UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2023

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: 001-40969

ENTRADA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**81-3983399**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**
One Design Center Place **Suite 17-500** **Boston, MA**	**02210**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code: (857) 520-9158

6 Tide Street, Boston, MA 02210

(Former address, if changed since last report)

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

Title of Each Class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**TRDA**	**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 an emerging growth company. See the definitions 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 the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 30, 2023, the registrant had 33,197,018 shares of common stock, $0.0001 par value per share, outstanding.

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We own various U.S. federal trademark applications and unregistered trademarks, including our company name and logo, that we use in connection with the operation of our business. This Quarterly Report on Form 10-Q (Quarterly Report) may also contain trademarks, service marks and trade names of third parties, which are the property of their respective owners. Our use or display of third parties' trademarks, service marks, trade names or products in this Quarterly Report is not intended to, and does not imply a relationship with, or endorsement or sponsorship by us. Solely for convenience, the trademarks, service marks and trade names referred to in this Quarterly Report may appear without the ®, TM or SM symbols, but the omission of such references is not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner of these trademarks, service marks and trade names will not assert, to the fullest extent under applicable law, its rights.

From time to time, we may use our website to distribute material information. Our financial and other material information is routinely posted to and accessible on the Investors Relations section of our website, available at www.entradatx.com. Investors are encouraged to review the Investors Relations section of our website because we may post material information on that site that is not otherwise disseminated by us. Information that is contained in and can be accessed through our website is not incorporated into, and does not form a part of, this Quarterly Report.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (Quarterly Report) contains express or implied forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), that are based on our management's belief and assumptions and on information currently available to our management. These statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements contained in this Quarterly Report include, but are not limited to, statements about:

- the initiation, timing, progress, results and costs of conducting our research and development programs and our current and future preclinical studies and anticipated clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our current and future programs;
- the ability of our preclinical studies and clinical trials to demonstrate safety and efficacy of our therapeutic candidates, and other positive results;
- the beneficial characteristics, and the potential safety, efficacy and therapeutic effects of our therapeutic candidates;
- the timing, scope and likelihood of regulatory filings and approvals, including timing of Investigational New Drug (IND) applications and final U.S. Food and Drug Administration (FDA) approval of our current therapeutic candidates or any future therapeutic candidates;
- the timing, scope or likelihood of foreign regulatory filings and approvals;
- the ability to leverage our proprietary EEV Platform to efficiently develop additional therapeutic candidates, including by applying learnings from one program to other programs and from one indication to our other indications;
- our estimates of the number of patients that we will enroll and our ability to initiate, recruit and enroll patients in and conduct and successfully complete clinical trials at the pace that we project;
- the costs of manufacturing and our ability to scale-up our manufacturing and processing approaches to appropriately address our anticipated commercial needs, which will require significant resources;
- our ability to establish or maintain collaborations or strategic relationships and the ability and willingness of our third-party strategic collaborators to undertake research and development activities relating to our current or future therapeutic candidates and discovery programs;
- our expectations regarding the potential benefits of the partnership, licensing and/or collaboration arrangements and other strategic arrangements and transactions we have entered into or may enter into in the future;
- the potential benefits of our technologies and programs, including those with strategic partners;
- our ability to obtain funding for our operations necessary to complete further development and commercialization of our therapeutic candidates;
- our ability to take advantage of expedited regulatory pathways for our therapeutic candidates;
- our ability to obtain and maintain regulatory approval of our therapeutic candidates;
- the implementation of our business model, and strategic plans for our business, therapeutic candidates, and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our therapeutic candidates and other therapeutic candidates we may develop, including the extensions of existing patent terms where available, the validity of intellectual property;
- rights held by third parties, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- our financial performance and estimates of our future expenses, revenues, capital requirements, use of our cash reserves, and our needs for additional financing;
- future agreements with third parties in connection with the development and commercialization of our therapeutic candidates and any other approved product;

- the rate and degree of market acceptance and the size and growth potential of the markets for our therapeutic candidates, and our ability to serve those markets;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our ability to produce our therapeutic candidates with advantages in turnaround times or manufacturing cost;
- our competitive position and the success of competing therapies that are or may become available;
- our need for and ability to attract and retain key scientific, management and other personnel and to identify, hire and retain additional qualified professionals;
- our expectations regarding the period during which we will remain an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act);
- our anticipated use of our existing resources;
- the effect of a worldwide health epidemic or pandemic, such as COVID-19, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations, including but not limited to our preclinical studies, our future clinical trials, healthcare systems and the global economy as a whole;
- the expected timing, progress and success of our collaboration with Vertex, including any future payments we may receive under our collaboration and license agreements, as well as our ability to identify and enter into future license agreements and collaborations;
- our beliefs and expectations regarding milestone, royalty or other payments that could be due to third parties under existing agreements;
- disruptions and instability in the banking industry and other parts of the financial service sector;
- the impact of global economic and political developments on our business, including rising inflation and capital market disruptions, the current conflict in Ukraine, economic sanctions and economic slowdowns or recessions that may result from such developments which could harm our research and development efforts as well as the value of our common stock and our ability to access capital markets; and
- other risks and uncertainties, including those listed under the caption “Risk Factors.”

In some cases, you can identify forward-looking statements by terminology such as “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “seek,” “predict,” “future,” “project,” “potential,” “continue,” “target,” "contemplate," "possible," "can," or the negative of these terms or other comparable terminology, and similar expressions, although not all forward-looking statements contain these identifying words. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section titled “Risk Factors” and elsewhere in this Quarterly Report. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this Quarterly Report and the documents that we reference in this Quarterly Report and have filed with the Securities and Exchange Commission (the SEC) thereto completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this Quarterly Report represent our views as of the date of this Quarterly Report. We do not undertake any obligation to publicly update any forward-looking statement except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report.

This Quarterly Report also contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. All of the market data used in this Quarterly Report involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Our estimates of the potential market opportunities for our product candidates include several key assumptions based on our

industry knowledge, industry publications, third-party research, and other surveys, which may be based on a small sample size and may fail to accurately reflect market opportunities. While we believe that our internal assumptions are reasonable, no independent source has verified such assumptions.

This Quarterly Report contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed as exhibits to this Quarterly Report. Unless the context otherwise requires, reference in this Quarterly Report to the terms "Entrada," "Entrada Therapeutics," "the Company," "we," "us," "our," and similar designations refer to Entrada Therapeutics, Inc. and, where appropriate, our wholly-owned subsidiary.

