (and in any event within [***] Business Days after the date of such meetings), *provided* that CRISPR shall limit access to any of the materials, documents or information received under this Section 4.1.4 to the Designated Personnel.

4.1.5. **Reporting**. Vertex will provide the JOC with reasonably detailed summary updates regarding the progress of activities pursuant to the Global Development Plan at each JOC meeting. Each Party will provide the JOC with reasonably detailed summary updates regarding the progress of Research activities with respect to the Shared Products at each JOC meeting.

4.2. **Regulatory Matters**.

4.2.1. **Regulatory Filings**. All Regulatory Filings and Regulatory Approvals that relate to the Shared Products shall be owned, prepared and filed by and held in the name of Vertex or its designated Affiliates. Vertex shall provide copies of all Regulatory Filings for the Shared Products to CRISPR and, subject to Section 18.6, CRISPR shall have the right to have its Senior-Level Employees and Designated Personnel review, in parallel with the process used by Vertex for its internal review, reasonably in advance of submission (it being agreed that at least [***] Business Days is reasonable advance notice) [***].

4.2.2. **Participation in Regulatory Meetings**. Subject to Section 18.6, and to the extent permitted by Applicable Law, CRISPR will have the opportunity to designate, by written notice to Vertex, one of its Senior-Level Employees to attend as an observer [***]. CRISPR will comply

with Vertex's internal policies disclosed to CRISPR regarding attendance and participation in such meetings, conferences and discussions.

4.2.3. **CRISPR Assistance**. CRISPR will provide reasonable assistance to Vertex with respect to regulatory matters for the purpose of obtaining and maintaining Regulatory Approvals of the Shared Products. Without limiting the foregoing, CRISPR will, promptly following any request by Vertex, provide any assistance or documentation as may be reasonably necessary to enable Vertex to submit Regulatory Filings with respect to the Shared Products. Notwithstanding anything to the contrary in this Agreement, the costs of such requested assistance by CRISPR will be Development Costs subject to the sharing of Net Profits/Net Loss pursuant to Section 10.4.

4.3. **Quality Agreement**. Vertex will control and will have the sole right to conduct, in its sole discretion, all quality activities with respect to the Shared Products in the Territory, except as expressly set forth in the Transition Plan or a CRISPR Activities Plan. The Parties have entered into a quality agreement for the Shared Products (the "**Quality Agreement**"), which contains terms and conditions for quality analysis and control criteria for the Manufacture of the Shared Products, electronic system compliance, responsibilities for managing Clinical Trials and pre-clinical studies, and decision-making criteria. The Transition Plan will provide for the Parties to update the Quality Agreement as may be necessary in light of the allocation of responsibilities contemplated by this Agreement. The updated Quality Agreement will be consistent with the relevant provisions of the Pharmacovigilance Agreement, as such provisions may be updated pursuant to Section 11.1.

4.4. **Diligence**. Vertex and its Affiliates will use Commercially Reasonable Efforts to Develop (a) the Initial Shared Product and (b) each other Shared Product for which Vertex files an IND, in each case ((a) and (b)), in [***]. Vertex 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, Vertex or its Affiliates will not be obligated to undertake or continue any Research or Development activities with respect to any Shared Product if Vertex (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.

4.5. **Clinical Trial Data**. Vertex shall provide CRISPR and its designees with access to the data arising from, relating to or otherwise in connection with any Clinical Trial of any Shared Product as follows: (a) [***]; and (b) [***]. CRISPR shall limit access to any of the information or data received under this Section 4.5 to the Designated Personnel.

ARTICLE 5
MEDICAL AFFAIRS ACTIVITIES

Vertex will control and will have the sole right to conduct, in its sole discretion, all Medical Affairs Activities with respect to the Shared Products in the Territory, except as expressly set forth in the Transition Plan or a CRISPR Activities Plan. Such Medical Affairs Activities will be conducted using Commercially Reasonable Efforts.

ARTICLE 6
COMMERCIALIZATION

6.1. **Responsibilities**. Vertex will control and will have the sole right to conduct, in its sole discretion, all Commercialization activities with respect to the Shared Products in the Territory, except as expressly set forth in the Transition Plan or a CRISPR Activities Plan. Vertex will have the sole right to invoice, sell and book all sales of each Shared Product in the Territory.

6.2. **Commercialization Plans**. Reasonably in advance of the anticipated launch of each Shared Product in the first country in the Territory (but in no event less than [***] months before the date of such anticipated launch), Vertex will develop a global Commercialization plan that will set forth at a high level the anticipated Commercialization activities to be conducted for such Shared Product in the Territory and will include a good faith estimate of the costs to be incurred by Vertex and its Affiliates in the conduct of such Commercialization activities (each such plan, as it may be updated by Vertex from time to time, a "**Global Commercialization Plan**"), and will provide such Global Commercialization Plan to the JOC for discussion. On [***] basis (or more frequently as determined by Vertex), Vertex will update each such Global Commercialization Plan and will provide each such updated Global Commercialization Plan to the JOC for discussion.

6.3. **Participation in Significant Commercial Meetings**. Subject to Section 18.6, CRISPR will have the opportunity to designate, by written notice to Vertex, (a) one of its Senior-Level Employees to attend as an observer [***] and (b) one of its Senior-Level Employees to attend as an observer [***]. Vertex will (i) give CRISPR at least [***] Business Days' prior written notice, to the extent practicable (and, in any event, Vertex will endeavor to provide at least [***] hours' prior written notice, *provided* that notice provided to CRISPR at the same time as notice provided to other participants in the meetings described in this Section 6.3 shall be deemed to be sufficient prior notice), regarding any of the meetings described in this Section 6.3 and (ii) provide CRISPR access to such portions of any written materials, documents or information prepared in connection with, or to be discussed at, any of the meetings described in this Section 6.3 relating to the Shared Products, either at the time Vertex provides notice of such meetings under Section 6.3(i) or, if not available at such time, immediately before or promptly after such meetings (and in any event within [***] Business Days after the date of such meetings),

provided that CRISPR shall limit access to any of the materials, documents or information received under this Section 6.3 to the Designated Personnel.