SUMMARY OF MATERIAL AND OTHER RISKS ASSOCIATED WITH OUR BUSINESS

Our business is subject to numerous risks and uncertainties and are subject to change based on various factors, including those highlighted in the section entitled "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q (Quarterly Report). These risks include, but are not limited to, the following:

- We have a limited operating history, have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.
- We will require additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our development programs, commercialization efforts or other operations.
- We are early in our development efforts. We have not initiated clinical studies, and as a result it will be years before we commercialize a therapeutic candidate, if ever. If we are unable to identify and advance therapeutic candidates through preclinical studies and clinical trials, obtain marketing approval and ultimately commercialize them, or experience significant delays in doing so, our business will be materially harmed.
- The U.S. Food and Drug Administration (FDA) has placed the Investigational New Drug (IND) application for ENTR-601-44 for the potential treatment of Duchenne muscular dystrophy on clinical hold. Should we be delayed in submitting a response to the clinical hold in the United States or our response is not satisfactory to the FDA, the clinical hold may not be lifted on a timely basis, or at all.
- Our business is highly dependent on the clinical advancement of our programs and modalities and is especially dependent on the success of our lead Endosomal Escape Vehicle (EEV) therapeutic candidates, ENTR-601-44, ENTR-601-45 and ENTR-701. Delay or failure to advance programs or modalities, including ENTR-601-44, ENTR-601-45 and our partnered candidate ENTR-701 could adversely impact our business.
- Our EEV therapeutic candidates are based on a novel therapeutic approach, which makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval, if at all.
- Preclinical and clinical development involves a lengthy and expensive process with an uncertain outcome, and the results of preclinical studies are not necessarily predictive of the results of later preclinical studies and any clinical trials of our therapeutic candidates. We have not tested any of our therapeutic candidates in clinical trials and our therapeutic candidates may not have favorable results in clinical trials, if any, or receive regulatory approval on a timely basis, if at all.
- Substantial delays in the commencement, enrollment or completion of our planned clinical trials or failure to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities could prevent us from commercializing any therapeutic candidates we determine to develop on a timely basis, if at all.
- Our approach to the discovery and development of therapeutic candidates based on our (EEV Platform is unproven, and we do not know whether we will be able to develop any products of commercial value, or if competing technological approaches will limit the commercial value of our therapeutic candidates or render our EEV Platform obsolete.
- We rely, and expect to continue to rely, on third parties to conduct some or all aspects of our product manufacturing, research and preclinical and clinical testing, and these third parties may not perform satisfactorily or, dedicate adequate resources to meet our needs, or may be unable to acquire the necessary supplies to perform successfully.
- We have and may in the future enter into collaborations, licenses and other similar arrangements with third parties for the research, development and commercialization of certain of the therapeutic candidates we may develop, including our collaboration with Vertex Pharmaceuticals Incorporated (Vertex). If any such arrangements are not successful, we may not be able to capitalize on the market potential of those therapeutic candidates.
- We face significant competition, and if our competitors develop technologies or therapeutic candidates more rapidly than we do or their technologies are more effective, our business and our ability to develop and successfully commercialize products may be adversely affected.
- We expect to expand our development and regulatory capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.
- While we will attempt to diversify our risks by developing one or more programs in each modality, there are risks that are unique to each modality and risks that are applicable across modalities. These risks may impair our ability to advance one or more of our programs in clinical development, obtain regulatory approval, or ultimately

commercialize our programs, or cause us to experience significant delays in doing so, any of which may materially harm our business.

- If we or our collaborators are unable to obtain and maintain patent protection for our EEV Platform, therapeutic development programs and other proprietary technologies we develop, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our therapeutic programs and other proprietary technologies we may develop may be adversely affected.
- Our future success depends on our ability to retain key employees and to attract, retain and motivate qualified personnel.
- The market price of our common stock may be volatile, and investors could lose all or part of their investment.
- Volatility in capital markets may affect our ability to access new capital, which may harm our liquidity, limit our ability to grow our business, pursue acquisitions or improve our operating infrastructure and restrict our ability to compete in our markets.
- Unstable market and economic conditions may have adverse consequences for our business, financial condition and stock price.

The material and other risks summarized above should be read together with the text of the full risk factors and in the other information set forth in this Quarterly Report, including our condensed consolidated financial statements and the related notes, as well as in other documents that we file with the Securities and Exchange Commission (the SEC). If any such material and other risks and uncertainties actually occur, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks summarized above or described in full are not the only risks that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, prospects, financial condition and results of operations.

PART I —FINANCIAL INFORMATION

Item 1. Financial Statements

ENTRADA THERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)
(unaudited)

	March 31, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 227,648	$ 45,157
Marketable securities	183,983	143,555
Collaboration receivable	6,297	—
Prepaid expenses and other current assets	16,207	21,163
Total current assets	434,135	209,875
Property and equipment, net	9,394	7,681
Restricted cash	3,950	3,950
Right-of-use assets, operating leases	14,247	25,340
Other non-current assets	13,843	5,210
Total assets	$ 475,569	$ 252,056
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 6,474	$ 5,990
Accrued expenses and other current liabilities	11,676	7,576
Operating lease obligations, current portion	7,103	8,406
Deferred revenue, current portion	122,341	—
Total current liabilities	147,594	21,972
Operating lease obligations, net of current portion	9,122	17,530
Deferred revenue, net of current portion	89,241	—
Total liabilities	245,957	39,502
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Common stock, par value $0.0001; 150,000,000 shares authorized; 33,177,324 shares issued and 33,133,736 shares outstanding as of March 31, 2023 and 31,448,508 shares issued and 31,394,767 shares outstanding as of December 31, 2022	3	3
Additional paid-in capital	425,210	402,893
Accumulated other comprehensive loss	(642)	(2,057)
Accumulated deficit	(194,959)	(188,285)
Total stockholders' equity	229,612	212,554
Total liabilities and stockholders' equity	$ 475,569	$ 252,056

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

ENTRADA THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)
(unaudited)