6.4. **Reporting**. Vertex will provide the JOC with reasonably detailed summary updates regarding the progress of activities pursuant to each Global Commercialization Plan at each JOC meeting.

6.5. **Diligence**. Vertex and its Affiliates will use Commercially Reasonable Efforts to Commercialize the Shared Products in the [***]. Vertex and its Affiliates will conduct their Commercialization activities in compliance with Applicable Law. Notwithstanding anything to the contrary contained herein, Vertex or its Affiliates will not be obligated to undertake or continue any Commercialization activities with respect to any Shared Product if Vertex (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.

ARTICLE 7
MANUFACTURING

7.1. **Transfer of Assigned Contracts to Vertex**. Promptly following the Amendment Effective Date, CRISPR will, if such assignment is requested by Vertex, assign to Vertex the agreements listed on Schedule D, which represent all agreements between CRISPR and [***] (each such agreement an "**Assigned Contract**" and, collectively, the "**Assigned Contracts**"), in accordance with the Transition Plan, including the applicable timelines set forth therein; *provided*, *however*, that, if a Third Party consent is required in order to effect the assignment of any such Assigned Contract, CRISPR will use Commercially Reasonable Efforts to obtain such Third Party consent (*provided* that CRISPR shall not, in the exercise of such Commercially Reasonable Efforts, be required to pay any amount to any such Third Party in exchange for such consent unless the Parties agree to include such amount as Program Expenses) and, if such consent cannot be obtained, CRISPR will comply with the provisions set forth below in this Section 7.1 as if such Assigned Contract were an Other Manufacturing Contract. Schedule E sets forth a list as of the Amendment Date of all other agreements between CRISPR and [***] (each, an "**Other Manufacturing Contract**"). At Vertex's request, [***] listed on Schedule E hereto, in accordance with the Transition Plan, including the applicable timelines set forth therein. To the extent permitted by Applicable Law, the Parties shall, as soon as possible following the Amendment Date, take such actions as are necessary to allow for assignment of the Assigned Contracts as of the Amendment Effective Date and [***] set forth on Schedule E. [***].

7.2. **Manufacturing Technology Transfer**. Promptly following the Amendment Effective Date, CRISPR will make available and deliver to Vertex or one or more designated Affiliates (a) [***] and (b) [***], in each case ((a) and (b)), in accordance with the Transition Plan, including the applicable timelines set forth therein. To assist with the transfer [***], CRISPR will make its personnel reasonably available to Vertex during CRISPR's normal business hours to transfer

such [***] under this Section 7.2 and the costs of such assistance at the FTE Rate will be included within the Transition Costs. Notwithstanding anything to the contrary set forth in this Agreement or the Transition Plan, CRISPR shall have no further obligations under this Section 7.2 to provide such assistance from and after the earlier to occur of (i) [***] or (ii) [***]. [***].

7.3. **Vertex Manufacturing Responsibilities**. Except as expressly set forth in the Transition Plan or a CRISPR Activities Plan or prior to the assignment of agreements contemplated by Section 7.1, Vertex will control and will have the sole right to conduct, in its sole discretion, all Manufacturing activities with respect to the Shared Products in the Territory and such Manufacturing activities will be conducted using Commercially Reasonable Efforts. For clarity, all Manufacturing Costs with respect thereto will be subject to the sharing of Net Profits/Net Loss pursuant to Section 10.4.

ARTICLE 8
TRANSITION ACTIVITIES

8.1. **Transition Plan**. Attached as Schedule F a preliminary transition plan (the "**Preliminary Transition Plan**") setting forth all activities that are necessary to effectively transfer all of CRISPR's material ongoing activities, to the extent primarily related to the Shared Products, to Vertex (the "**Transition Activities**") and the timelines therefor. As soon as possible following the Amendment Date, the Transition Committee will revise and update the Preliminary Transition Plan and submit the same to the Parties for approval (such transition plan, as it may be updated pursuant to this Agreement, the "**Transition Plan**"). The Transition Committee may, from time to time after such approval by the Parties, prepare and submit to the Parties for discussion amendments to the Transition Plan. The Parties will discuss in good faith any amendments to the Transition Plan that are necessary to enable each Party to fully exercise its rights and perform its obligations under this Agreement. If the Parties cannot mutually agree upon the initial Transition Plan or any such amendment thereto reasonably promptly following submission thereof to the Parties for approval, either Party may submit the dispute to the Executive Officers for resolution. If the Executive Officers cannot resolve such dispute within [***] days of submission thereof to the Executive Officers, [***] will have the final decision-making authority, *provided* that [***] shall not (i) have final decision-making authority with respect (a) any item or matter that was set forth in the Preliminary Transition Plan, (b) any item or matter that would cause or is reasonably likely to cause [***] or any of its Affiliates to violate any Applicable Law or be in breach of, or default under, any Third Party agreement existing as of the Amendment Date; or (ii) have the right to amend any provision of this Agreement or any schedule hereto without [***] written consent.

8.2. **Transition Activities**. Commencing on the Amendment Effective Date, the Parties will conduct the Transition Activities to effectively transfer all of CRISPR's material ongoing activities, to the extent related to the Shared Products, to Vertex. The Transition Activities will be conducted for an anticipated period of [***]

months following the Amendment Effective Date, in accordance with the Transition Plan, including the timelines set forth therein. Each Party will use Commercially Reasonable Efforts to perform the activities allocated to such Party under the Transition Plan, *provided* that in no event shall Transition Activities be conducted after the date that is [***] months after the Amendment Effective Date (*provided* that CRISPR has complied with its obligations under this Section 8.2 in all material respects) unless the Parties mutually agree in writing. Each Party will provide the other Party with reasonably detailed summary reports with respect to any data or other materials provided to the other Party pursuant to the Transition Plan, for the purpose of aiding in the interpretation of such data or other materials by the other Party. All Transition Costs will be subject to the sharing of Net Profits/Net Loss pursuant to Section 10.4.