	Three Months Ended March 31,	
	2023	2022
Collaboration revenue	$ 25,260	$ —
Operating expenses:		
Research and development	23,102	15,718
General and administrative	7,938	6,433
Total operating expenses	31,040	22,151
Loss from operations	(5,780)	(22,151)
Other income:		
Interest and other income	2,657	480
Total other income	2,657	480
Loss before provision for income taxes	(3,123)	(21,671)
Provision for income taxes	(3,551)	—
Net loss	$ (6,674)	$ (21,671)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.21)	$ (0.69)
Weighted-average common shares outstanding, basic and diluted	32,374,299	31,246,916
Other comprehensive loss:		
Unrealized gain (loss) on marketable securities	1,415	(1,535)
Total other comprehensive gain (loss)	1,415	(1,535)
Total comprehensive loss	$ (5,259)	$ (23,206)

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

ENTRADA THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS STOCKHOLDERS' EQUITY
(In thousands, except share amounts)
(unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2021	31,224,336	$ 3	$ 392,384	$ —	$ (93,669)	$ 298,718
Issuance of common stock upon exercise of stock options	24,891	—	50	—	—	50
Vesting of early exercised options	15,224	—	35	—	—	35
Stock-based compensation	—	—	1,794	—	—	1,794
Other comprehensive loss	—	—	—	(1,535)	—	(1,535)
Net loss	—	—	—	—	(21,671)	(21,671)
Balances at March 31, 2022	31,264,451	$ 3	$ 394,263	$ (1,535)	$ (115,340)	$ 277,391

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2022	31,394,767	$ 3	$ 402,893	$ (2,057)	$ (188,285)	$ 212,554
Issuance of common stock upon exercise of stock options	18,344	—	129	—	—	129
Vesting of early exercised options	10,153	—	26	—	—	26
Vesting of restricted stock units	91,859	—	—	—	—	—
Issuance of common stock in connection with the Vertex Agreement	1,618,613	—	19,407	—	—	19,407
Stock-based compensation	—	—	2,755	—	—	2,755
Other comprehensive loss	—	—	—	1,415	—	1,415
Net loss	—	—	—	—	(6,674)	(6,674)
Balances at March 31, 2023	33,133,736	$ 3	$ 425,210	$ (642)	$ (194,959)	$ 229,612

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

ENTRADA THERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Cash flows from operating activities:		
Net loss	$ (6,674)	$ (21,671)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	541	390
Stock-based compensation expense	2,755	1,794
Amortization of premiums and discounts on marketable securities, net	(237)	142
Changes in operating assets and liabilities:		
Collaboration receivable	(6,297)	—
Prepaid expenses and other current assets	4,339	(1,670)
Right-of-use assets, operating leases	3,332	1,582
Other non-current assets	(8,633)	(562)
Accounts payable	534	2,061
Accrued expenses and other current liabilities	4,107	(1,526)
Operating lease liabilities	(1,950)	(1,531)
Deferred revenue	211,582	—
Net cash provided by (used in) operating activities	203,399	(20,991)
Cash flows from investing activities:		
Purchases of property and equipment	(1,668)	(594)
Purchases of marketable securities	(101,776)	(182,653)
Maturities of marketable securities	63,000	1,714
Net cash used in investing activities	(40,444)	(181,533)
Cash flows from financing activities:		
Proceeds from issuance of common stock in connection with the Vertex Agreement	19,407	—
Proceeds from exercise of stock options	129	50
Net cash provided by financing activities	19,536	50
Net increase (decrease) in cash, cash equivalents, and restricted cash	182,491	(202,474)
Cash, cash equivalents, and restricted cash at beginning of period	49,107	291,064
Cash, cash equivalents, and restricted cash at end of period	$ 231,598	$ 88,590
Supplemental cash flow disclosures:		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 57	$ 391
Right-of-use assets surrendered as part of lease modification	$ 7,761	$ —
Recognition of right-of use asset upon adoption of ACS 842	$ —	$ 32,991
Transfer of deposits for equipment from operating to investing cash flows	$ 617	$ 495
Vesting of options early exercised subject to repurchase	$ 26	$ 35

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

ENTRADA THERAPEUTICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. Nature of the Business

Organization

Entrada Therapeutics, Inc. (Entrada or the Company) aims to transform the lives of patients by establishing Endosomal Escape Vehicle (EEV™) therapeutics as a new class of medicines and to become the world's foremost intracellular therapeutics company. The Company was incorporated in Delaware on September 22, 2016 and its principal offices are located in Boston, Massachusetts.

Liquidity and Capital Resources

Since its inception, the Company has devoted substantially all of its resources to its research and development efforts relating to its proprietary, highly versatile and modular EEV platform (EEV Platform), advancing development of its portfolio of programs and general and administrative support for these operations, including raising capital. The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, technical risks associated with the successful research, development and manufacturing of therapeutic candidates, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations, and the ability to secure additional capital to fund operations. Therapeutic candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts will require significant amounts of additional capital, adequate personnel and infrastructure. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize revenue from product sales.

In accordance with Accounting Standards Codification (ASC) 205-40, Going Concern, the Company evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about its ability to continue as a going concern within one year after the date that the condensed consolidated financial statements are issued. The Company has incurred losses since its inception, including losses of $6.7 million and $21.7 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, the Company had an accumulated deficit of $195.0 million. To date, the Company has funded its operations primarily through the sale of equity securities and collaboration payments. Other than the upfront collaboration payment received during the three months ended March 31, 2023 which resulted in positive cash flows for the period ended March 31, 2023, the Company expects to continue to generate operating losses and negative operating cash flows for the foreseeable future.

The Company expects that its cash, cash equivalents and marketable securities of $411.6 million as of March 31, 2023 will be sufficient to fund its operations and capital expenditure requirements for at least the next twelve months from the date of issuance of these condensed consolidated financial statements. The Company will need additional financing to support its continuing operations and pursue its business strategy and may pursue additional cash resources through a combination of equity offerings, debt financings, collaborations, strategic alliances, licensing, or other arrangements. The Company may be unable to raise additional funds or enter into such other agreements when needed or on favorable terms or at all. The inability to raise capital as and when needed would have a negative impact on the Company's financial condition and its ability to pursue its business strategy. The Company will need to generate significant revenue to achieve profitability, and it may never do so.

2. Summary of Significant Accounting Policies

The significant accounting policies used in preparation of these condensed consolidated financial statements as of and for the three months ended March 31, 2023 are consistent with those discussed in Note 2 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, which was filed with the Securities and Exchange Commission (the SEC) on March 6, 2023 (Annual Report), except as noted immediately below.

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared in conformity with generally accepted accounting principles in the United States of America (GAAP). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB). The condensed consolidated financial statements have been prepared on the same basis as the audited annual financial statements. Certain information and footnote disclosures normally included in the Company's annual financial statements have been condensed or omitted, as is permitted by GAAP. These condensed consolidated financial statements, in the opinion of management, reflect all normal recurring adjustments necessary for a fair presentation of the Company's financial position as of March 31, 2023, and results of operations for the interim periods ended March 31, 2023 and 2022.

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 condensed consolidated financial statements should be read in conjunction with the audited financial statements as of and for the years ended December 31, 2022 and 2021, and the notes thereto, included in the Company's Annual Report.

Revenue Recognition

The Company analyzes its collaboration arrangements to assess whether they are within the scope of ASC 808, Collaborative Arrangements ("ASC 808") to determine whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, the Company first determines which elements of the collaboration are deemed to be within the scope of ASC 808 and those that are more reflective of a vendor-customer relationship and therefore within the scope of Topic 606. For elements of collaboration arrangements that are accounted for pursuant to ASC 808, an appropriate recognition method is determined and applied consistently, generally by analogy to Topic 606. For those elements of the arrangement that are accounted for pursuant to Topic 606, the Company applies the five-step model described below.

To date all revenue has been generated from the Company's Strategic Collaboration and License Agreement (the Vertex Agreement) with Vertex Pharmaceuticals Incorporated (Vertex) which closed in February 2023 and falls within the scope of ASC Topic 606, "Revenue from Contracts with Customers" ("ASC 606"), under which the Company licensed rights to ENTR-701 and performs research and development services. The terms of this arrangement includes a non-refundable upfront payment, reimbursement for research and development costs; development, regulatory, and commercial milestone payments; and royalties on net sales of licensed products.

Under Topic 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of Topic 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price, including variable consideration, if any; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration to which it is entitled in exchange for the goods or services it transfers to the customer.

For contracts within the scope of Topic 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations. Arrangements that include rights to additional goods or services that are exercisable at a customer's discretion are generally considered options. The Company assesses if these options provide a material right to the customer and if so, they are considered separate performance obligations. The identification of material rights requires judgments related to the determination of the value of the underlying license relative to the option exercise price, including assumptions about technical feasibility and the probability of developing a candidate that would be subject to the option rights. The exercise of a material right is accounted for as a contract modification for accounting purposes.

The Company assesses whether each promised good or service is distinct for the purpose of identifying the performance obligations in the contract. This assessment involves subjective determinations and requires management to

make judgments about the individual promised goods or services and whether such promised goods or services are separable from the other aspects of the contractual relationship. Promised goods and services are considered distinct provided that: (i) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (that is, the good or service is capable of being distinct) and (ii) the entity's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract (that is, the promise to transfer the good or service is distinct within the context of the contract). In assessing whether a promised good or service is distinct, the Company considers factors such as the research, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. The Company also considers the intended benefit of the contract in assessing whether a promised good or service is separately identifiable from other promises in the contract. If a promised good or service is not distinct, an entity is required to combine that good or service with other promised goods or services until it identifies a bundle of goods or services that is distinct.

The transaction price is then determined and allocated to the identified performance obligations in proportion to their standalone selling prices (SSP) on a relative SSP basis. SSP is determined at contract inception and is not updated to reflect changes between contract inception and when the performance obligations are satisfied. Determining the SSP for performance obligations may require significant judgment. In developing the SSP for a performance obligation, the Company considers applicable market conditions and relevant entity-specific factors, including factors that were contemplated in negotiating the agreement with the customer and estimated costs. The Company validates the SSP for performance obligations by evaluating whether changes in the key assumptions used to determine the SSP will have a significant effect on the allocation of arrangement consideration between multiple performance obligations.

If the consideration promised in a contract includes a variable amount, the Company estimates the amount of consideration to which it will be entitled in exchange for transferring the promised goods or services to a customer. The Company determines the amount of variable consideration by using the expected value method or the most likely amount method. The Company includes the unconstrained amount of estimated variable consideration in the transaction price. The amount included in the transaction price is constrained to the amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. At the end of each subsequent reporting period, the Company re-evaluates the estimated variable consideration included in the transaction price and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment.

If an arrangement includes development and regulatory milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's control or a customer's control, such as regulatory approvals, are generally not considered probable of being achieved until those approvals are received.

For arrangements with licenses of intellectual property that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes royalty revenue and sales-based milestones at the later of (i) when the related sales occur, or (ii) when the performance obligation to which the royalty has been allocated has been satisfied.

Up-front and milestone payments are recorded as deferred revenue upon receipt or when due until the Company performs its obligations under these arrangements. Amounts are recorded as a collaboration receivable when the Company's right to consideration is unconditional.

The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) each performance obligation is satisfied, either at a point in time or over time, and if over time recognition is based on the use of an output or input method.

Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses* (Topic 326): Measurement of Credit Losses on Financial Instruments. This ASU requires that credit losses for financial instruments measured at amortized cost be reported using an expected losses model rather than the incurred losses model that is currently used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with

unrealized losses, this standard requires allowances to be recorded for any credit losses instead of reducing the amortized cost of the investment. ASU 2016-13 limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. For Emerging Growth Companies (EGCs), such as the Company, the new standard became effective beginning January 1, 2023. This guidance did not have a material impact on the Company's condensed consolidated financial statements.

3. Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. At March 31, 2023 and December 31, 2022, cash and cash equivalents include standard checking accounts and money market account funds that invest primarily in U.S. government-backed securities and treasuries.

As of March 31, 2023 and December 31, 2022, restricted cash represents collateral provided for a letter of credit issued as a security deposit in connection with the Company’s lease of its corporate facilities located at One Design Center Place, Boston, Massachusetts. A reconciliation of the cash, cash equivalents, and restricted cash reported within the balance sheet that sum to the total of the same amounts shown in the statement of cash flows is as follows (in thousands):

	March 31, 2023	December 31, 2022
Cash and cash equivalents	$ 227,648	$ 45,157
Restricted cash	3,950	3,950
Total cash, cash equivalents and restricted cash	$ 231,598	$ 49,107

4. Marketable Securities

The following are summaries of the Company's marketable securities at March 31, 2023 and December 31, 2022 (in thousands).