ARTICLE 9
CRISPR ACTIVITIES

9.1. **CRISPR Activities Plan**. Notwithstanding anything to the contrary in this Agreement, the Parties may from time to time decide by mutual agreement to allocate to CRISPR or its Affiliates certain Research, Development, Manufacturing or Commercialization activities with respect to the Shared Products. Any such agreement will be set forth in a writing duly executed by both Parties (each, a "**CRISPR Activities Plan**"), which CRISPR Activities Plan will include an estimate of costs for such activities.

9.2. **Diligence**. CRISPR, itself or through its Affiliates, will use Commercially Reasonable Efforts to conduct the activities set forth in each CRISPR Activities Plan in accordance with the timelines set forth therein. CRISPR and its Affiliates will conduct their activities in compliance with Applicable Law. Notwithstanding anything to the contrary contained herein, CRISPR or its Affiliates will not be obligated to undertake or continue any activity under a CRISPR Activities Plan if CRISPR (or any of its Affiliates) reasonably determines that performance of such activity would violate Applicable Law or infringe or misappropriate a Third Party's intellectual property.

9.3. **Reporting**. CRISPR will provide the JOC with reasonably detailed summary updates regarding the progress of activities pursuant to each CRISPR Activities Plan, if any, at each JOC meeting.

ARTICLE 10
FINANCIAL TERMS; ALLOCATION OF NET PROFIT AND NET LOSS

10.1. **Payments Under Original Agreement**. The Parties acknowledge that Vertex has paid to CRISPR, prior to the Amendment Date, (a) a non-refundable, non-creditable, upfront payment in the amount of Seven Million Dollars ($7,000,000) and (b) a one-time, non-refundable, non-creditable milestone payment in the amount of Three Million Dollars ($3,000,000) following the dosing of the second patient in a Clinical Trial with the Initial Shared Product, in each case ((a) and (b)),

as required under the Original Agreement. 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.

10.2. **Amendment Upfront Payment**. Within [***] Business Days after the Amendment Effective Date, Vertex shall pay to CRISPR a non-refundable, non-creditable, upfront payment in the amount of Nine Hundred Million Dollars ($900,000,000**)**.

10.3. **Milestone Payment**. Following receipt by Vertex or its Affiliates of the first Marketing Approval for the Initial Shared Product from the FDA or the European Commission, Vertex will make a one-time, non-refundable, non-creditable payment to CRISPR of Two Hundred Million Dollars ($200,000,000) within [***] days after receipt by Vertex of an invoice for such payment from CRISPR.

10.4. **Allocation**. With respect to each Shared Product, starting January 1, 2018, and continuing through the Co-Co Agreement Term, each Party will be entitled to 50% of the Net Profits or will bear 50% of the Net Loss, as applicable; *provided, however*, that, solely with respect to the Initial Shared Product, starting on July 1, 2021 (or, if the Amendment Effective Date has not occurred prior to October 1, 2021, starting on the first day of the Calendar Quarter in which the Amendment Effective Date occurs), and continuing through the Co-Co Agreement Term, subject to the limitations set forth in Section 10.7.2, Vertex will be entitled to 60% of the Net Profits and will bear 60% of the Net Loss, as applicable, and CRISPR will be entitled to 40% of the Net Profits and will bear 40% of the Net Loss, as applicable. Each Party will be solely responsible for any Program Expenses incurred by such Party between the Effective Date and January 1, 2018. If either Party elects to Opt-Out (as defined below), the other Party shall pay royalties to such Party in accordance with Section 17.3 in lieu of sharing of Net Profits/Net Loss pursuant to this Section 10.4.

10.5. **Calculation**. [***].

10.6. **Payment of Expenses; Summary Statements**. Subject to reconciliation and the limitations provided in Section 10.7, 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 10.8. Each Party will report all Program Expenses, Sublicense Revenue and Net Sales in accordance with the terms and conditions hereof and in accordance with GAAP. If any Program Expenses relate to multiple Shared Products, the Parties will work together to determine an equitable allocation of such Program Expenses between such Shared Products. Within [***] Business Days after the end of each Calendar Quarter, each Party will submit to the other a written report reflecting, on a Shared Product-by-Shared Product basis, the estimated 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 Statement reflecting, on a Shared Product-by-Shared Product basis, the actual 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 with respect to a Shared Product 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 10.6 (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 10.7. The Parties' respective finance departments, coordinated by the Alliance Managers, will meet at least [***] 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 recognition of specific Program Expenses, review cost estimates and forecasts, and discuss reconciliation and reporting procedures.

10.7. **Reconciliation**.

10.7.1. **General Reconciliation**. [***] will prepare a reconciliation report, as soon as practicable, after the receipt of [***] updated Summary Statements, 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 Statements and the share of the Net Profits and Net Losses to be allocated to each of the Parties for such Calendar Year in accordance with Section 10.4, on a Shared Product-by-Shared Product basis and in the aggregate across all Shared Products (such report, the "**Reconciliation Report**").

10.7.2. **Excess OPEX Deferral**. Schedule G sets forth the limits on CRISPR's share of the Program Expenses for the Initial Shared Product for each of Calendar Years 2021, 2022, 2023 and 2024 (such limit for the applicable Calendar Year, each an "**Annual OPEX Cap**"). To the extent that the Reconciliation Report for Calendar Years 2021, 2022, 2023 or 2024 indicates that CRISPR's share of the Program Expenses for the Initial Shared Product for such Calendar Year exceeds [***]% of the Annual

OPEX Cap for such Calendar Year, CRISPR shall be permitted to defer payment of an amount equal to such excess amount (the "**OPEX Overage**") as set forth in Section 10.7.3.

10.7.3. **Payment**. Subject to the limitations provided in this Section 10.7, payment to reconcile aggregate Net Profit or Net Loss, as applicable, across all Shared Products shall be made by the owing Party to the other Party within [***] days after such Reconciliation Report is complete; *provided* that, CRISPR shall be permitted, by written notice to Vertex within such [***]-day period, to defer payment of any OPEX Overage, and such OPEX Overage shall not be currently charged to or payable by CRISPR during or in respect of such Calendar Year and instead will be deducted from Net Profits payable thereafter to CRISPR for the Initial Shared Product, *provided* that, the maximum deduction against such Net Profits for any single Calendar Year for any and all deferred OPEX Overages shall be limited to [***] and, *provided, further*, that any portion of an OPEX Overage which is not deducted from such Net Profits by application of such cap shall be carried forward for deduction against future distributions of such Net Profits until such OPEX Overage amounts have been deducted in full. For the avoidance of doubt, the deductions contemplated by this Section 10.7.3 may only occur in a Calendar Year in which there is a Net Profit payable to CRISPR with respect to the Initial Shared Product.

10.8. **Books and Records**. Each Party will keep and maintain accurate and complete records regarding Program Expenses, Sublicense Revenue and Net Sales, as applicable, 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 10.8 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.

10.9. **Payment Method; Currency**.

10.9.1. All payments under this Agreement after the Amendment Effective Date 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 [***] 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).

10.9.2. 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.

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

10.11. **Capital Equipment**. [***].

ARTICLE 11
ADVERSE EVENTS

11.1. **Pharmacovigilance Agreement**. Vertex shall be responsible for all pharmacovigilance activities for the Shared Products in the Territory. The Parties have entered into the Pharmacovigilance Agreement, which contains terms and conditions for the processes and procedures for sharing safety information with respect to the Shared Products. The Transition Plan will provide for the Parties to update the Pharmacovigilance Agreement as may be necessary in light of the allocation of responsibilities contemplated by this Agreement.

11.2. **Global Safety Database**. Vertex 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 Vertex.

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

11.4. **Notice of Certain Events**. Notwithstanding anything to the contrary in this Agreement or the Pharmacovigilance Agreement, Vertex will promptly notify CRISPR (and, in any event, within [***] Business Day), in accordance with the notice procedures set forth in the Pharmacovigilance Agreement, after Vertex or any Affiliate thereof becomes aware of the occurrence of any Specified Clinical Event (as hereinafter defined), and Vertex will provide CRISPR with reasonably detailed information regarding such Specified Clinical Event. Vertex shall provide CRISPR with reasonably detailed updates, in accordance with the notice procedures set forth in the Pharmacovigilance Agreement, about any such Specified Clinical Event. For purposes hereof, the term "**Specified Clinical Event**" shall mean [***].

ARTICLE 12
SUBCONTRACTING

Vertex may subcontract the performance of any activities undertaken by Vertex under this Agreement with respect to the Shared Products to one or more Third Parties of Vertex's choice (each such Third Party, a "**Subcontractor**") pursuant to a written agreement in compliance with the terms of this Agreement and the Quality Agreement (a "**Subcontract**"). CRISPR may subcontract the performance of any activities undertaken by CRISPR under this Agreement (including under Section 4.1.2), in accordance with the Transition Plan or the applicable CRISPR Activities Plan, as applicable, to one or more Subcontractors of CRISPR's choice pursuant to a Subcontract.

ARTICLE 13
LICENSE GRANTS

13.1. **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, [***].

13.2. **License Grants to Vertex**.

13.2.1. **Development and Commercialization License**. Subject to the terms and conditions of this Agreement, CRISPR grants to Vertex Parent and its Affiliates an exclusive license under CRISPR's and its Affiliates' interest in the Licensed CRISPR Technology, with the right to Sublicense through multiple tiers (subject to Section 13.5), to Research, Develop, Manufacture, have Manufactured, use, keep, sell, offer for sale, import, export and Commercialize the Shared Products in the Field in the Territory (such license, the "**Exclusive License**"), subject to CRISPR's retained rights to (a) perform the Transition Activities in accordance with the Transition Plan and this Agreement and (b) conduct the activities set forth in any CRISPR Activities Plan, as applicable. As of the Amendment 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 the license grant set forth in Section 10.2.1 of the Original Agreement, and shall be deemed to be the "Exclusive License" under the Collaboration Agreement with respect to the Shared Targets.

13.2.2. **Research License**. Subject to the terms and conditions of this Agreement, CRISPR grants to Vertex Parent and its Affiliates an exclusive license under CRISPR's and its Affiliates' interest in the Licensed CRISPR Technology to conduct the Research activities with respect to the Shared Products in the Field in the Territory, subject to CRISPR's retained rights to (a) perform the Transition Activities in accordance with the Transition Plan and this Agreement, (b) conduct the activities set forth in any CRISPR Activities Plan, as applicable and (c) conduct the research contemplated by Section 4.1.2.

13.2.3. **License Conditions; Limitations**. Subject to Section 13.7.2, 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, (i) prior to the Effective Date, in the case of the Initial Shared Product, and (ii) prior to filing of the first IND for the applicable Shared Product, in the case of any other Shared Product; and (b) with respect to [***] under [***] for which CRISPR is the contracting Party, on or prior to the date on which such [***] becomes effective.

13.3. **License Grants to CRISPR**.

13.3.1. **License for Transition Activities and CRISPR Activities**. Subject to the terms and conditions of this Agreement, Vertex grants to CRISPR a non-exclusive license under Vertex's and its Affiliates' interest in the Licensed Vertex Technology, without the right to Sublicense (except to permitted Subcontractors), solely to (a) perform the Transition Activities in accordance with the Transition Plan and this Agreement, (b) conduct the activities set forth in any CRISPR Activities Plan, as applicable and (c) conduct the research contemplated by Section 4.1.2.

13.3.2. **License Conditions; Limitations**. Subject to Section 13.7.2, 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, (i) prior to the Effective Date, in the case of the Initial Shared Product, and (ii) prior to filing of the first IND for the applicable Shared Product, in the case of any other Shared Product; and (b) with respect to [***] under [***] for which Vertex is the

contracting Party, on or prior to the date on which such [***] becomes effective.

13.4. **Licenses to Improvements**.