March 31, 2023	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. government agency securities and treasuries	$ 79,580	$ 65	$ (605)	$ 79,040
Corporate debt securities	45,996	2	(593)	45,405
Total securities with a maturity of one year or less	$ 125,576	$ 67	$ (1,198)	$ 124,445
U.S. government agency securities and treasuries	49,960	439	—	50,399
Corporate debt securities	9,089	50	—	9,139
Total securities with a maturity of more than one year	$ 59,049	$ 489	$ —	$ 59,538
Total available-for-sale securities	$ 184,625	$ 556	$ (1,198)	$ 183,983

December 31, 2022	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. government agency securities and treasuries	$ 100,555	$ —	$ (1,159)	$ 99,396
Corporate debt securities	41,615	—	(774)	40,841
Total securities with a maturity of one year or less	$ 142,170	$ —	$ (1,933)	$ 140,237
U.S. government agency securities and treasuries	—	—	—	—
Corporate debt securities	3,442	—	(124)	3,318
Total securities with a maturity of more than one year	$ 3,442	$ —	$ (124)	$ 3,318
Total available-for-sale securities	$ 145,612	$ —	$ (2,057)	$ 143,555

As of March 31, 2023, the Company had 23 marketable securities with a total fair market value of $95.2 million in an unrealized loss position. All of the Company's investments are classified as available-for-sale and are carried at fair value with unrealized gains and losses recorded as a component of accumulated other comprehensive loss. The Company considers all available-for-sale securities, including those with maturity dates beyond 12 months, as available to support current operational liquidity needs and therefore classifies all securities as available for sale.

The Company believes that any unrealized losses associated with the decline in value of its securities are temporary and believes that it is more likely than not that it will be able to hold its debt securities to maturity and that there was no material change in the credit risk of the above instruments since January 1, 2023. Therefore, the Company anticipates a full recovery of the amortized cost basis of its debt securities at maturity and no allowance for credit losses was recognized.

As of March 31, 2023 and December 31, 2022, $0.9 million and $0.6 million, respectively, of accrued interest receivable was included in prepaid expenses and other current assets.

5. Fair Value Measurements

The following tables present the Company's fair value hierarchy for its assets that are measured at fair value on a recurring basis and indicate the level within the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value (in thousands):

	Fair Value Measurements at March 31, 2023			
	Level 1	Level 2	Level 3	Total
Cash equivalents: [1]				
Money market funds	$ 227,321	$ —	$ —	$ 227,321
Marketable securities:				
U.S. government agency securities and treasuries	—	129,439	—	129,439
Corporate bonds	—	54,544	—	54,544
Total	$ 227,321	$ 183,983	$ —	$ 411,304

	Fair Value Measurements at December 31, 2022			
	Level 1	Level 2	Level 3	Total
Cash equivalents: [1]				
Money market funds	$ 44,907	$ —	$ —	$ 44,907
Marketable securities:				
U.S. government agency securities and treasuries	$ —	$ 99,396	$ —	$ 99,396
Corporate bonds	—	44,159	—	44,159
Total	$ 44,907	$ 143,555	$ —	$ 188,462

(1) The cash equivalent amounts above do not include $0.3 million of cash related to checking accounts included in cash and cash equivalents as of March 31, 2023 and December 31, 2022. These amounts are excluded as no valuation is needed for cash in checking accounts.

Money market funds are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets. The Company measures its debt securities at fair value on a recurring basis using inputs that are observable or can be corroborated by observable market data and classifies those instruments within Level 2 of the fair value hierarchy.

6. Property and Equipment, Net

Property and equipment, net consisted of the following at March 31, 2023 and December 31, 2022 (in thousands):

	March 31, 2023	December 31, 2022
Laboratory equipment	$ 8,512	$ 8,335
Furniture and fixtures	161	161
Computer equipment	43	43
Leasehold improvements	1,859	1,859
Construction in progress	2,659	584
Total property and equipment	13,234	10,982
Less: accumulated depreciation	(3,840)	(3,301)
Property and equipment, net	$ 9,394	$ 7,681

Depreciation expense for the three months ended March 31, 2023 and 2022 was $0.5 million and $0.4 million, respectively.

The construction in progress amount in the table above represents costs for capital assets not yet placed into service as of March 31, 2023.

7. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following at March 31, 2023 and December 31, 2022 (in thousands):

	March 31, 2023	December 31, 2022
Employee compensation and benefits	$ 2,049	$ 5,063
External research and development expenses	4,057	1,157
General and administrative professional service expenses	837	925
Accrued income tax liability	3,551	—
Other	1,182	431
Total accrued expenses and other current liabilities	$ 11,676	$ 7,576

8. Common Stock and Preferred Stock

Common Stock

As of March 31, 2023 and December 31, 2022, the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 150,000,000 shares of common stock, par value $0.0001 per share.

In February 2023, in connection with the closing of the Vertex Agreement, the Company and Vertex also closed their Stock Purchase Agreement for the sale and issuance of 1,618,613 shares of Entrada's common stock (the "Shares") to Vertex for an aggregate purchase price of approximately $26.3 million or $16.26 per share. See Note 13, *Collaboration and License Agreements,* for further discussion of the Company's accounting for the shares sold in connection with the closing of the Vertex Agreement.

Shares Reserved for Future Issuance

The Company has reserved the following shares of common stock for future issuance as of:

	March 31, 2023	December 31, 2022
Exercise of outstanding stock options	5,349,166	5,028,850
Vesting of outstanding restricted stock	671,308	463,964
Future awards under the 2021 Stock Option and Incentive Plan	2,596,835	1,976,758
Future awards under the 2021 Employee Stock Purchase Plan	877,600	563,115
Total shares of authorized common stock reserved for future issuance	9,494,909	8,032,687

Preferred Stock

As of March 31, 2023 and December 31, 2022, the Company was authorized to issue 10,000,000 shares of undesignated preferred stock, par value $0.0001 per share, in one or more series and to fix the rights, preferences, privileges and restrictions thereof. As of March 31, 2023 and December 31, 2022, there were no shares of undesignated preferred stock issued or outstanding.