13.4.1. Subject to the terms and conditions of this Agreement, CRISPR hereby grants to Vertex Parent 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 in the course of performing Research activities with respect to the Shared Products or Developing, Manufacturing or Commercializing a Shared Product and are Controlled by CRISPR or its Affiliates to make, have made, use, sell, keep, offer for sale and import products other than the Shared Products.

13.4.2. 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 in the course of performing Research activities with respect to the Shared Products or Developing, Manufacturing or Commercializing a Shared Product and are Controlled by Vertex or its Affiliates to make, have made, use, sell, keep, offer for sale and import products other than the Shared Products.

13.5. **Sublicensing**. Subject to the rights granted or retained by the Parties under this Agreement, Vertex may Sublicense (through multiple tiers) to its Affiliates or Third Parties any and all rights granted to it by CRISPR or retained by Vertex with respect to the Research, Development, Manufacture and Commercialization of the Shared Products and, if applicable, [***]. If Vertex 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.

13.6. **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 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.

13.7. **Third Party Agreements**.

13.7.1. **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 Shared Product under this Agreement will be included in [***].

13.7.2. **[***]**. If a Party believes, in its reasonable judgment, that it may be necessary to obtain rights under [***] in order [***], such Party will promptly notify the other Party and [***]. Unless otherwise agreed by the Parties in writing, (a) [***] 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 included as [***] under this Agreement unless otherwise mutually agreed by the Parties in writing. [***] shall [***], and shall not [***].

13.7.3. **[***]**. Notwithstanding anything to the contrary in Section 13.7.2 of this Agreement, either Party may, in its sole discretion, conduct activities with respect to the research, development, manufacture or commercialization of [***] and enter into agreements for the acquisition of, grant or exercise of a license or similar rights to [***] (each, a "[***]"), subject to the terms of this Section 13.7.3. At each JOC meeting, [***]. [***].

(a) **License Grant**. Effective as of any election by [***] to [***], [***] will grant, and does hereby grant, to [***] and its Affiliates an exclusive license under [***] interest in such [***] with respect to such [***], with the right to Sublicense through multiple tiers (subject to Section 13.5), to Research, Develop, Manufacture and Commercialize such [***].

(b) **Economic Terms**.

(i) **[***]**. [***] will pay to [***] the following one-time milestone payments with respect to the first achievement by [***] (itself or through its Affiliates or Sublicensees) of the applicable milestone event with respect to any [***]:

Milestone Number	Milestone Event	Milestone Payment
1	[***]	$[***]
2	[***]	$[***]

[***] will provide [***] with written notice upon the achievement of any of the milestone events set forth in this Section 13.7.3(b) within [***] days after such achievement. Following receipt of such notice, [***] will promptly invoice [***] for the applicable milestone payment and [***] will make such milestone payment within [***] days after receipt of such invoice. The milestones are intended to be successive; if the milestone numbered 2 is achieved with respect to the applicable [***] without the milestone numbered 1 having been achieved with respect to such [***], the corresponding payment for the milestone numbered 1 will be made together with the corresponding payment for the milestone numbered 2.

(ii) **[***]**. If [***] (A) [***] or (B) (1) [***], (2) [***] and (3) [***], then, in each case ((A) and (B)), [***] will have the right, [***].

(iii) **Third Party Payments**. Each Party will be solely responsible for any amounts payable under any [***] entered into by such Party, and such amounts will not constitute [***] and will not be included in [***] under this Agreement, *provided* that [***]. Notwithstanding anything to the contrary in this Agreement, in no event will [***].

(c) **Intellectual Property Rights**. For purposes of Section 13.4 of this Agreement, (i) any [***], as applicable, and (ii) [***], as applicable.

(d) **Supply of [***]**. With respect to any [***], upon [***] request, the Parties will negotiate in good faith an agreement pursuant to which [***] would provide [***] on [***] terms, at [***], and such cost shall [***].

ARTICLE 14
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 15
REPRESENTATIONS AND WARRANTIES

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

15.1.1. 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;

15.1.2. 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;

15.1.3. 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;

15.1.4. 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

15.1.5. except as contemplated by ARTICLE 2, 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.

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

15.2.1. 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;

15.2.2. 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;

15.2.3. 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;

15.2.4. 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;

15.2.5. except as contemplated by ARTICLE 2, 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;

15.2.6. 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;

15.2.7. 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;

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

15.2.9. 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;

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

15.2.11. Schedule D lists all agreements between CRISPR and its [***] that, in each case, [***]. Schedule E lists all other agreements between CRISPR and [***] that, in each case, [***].

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

15.3.1. 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;

15.3.2. 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 [***];

15.3.3. 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;

15.3.4. 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;

15.3.5. 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);

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

15.3.7. 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;

15.3.8. 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;

15.3.9. 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; and

15.3.10. within [***] days of the Amendment Date, CRISPR will provide or otherwise make available to Vertex [***].

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

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

15.4.2. 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

15.4.3. 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.

15.5. **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 Shared 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 Shared Product.

ARTICLE 16
INDEMNIFICATION; INSURANCE

16.1. **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:

(a) [***]; or

(b) [***];

except, in each case ((a)-(b)), to the extent CRISPR is required to indemnify Vertex pursuant to Section 16.2.

16.2. **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:

(a) [***]; or

(b) [***];

except, in each case ((a)-(b)), to the extent Vertex is required to indemnify CRISPR pursuant to Section 16.1.

16.3. **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 16 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 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.

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

16.5. **Insurance**.

16.5.1. **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 [***].

16.5.2. **Evidence of Insurance**. Each Party will provide the other Party with evidence of the insurance required under this Section 16.5 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.

16.5.3. **Post-Termination Obligations**. Each Party will maintain the insurance required under this Section 16.5 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 Shared Product, which in no event will be less than five years.

16.5.4. **Affiliates, Sublicensees and Distributors**. Each Party will (a) ensure that all applicable Affiliates of such Party are covered under such Party's insurance policies as described in Section 16.5.1 and (b) require all of its sublicensees and Distributors to comply with the provisions and obligations under this Section 16.5 as if such entity were such Party.

16.5.5. **No Limitation**. The minimum amounts of insurance coverage required under this Section 16.5 will not be construed to create a limit of liability with respect to a Party's indemnification obligations under Section 16.1 or 16.2, as applicable, or with respect to such Party's share of any Liabilities under Section 16.4.

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

16.6. **Limitation of Consequential Damages**. Except for (a) claims of a Third Party that are subject to indemnification under this ARTICLE 16, (b) claims arising out of a Party's willful misconduct, or (c) a Party's breach of ARTICLE 18, 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 17
TERM; TERMINATION

17.1. **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 17, will continue in full force and effect until Vertex is no longer Developing or Commercializing any of the Shared Products or performing Research regarding any Shared Products in the Territory.

17.2. **Termination of the Agreement**.

17.2.1. **Termination for Failure to Obtain Antitrust Clearance**. If the Amendment Effective Date has not occurred within [***] after the Amendment Date, this Agreement may be terminated by either Party on written notice to the other Party. In such event, neither Party shall have any further obligations under this Agreement, except for such Party's obligations of non-disclosure pursuant to ARTICLE 18, which shall survive for the period set forth therein, and the Original Agreement will remain in full force and effect (including any provisions that had been superseded by this Agreement as of the Amendment Date).

17.2.2. **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 17.2.1 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.

17.2.3. **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 17.5 (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 17.5 (in lieu of termination).

(c) **Disputes Regarding Material Breach**. Notwithstanding the foregoing, if the Breaching Party in this Section 17.2.3 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 17.2.3, 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.

17.2.4. **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 17.3 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.

17.2.5. **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)):

(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 17.2.5(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.

(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 the Shared Products; and

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

17.3. **Opt-Out**.

17.3.1. 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 Shared 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 Shared Product ("**Opt-Out Royalties**") in accordance with this Section 17.3, 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*. Upon the other Party's receipt of such notice, all rights and obligations under this Agreement with respect to the Opt-Out Shared Product shall terminate, *except for* the obligations set forth in this Section 17.3.

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

17.3.2. If the opting out Party is CRISPR, the Opt-Out Shared Product shall be deemed a Shared 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 Shared 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 17.3; 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 Shared Product.

17.3.3. If the opting out Party is Vertex, (i) all licenses granted by CRISPR to Vertex under this Agreement with respect to the Opt-Out Shared Product will terminate and Vertex and its Affiliates will cease all Research, Development, Manufacture and Commercialization activities with respect to such Opt-Out Shared Product; and (ii) the Parties shall negotiate in good faith a termination agreement for the Opt-Out Shared Product, including the obligation to pay royalties as set forth in this Section 17.3 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 (i) the Development of the Opt-Out Shared Product through [***] and (ii) starting upon [***] for the Opt-Out Shared Product and continuing thereafter until the expiration of the applicable Royalty Term, Commercialization of the Opt-Out Shared Product, as appropriate for the stage of the Opt-Out Shared Product, including a launch plan for each [***]; and

(d) following the first sale of the Opt-Out Shared 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.

17.3.4. Following any Opt-Out with respect to an Opt-Out Shared Product, the opting out Party shall, within a reasonable time as mutually agreed by the Parties, (a) transfer to the other Party all Regulatory Filings with respect to such Opt-Out Shared Product, (b) conduct any technology transfer with respect to such Opt-Out Shared Product as reasonably requested by the non-opting out Party and (c) 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 Shared Product. The Expenses of all activities under this Section 17.3.4 shall be shared equally by the Parties.

17.3.5. If the opting out Party is conducting Manufacturing activities with respect to the Opt-Out Shared 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 Shared Product, at the other Party's expense at cost of Manufacturing such Opt-Out Shared 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 Shared Product. The Expenses of technology transfer activities under this Section 17.3.5, including any Expenses incurred in establishing a CMO capable of Manufacturing the Opt-Out Shared Products, shall be shared equally by the Parties.

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

17.4. **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 Shared Product**") in accordance with Section 17.2 at any time and for any reason, the following terms will apply with respect to each Terminated Shared Product:

17.4.1. 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 Shared 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 17.3. 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.

17.4.2. 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 Shared 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.

17.4.3. Except as may be necessary for a Party to exercise the rights set forth in Section 17.3, all licenses granted by a Party to the other Party under this Agreement with respect to the Terminated Shared Product will terminate and each Party and its Affiliates will cease all Research, Development,

Manufacture and Commercialization activities with respect to the Terminated Shared Product.

17.4.4. Except as may be necessary for a Party to exercise the rights set forth in Section 17.3, 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 Shared 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.

17.4.5. Except as set forth in Section 17.3, neither Party will have any further rights or obligations with respect to the Terminated Shared Product.

17.5. **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 17.2.3, [***].

17.6. **Survival**. The following provisions of this Agreement will survive any expiration or termination of this Agreement: ARTICLE 1, ARTICLE 10 (with respect to any amounts owed as of the time of expiration or termination or paid during the Co-Co Agreement Term), Section 13.1, Section 13.4, Section 13.6, Section 13.7.3(c), ARTICLE 14, Section 15.5, ARTICLE 16, Section 17.3, Section 17.4, Section 17.6, the first sentence of Section 18.1, and ARTICLE 19.