9. Stock-Based Compensation

2021 Plan

The total shares of common stock authorized for issuance under the 2021 Stock Option and Incentive Plan increased from 5,262,917 as of December 31, 2022 to 6,425,669 as of March 31, 2023 primarily due to the automatic annual increase provision.

2016 Plan

The total shares of common stock authorized for issuance under the 2016 Stock Incentive Plan as of March 31, 2023 and December 31, 2022 were 2,191,640 shares and 2,206,655 shares, respectively.

2021 Employee Stock Purchase Plan

The total shares of common stock authorized for issuance under the 2021 Employee Stock Purchase Plan (2021 ESPP) increased from 563,115 as of December 31, 2022 to 877,600 as of March 31, 2023 due to the automatic annual increase provision within the 2021 ESPP.

Stock-Based Compensation

Stock-based compensation expense recorded in the condensed consolidated statements of operations and comprehensive loss is as follows (in thousands):

	Three Months Ended March 31,	
	2023	2022
Research and development expenses	$ 1,298	$ 704
General and administrative expenses	1,457	1,090
Total	$ 2,755	$ 1,794

Stock Option Valuation

The following table presents, on a weighted-average basis, the assumptions used in the Black-Scholes option-pricing model to determine the fair value of stock options granted during the three months ended March 31, 2023 and 2022:

	March 31, 2023	March 31, 2022
Risk-free interest rate	4.13 %	1.61 %
Expected volatility	71 %	70 %
Expected dividend yield	—	—
Expected term (in years)	6.08	6.06

Early Exercise of Unvested Stock Options

Shares purchased by employees pursuant to the early exercise of stock options are not deemed, for accounting purposes, to be outstanding shares until those shares vest according to their respective vesting schedules. Cash received from employee exercises of unvested options is included in current liabilities on the balance sheet. Amounts recorded are reclassified to common stock and additional paid-in capital as the shares vest. Vesting can occur in the year of exercise and thereafter. There were 43,588 and 53,741 unvested shares related to early exercises of stock options as of March 31, 2023 and December 31, 2022, respectively. As of March 31, 2023 and December 31, 2022, the liability associated with the unvested early exercise of stock options was $0.2 million.

Stock Options

The following table summarizes the Company's stock option activity during the three months ended March 31, 2023:

	Number of Shares		Weighted-Average Exercise Price
Outstanding as of December 31, 2022	5,028,850	$	10.95
Granted	350,396		12.24
Exercised	(18,344)		6.39
Forfeited	(11,736)		13.69
Outstanding as of March 31, 2023	5,349,166	$	11.04
Exercisable as of March 31, 2023[(1)]	2,878,389	$	8.37

(1) This represents the number of vested and unvested options exercisable as of March 31, 2023.

The weighted-average grant-date fair value of stock options granted during the three months ended March 31, 2023 and 2022 was $8.17 per share and $7.39 per share, respectively. As of March 31, 2023, there was $25.2 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 2.71 years.

Restricted Stock Units

During the three months ended March 31, 2023, restricted stock units (RSUs) were granted to employees with vesting conditions based on continued service over time. Accordingly, stock-based compensation expense for such awards is recognized using a straight-line attribution model over the vesting term of each RSU. The fair value of each RSU is based on the closing price of the Company's common stock on the date of grant.

A summary of restricted stock activity during the three months ended March 31, 2023 is as follows:

	Shares		Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2022	463,964	$	12.26
Issued	303,262	$	12.25
Vested	(91,859)	$	11.57
Forfeited	(4,059)	$	12.06
Unvested as of March 31, 2023	671,308	$	12.35

As of March 31, 2023, there was $7.8 million of unrecognized stock-based compensation expense related to restricted stock that is expected to vest. These costs are expected to be recognized over a weighted-average remaining vesting period of 3.42 years.

10. Income Taxes

The Company records income tax expense in any interim period based on the estimated effective tax rate for the fiscal year for those tax jurisdictions in which the Company can reliably estimate the effective tax rate. The calculation of the estimated effective tax rate requires an estimate of pre-tax income by tax jurisdiction as well as total tax expense for the fiscal year. Accordingly, the annual estimated effective tax rate is subject to adjustment if there are changes to the initial estimates of total tax expense or pre-tax income.

Provision for Income Taxes

The Company recorded an income tax expense of $3.6 million for the three months ended March 31, 2023. In the three months ended March 31, 2023, the income tax expense recorded was driven largely by the projected current tax liability associated with the tax recognition of the Vertex Agreement upfront payment received in 2023. A significant portion of the taxable income related to the collaboration payment is projected to be offset by current year expenses and prior year accumulated losses. A current tax liability has been projected for the remaining taxable income. The Company reported no income tax provision in the three months ended March 31, 2022, as the Company generated a taxable loss, offset by an increase to the Company's valuation allowance.

Despite the collaboration revenue, the Company continues to maintain a valuation allowance against all remaining deferred tax assets. The Company believes that it is more likely than not that it will not realize a future tax benefit of these attributes as the Company expects to continue to generate operating losses. Ultimate realization of any deferred tax asset is dependent on the Company's ability to generate sufficient future taxable income in the appropriate tax jurisdiction before the expiration of carryforward periods, if any.

The Company currently anticipates that there will be no change in its unrecognized tax benefits in the next twelve months. As of March 31, 2023, the Company had no unrecognized tax benefits. The Company has not yet conducted a study of its research and development credit carryforwards. Such a study may result in an adjustment to the Company's research and development credit carryforwards; however, until a study is completed and any adjustment is known, no amount is being presented as an uncertain tax position.

11. Commitments and Contingencies

The Company's commitments, including significant license agreements, are disclosed in Note 10 *Commitments and Contingencies* in the audited financial statements for the year ended December 31, 2022, and notes thereto, included in the Company's Annual Report. Since the date of those financial statements, there have been no material changes to its commitments except those discussed below.