ARTICLE 18
CONFIDENTIALITY

18.1. **Confidentiality**. Except as expressly provided herein, the terms of ARTICLE 12 of the Collaboration Agreement will apply with respect to (a) 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 and (b) the terms of this Agreement, which shall be deemed to be the Confidential Information of both Parties under the Collaboration Agreement. Notwithstanding the foregoing, from and after the Amendment Effective Date, the terms of this ARTICLE 18 will apply with respect to [***] (the "**Specified Shared Product Information**"), and the terms of ARTICLE 12 of the Collaboration Agreement (and any confidentiality obligations under any Other CRISPR-Vertex Agreement) will not apply with respect to the Specified Shared Product Information. For purposes of this ARTICLE 18, all Specified Shared Product Information is hereby deemed to constitute Confidential Information of Vertex following the Amendment Effective Date. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing, CRISPR agrees that, during the Agreement Term and for [***] years thereafter, CRISPR will: (a) keep the Specified Shared Product Information confidential; (b) not publish, or allow to be published, and will not otherwise disclose, or permit the disclosure of, the Specified Shared Product Information in any manner not expressly authorized pursuant to the

terms of this Agreement; and (c) not use, or permit to be used, the Specified Shared Product Information for any purpose other than as expressly authorized pursuant to the terms of this Agreement. Without limiting the generality of the foregoing, to the extent that Vertex or any of its Affiliates provides to CRISPR or any of its Affiliates any Specified Shared Product Information owned by any Third Party, CRISPR will, and will cause its Affiliates to, handle such Specified Shared Product Information in accordance with the terms and conditions of this ARTICLE 18.

18.2. **Authorized Disclosure**. Notwithstanding anything to the contrary set forth in this Agreement or the Collaboration Agreement, CRISPR may disclose the Specified Shared Product Information to the extent such disclosure is reasonably necessary to:

18.2.1. file or prosecute patent applications as contemplated by this Agreement;

18.2.2. prosecute or defend litigation;

18.2.3. exercise its rights and perform its obligations hereunder; or

18.2.4. comply with Applicable Law, including the rules and regulations promulgated by the United States Securities and Exchange Commission or any equivalent governmental agency in any country in the Territory.

If CRISPR deems it reasonably necessary to disclose the Specified Shared Product Information pursuant to this Section 18.2, CRISPR will, to the extent practicable, give reasonable advance written notice of such disclosure to Vertex and will take reasonable measures to ensure confidential treatment of such information.

18.3. **SEC Filings and Other Disclosures**. Each Party may disclose the terms of this Agreement and CRISPR may disclose the Specified Shared Product Information as follows: (a) to the extent required to comply with Applicable Law, including the rules and regulations promulgated by the United States Securities and Exchange Commission or any equivalent governmental agency in any country in the Territory; *provided*, that CRISPR will reasonably consider the comments of Vertex regarding confidential treatment sought for such disclosure; and (b) to its advisors (including financial advisors, attorneys and accountants), actual or potential acquisition partners, strategic partners, collaborators or services providers, actual or potential financing sources or investors and actual or potential underwriters on a need to know basis; *provided* that such disclosure is subject to confidentiality obligations similar to those set forth herein (which may include professional ethical obligations).

18.4. **Public Announcement; Publications**.

18.4.1. **Announcements**. The Parties will jointly issue a press release, to be mutually agreed upon and in substantially the same form as Schedule J, regarding the signing of this Agreement on a date to be determined by the Parties within [***] Business Days following the Amendment Date.

18.4.2. **Vertex Publications**. Vertex will have the sole right, subject to Section 18.4.3, to make publications, public presentations, press releases and other public announcements related to the Shared Products in the Territory, *provided* [***]. [***].

18.4.3. **CRISPR Publications**. Notwithstanding anything to the contrary in this Agreement, CRISPR may make publications, public presentations, press releases and other public announcements related to the Shared Products in the Territory as follows: [***].

18.4.4. **Investor Presentations**. Vertex will permit CRISPR to participate in all Third Party-sponsored investor presentations or other updates conducted by Vertex or its Affiliates regarding the Initial Shared Product until [***], *provided* that [***], *provided, further*, that [***]. For clarity, CRISPR's participation right as set forth in this Section 18.4.4 will not apply with respect to general investor presentations of Vertex not specific to the Shared Products.

18.4.5. **Communications Coordination**. Each Party's communications or investor relations personnel or Alliance Managers will meet [***] (or more frequently as mutually agreed by the Parties) to review anticipated communications milestones and a calendar of potential communications events relating to activities under this Agreement.

18.5. **Site Media Materials**.

18.5.1. The Parties agree that any promotional materials, including images, audio or film captured or recorded by either Party or any permitted contractor, vendor or subsidiary of the Parties or their Affiliates in the course of conducting the Clinical Trials for the Shared Products shall be "**Site Media Materials**." Site Media Materials includes images, audio or film of a research site, research staff, the employees or contractors of either Party, or of scientific equipment at a research site.

18.5.2. Following the Amendment Effective Date, Vertex will have the sole right to produce new Site Media Materials, in its sole discretion.

18.5.3. Following the Amendment Effective Date, Vertex may use any and all of the Site Media Materials (whether produced prior to, on or after the Amendment Effective Date) for any and all purposes without the prior written consent of CRISPR. Following the Amendment Effective Date, CRISPR may (a) use the Site Media Materials produced prior to the Amendment Effective Date for any Approved Actions that have already received the Approvals from Vertex prior to the Amendment Effective Date and (b) subject to the Approvals, use the Site Media Materials produced on or after the Amendment Effective Date, and the Site Media Materials produced prior to the Amendment Effective Date for which a

new use has arisen that has not already received the Approvals from Vertex prior to the Amendment Effective Date, solely for the following purposes (each, an "**Approved Action**"): (i) promotional content for CRISPR; (ii) internal use by CRISPR; (iii) use on digital websites, including corporate websites, owned exclusively by CRISPR or jointly by the Parties; (iv) social media accounts operated by CRISPR; (v) use by a Third Party. Approved Actions may not violate applicable rules and regulations relating to data privacy. No Confidential Information of Vertex may be disclosed in connection with an Approved Action. CRISPR agrees that it will not commence any Approved Action without the prior written consent of Vertex, which consent shall consist of written approval (including electronic mail) from each of the following departments of Vertex: (A) corporate communications, (B) legal and (C) clinical development (collectively, the "**Approvals**"). Each such representative of Vertex will have the right to review the content of the relevant Approved Action and Vertex will cause all such reviews to occur in a timely manner (and all such reviews shall take no longer than a total of [***] Business Days after the date on which Vertex received the request for such Approved Action) and Vertex will notify CRISPR of its consent or non-consent of such requested Approved Action by no later than the [***] Business Days after the date on which Vertex received the request for such Approved Action.