Concurrently with the closing of the Vertex Agreement in February 2023, the Company entered into a sublicense agreement (the Sublicense Agreement) with Vertex. Pursuant to the Sublicense Agreement, the Company granted to Vertex an exclusive sublicense under certain intellectual property licensed to the Company under the license agreement (OSIF License Agreement), dated December 14, 2018, by and between Company and Ohio State Innovation Foundation (OSIF), as amended. See Note 10, *Commitments and Contingencies,* in the Company's audited financial statements for the year ended December 31, 2022 for further discussion of the OSIF License Agreement. The material terms of the Sublicense Agreement mirror those of the Vertex Agreement, and the payments described in connection with the Vertex Agreement above are in consideration for the rights granted under both the Vertex Agreement and Sublicense Agreement. Pursuant to the OSIF License Agreement, in April 2023, the Company paid OSIF a sublicense fee of $2.8 million. The sublicense fee was accrued for in accrued expenses and other current liabilities as of March 31, 2023 and recorded in research and development expenses for the three months ended March 31, 2023. No other sublicense fees were owed to OSIF as of March 31, 2023. If the Company receives any additional sublicensing consideration, it will owe additional fees to OSIF pursuant to the terms of the OSIF License Agreement.

12. Leases

The Company's operating lease activity is comprised of non-cancelable facility leases for office and laboratory space in Boston, Massachusetts.

6 Tide Street Lease

The Company entered into an operating lease for office and laboratory space in Boston, Massachusetts in February 2020 (6 Tide Street Lease), and entered into subsequent amendments through 2023. The amendments run co-terminus with the existing lease. The Company has a total of 42,046 square feet licensed at this facility. The Company has the option to terminate the lease and amendments after November 30, 2023 without penalty. At the adoption of ASC 842, the Company concluded that it is not reasonably certain that it will exercise this option to terminate the lease early.

In January 2023, the Company entered into an amendment to the 6 Tide Street Lease pursuant to which the Company will cease making lease payments for a portion of the leased space no later than November 30, 2023. The term for the remainder of the lease will end on November 30, 2025. Following the amendment, the fixed rental payment will be approximately $0.8 million per month through November 30, 2023, and $0.5 million per month after November 30, 2023.

Subsequent to the amendment, the Company continues to classify the 6 Tide Street Lease as an operating lease. Upon the lease modification, the Company reassessed its incremental borrowing rate and remeasured the lease liability and right-of-use asset.

In connection with entering into the 6 Tide Street Lease, the Company paid a security deposit of $0.8 million, of which $0.5 million is recorded as a component of other non-current assets and $0.3 million is recorded as a component of other current assets as of March 31, 2023.

The components of operating lease cost were as follows (in thousands):

	Three Months Ended March 31, 2023
Operating lease cost	$ 3,665
Variable lease cost	—
Total lease cost	$ 3,665

Supplemental information related to operating leases was as follows:

Other information	Three Months Ended March 31, 2023
Operating cash flows used for operating leases (in thousands)	$ 2,282
Weighted average remaining lease term	2.7 years
Weighted average discount rate	7.95%

Future payments due under operating leases as of March 31, 2023 were as follows (in thousands):

Maturity of Lease Liability	**As of March 31, 2023**
2023 (excluding the three-months ended March 31, 2023)	6,627
2024	5,741
2025	5,396
Thereafter	—
Total lease payments	$ 17,764
Less: imputed interest	(1,539)
Present value of operating lease liabilities	$ 16,225

IDB Lease

On March 16, 2022, the Company and IDB 17-19 Drydock Limited Partnership, as landlord (Landlord), entered into a lease agreement (IDB Lease) with respect to approximately 81,229 square feet of office and laboratory space (Premises) in Boston, Massachusetts, which, when available for occupancy, will become the Company's new consolidated headquarters location and supplement its existing space in Massachusetts.

The term of the IDB Lease commences the date upon which the Landlord tenders possession of the Premises to the Company following the Landlord's substantial completion of the initial build-out of the Premises (Commencement Date) and shall continue for a period of approximately 10 years, unless earlier terminated in accordance with the terms of the IDB Lease. The Company has (i) the option to extend the IDB Lease for an additional period of five (5) years, and (ii) a

right of first offer on adjacent space to the Premises, subject to the terms and conditions of the IDB Lease. As these options are not reasonably certain of occurring, they will not be included in the initial calculation of the Company's right-of-use asset upon lease commencement.

The initial fixed rental rate is $0.5 million per month, which is for a 12 month period during which the base rent is payable for 65,000 square feet, and will increase 3% per annum thereafter for the entire 81,229 square feet leased. Base rent becomes due upon the earlier of (i) the Company's occupancy of the Premises for use in its regular operations, or (ii) 10 months following the Commencement Date, provided that in the event the Landlord's build-out of the Premises is not complete on such date, base rent becomes due upon substantial completion of such build-out. Under the terms of the IDB Lease, the Landlord will provide an allowance in an amount not to exceed $19.5 million (calculated at a rate of $240.00 per rentable square foot of the Premises) toward the cost of completing tenant improvements for the Premises. In addition, the Company has the right to require the Landlord to provide an additional contribution in an amount not to exceed $1.6 million (calculated at a rate of $20.00 per rentable square foot of the Premises) toward the cost of tenant improvements to the Premises, which amount shall be repaid by the Company in an amount of equal monthly payments of principal and interest as would be necessary to repay a loan in the full amount of the additional contribution used by the Company, subject to an 8% annual interest charge, on a level direct reduction basis over a 120 month period. The Company will be required to pay its share of operating expenses, taxes and any other expenses payable under the IDB Lease. In connection with the execution of the IDB Lease, the Company executed a cash-collateralized letter of credit, which may be reduced in the future subject to reduction requirements specified in the IDB Lease therein. The cash collateralizing the letter of credit is classified as restricted cash on the Company's condensed consolidated balance sheets.

The Company concluded that the improvements resulting from both the Landlord's build-out and the tenant improvements are the Landlord's assets for accounting purposes. Costs incurred by the Company related to the tenant improvements up to the Landlord's allowance are pass-through costs and will be reimbursed. Costs incurred by the Company related to the tenant improvements in excess of the Landlord's allowance will be treated as prepaid rent and will increase the right-of-use asset upon occurrence of the accounting commencement date. As of March 31, 2023, the Company had incurred $21.2 million of refundable pass-through costs, of which $14.4 million was reimbursed by the Landlord as of March 31, 2023, and $13.3 million of prepaid rent amounts. Net pass-through cost associated with the IDB Lease are included in other current assets as the Company expects to receive the remaining reimbursement for such costs in the next 12 months. Prepaid rent amounts associated with the IDB Lease are included in other non-current assets. The accounting commencement date occurred in April 2023 when both the Landlord's build-out and the tenant improvements were substantially completed. As the accounting commencement date had not occurred as of March 31, 2023, the IDB Lease is excluded from the table above.