18.5.4. All costs incurred in connection with any production of any Site Media Materials in accordance with this Agreement will be included in [***] shared by the Parties pursuant to this Agreement.

18.6. **Confidentiality Obligations of CRISPR Personnel**. With respect to the participation by CRISPR employees in meetings regarding the Shared Products pursuant to Section 4.1.4, Section 4.2.2 and Section 6.3, Vertex may condition such participation upon execution by the applicable employee(s) of a non-disclosure agreement with Vertex in the form attached hereto as Schedule I.

ARTICLE 19
MISCELLANEOUS

19.1. **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) either Party 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 under this Agreement. An assigning Party will promptly notify the other Party of any assignment or transfer under the provisions of this Section 19.1. 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 19.1 will be void.

19.2. **Effects of Change of Control**. If, during the Co-Co Agreement Term, any [***] undergoes a Change of Control, then, [***].

19.3. **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.

19.4. **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.

19.5. **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 02210
E-mail: [***]

with a copy to:

Vertex Pharmaceuticals Incorporated
Attn: Corporate Legal
50 Northern Avenue
Boston, Massachusetts 02210
E-mail: [***]

and:

Ropes & Gray LLP
Attn: Marc A. Rubenstein

Prudential Tower
800 Boylston Street
Boston, Massachusetts 02199-3600
E-mail: [***]

If to CRISPR:

CRISPR Therapeutics AG
Attn: Chief Executive Officer
Baarerstrasse 14
6300 Zug
Switzerland
Email: [***]

with a copy to:

CRISPR Therapeutics AG
Attn: General Counsel
Baarerstrasse 14
6300 Zug
Switzerland
Email: [***]

and

Goodwin Procter LLP
Attn: Christopher Denn
100 Northern Avenue
Boston, Massachusetts 02210
E-mail: [***]

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 19.5 shall be deemed properly delivered hereunder to each of CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr. Notwithstanding the foregoing, for the purposes of Sections 4.1.4, 4.2.2 and 6.3, any notice of a scheduled meeting thereunder may be in the form of an electronic calendar invitation sent to the e-mail address of the relevant designated CRISPR Senior-Level Employee and any such notice will be deemed to have been given when sent.

19.6. **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.

19.7. **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 19.7 shall be binding upon each of CRISPR UK, CRISPR AG, CRISPR Inc. and Tracr.

19.8. **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.

19.9. **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.

19.10. **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.

19.11. **Data Privacy Matters**. Prior to the Amendment Date, the Parties have executed a letter agreement dated as of January 20, 2019, addressing certain matters with respect to data privacy (the "**GDPR Letter Agreement**"). The Transition Plan will provide for the Parties to update the GDPR Letter Agreement as may be necessary in light of the allocation of responsibilities contemplated by this Agreement and any changes in Applicable Laws.

19.12. **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.

19.13. **Entire Agreement**. This Agreement, together with the Collaboration Agreement, the Pharmacovigilance Agreement, the Quality Agreement and the GDPR Letter 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, including the Original Agreement. For the avoidance of doubt, except as expressly set forth in Section 2.3 with respect to the Amendment Date Provisions, this Agreement shall not terminate any rights or obligations accrued under the Original Agreement prior to the Amendment Effective Date.

19.14. **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 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.

19.15. **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, e-

mail or otherwise (but excluding text messaging 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."

19.16. **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.

19.17. **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.

19.18. **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.

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

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

19.19.2. 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;

19.19.3. 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

19.19.4. 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]

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

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Reshma Kewalramani

Name: Reshma Kewalramani

Title: Chief Executive Officer and President

VERTEX PHARMACEUTICALS (EUROPE) LIMITED

By: /s/ Klas Holmlund

Name: Klas Holmlund

Title: Director

CRISPR THERAPEUTICS AG

By: /s/ Rodger Novak

Name: Rodger Novak

Title: President

CRISPR THERAPEUTICS LIMITED

By: /s/ Rodger Novak

Name: Rodger Novak

Title: Director

CRISPR THERAPEUTICS, INC.

By: /s/ Samarth Kulkarni

Name: Samarth Kulkarni

Title: CEO and President

TRACR HEMATOLOGY LTD.

By: /s/ Rodger Novak

Name: Rodger Novak

Title: Director

SCHEDULE A
CRISPR IN-LICENSE AGREEMENTS

[***]

SCHEDULE B

DESIGNATED SHARED PRODUCTS

[***]

SCHEDULE C
VERTEX IN-LICENSE AGREEMENTS

[***]

SCHEDULE D
ASSIGNED CONTRACTS

[***]

SCHEDULE E
OTHER MANUFACTURING CONTRACTS

[***]

SCHEDULE F
PRELIMINARY TRANSITION PLAN

[***]

SCHEDULE G

ANNUAL OPEX CAP

[***]

SCHEDULE H
CRISPR DISCLOSURE SCHEDULE

[***]

SCHEDULE I

FORM OF NON-DISCLOSURE AGREEMENT

[***]

SCHEDULE J

FORM OF PRESS RELEASE

[***]

Exhibit 31.1

CERTIFICATIONS

I, Samarth Kulkarni, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CRISPR Therapeutics AG;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 27, 2021

By: /s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Michael Tomsicek, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CRISPR Therapeutics AG;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 27, 2021

By: /s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of CRISPR Therapeutics AG (the "Company") for the period ended March 31, 2021 as filed with the Securities and Exchange Commission on or about the date hereof (the "Report"), the undersigned officers of the Company hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his or her knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of, and for, the periods presented in the Report.

/s/ Samarth Kulkarni
Samarth Kulkarni
Chief Executive Officer
(Principal Executive Officer)

April 27, 2021

/s/ Michael Tomsicek
Michael Tomsicek
Chief Financial Officer
(Principal Financial and Accounting Officer)

April 27, 2021