IDB Sublease

In December 2022, the Company entered into a sublease agreement to sublease a portion of the office and laboratory space leased under the IDB Lease to a third-party (subtenant). The sublease term is 3 years and the subtenant has an option to extend the lease term for 6 months. The initial fixed rental rate is approximately $0.2 million per month, and will increase 3% per annum thereafter. The sublessee is obligated to pay its ratable portion of operating expenses during the sublease term. The Company received a letter of credit of $0.5 million in place of a security deposit. As of March 31, 2023, no amounts have been drawn on the letter of credit. The sublease accounting commencement date occurred in April 2023 and therefore no sublease income was recorded during the three months ended March 31, 2023 and no amounts were owed from the subtenant as of March 31, 2023.

13. Collaboration and License Agreements

Vertex Agreement - Overview

In February 2023,the Company and Vertex closed the Vertex Agreement pursuant to which the Company granted Vertex an exclusive worldwide license to research, develop, manufacture and commercialize ENTR-701, the Company's intracellular Endosomal Escape Vehicle (EEV)-based therapeutic candidate for the treatment of myotonic dystrophy type 1 (DM1), as well as any additional EEV-based therapeutic candidates that may be identified by the Company for the potential treatment of DM1 in the course of the parties' global research collaboration.

The Vertex Agreement provides for a four-year global research collaboration under which Entrada will continue to perform pre-clinical development of the Company's partnered candidate ENTR-701 pursuant to the mutually agreed-upon research plan (Research Plan). The Research Plan is overseen by a Joint Research Committee (JRC) as detailed in the

Vertex Agreement. Pursuant to the terms of the Vertex Agreement, the JRC may amend the research plan to include additional DM1-related research activities with a goal of identifying other EEV-based therapeutic product candidates for the potential treatment of DM1. Vertex is obligated to reimburse the Company's research expenses incurred in performing activities under the research plan.

Pursuant to the Vertex Agreement, the Company received an upfront payment of $223.7 million, and Vertex made an equity investment of $26.3 million by purchasing 1,618,613 shares of the Company's common stock, pursuant to a separate but simultaneously executed stock purchase agreement. The Company will be eligible to receive up to $485.0 million upon the achievement of certain research, development, regulatory and commercial milestones. The Company will also receive tiered royalties, from the mid to high single digits based on potential future net sales of licensed products as set forth in the Vertex Agreement.

The term of the Vertex Agreement will expire in its entirety upon expiration of the royalty term as set forth in the Vertex Agreement. Vertex may terminate the Vertex Agreement for convenience by providing adequate written notice to the Company. The Company may terminate the Vertex Agreement under certain specified circumstances, including in the event Vertex or any of its affiliates or sublicensees challenges directly or indirectly in a legal or administrative proceeding the patentability, enforceability, or validity of any licensed patent as set forth in the Vertex Agreement. Either party may terminate the Vertex Agreement for an uncured material breach by the other party or upon the bankruptcy or insolvency of the other party. Neither party may assign the agreement without the prior written consent of the other party, except that a party may assign its rights and obligations to an affiliate or third party that acquires all or substantially all of the business or assets to which the Vertex Agreement relates and agrees in writing to be bound by the terms of the Vertex Agreement.

Vertex Agreement - Accounting Analysis

The Company determined that the Vertex Agreement should be accounted for in accordance with ASC 606 as Vertex was deemed to be a customer. The Company assessed the promised goods and services under the Vertex Agreement in accordance with ASC 606. At inception, the Vertex Agreement included one performance obligation which was the combination of the exclusive license and the performance of the research activities for ENTR-701 (the Research Services). The Company concluded that the license is not distinct from the research and development services for ENTR-701 during the research collaboration as Vertex cannot fully exploit the value of the license without receipt of such services. The Company also determined that Vertex's ability to engage Entrada to perform work on additional EEV-based therapeutic candidates for the potential treatment of DM1 through the JRC represented customer options. The Company concluded that these customer options do not represent a material right as these services will be reimbursed by Vertex at a price that represents standalone selling price for such services. These customer options will be accounted for as separate contracts for accounting purposes upon Vertex's election.

At the commencement of the arrangement, the Vertex Agreement has a fixed transaction price of $232.0 million, primarily consisting of the $223.7 million upfront fee plus a premium of $6.9 million related to the 1,618,613 shares sold to Vertex under the Stock Purchase Agreement when measured at fair value on the date of issuance. To determine the fair value of the common stock issued to Vertex, the Company utilized the fair value of the Company's common stock as of the effective date of the Vertex Agreement and applied a discount for lack of marketability. The Company is also entitled to reimbursement of costs incurred associated with the delivery of services under the Research Plan. The Company utilized the most likely amount approach to estimate the expected cost reimbursement. The Company concluded that these amounts do not require a constraint and are included in the transaction price at inception. The Company considers this estimate at each reporting date and updates the estimate based on information available. Additional consideration to be paid to the Company upon reaching certain milestones are excluded from the transaction price as they are fully constrained as the Company concluded that they are not probable of being achieved as of March 31, 2023. The Company re-evaluates the probability of achievement of development milestones and any related constraint at each period end, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect collaboration revenue in the period of adjustment.

The transaction price is fully allocated to the one performance obligation. The Company recognizes revenue associated with the performance obligation as the research and development services are provided using an input method, according to the costs incurred as related to the research services and the costs expected to be incurred in the future to satisfy the performance obligation in accordance with the Research Plan. The transfer of control occurs over this time period and, in management's judgment, is the best measure of progress towards satisfying the performance obligation. As the Company progresses towards satisfaction of performance obligations under the Vertex Agreement, the estimated costs associated with the remaining effort required to complete the performance obligation in accordance with the research plan

may change, which may materially impact revenue recognition. The Company regularly evaluates and, when necessary, updates the costs associated with the remaining effort pursuant to the performance obligation under the Vertex Agreement.

The amounts received that have not yet been recognized as revenue are deferred on the Company's consolidated balance sheet and will be recognized over the remaining research and development period until the performance obligation is satisfied. The performance obligation has not been fully satisfied as of March 31, 2023.

During the three months ended March 31, 2023, the Company recognized $25.3 million in revenue under the Vertex Agreement including $4.9 million in cost reimbursements and $20.4 million from amounts that were recorded in deferred revenue at inception of the agreement. The aggregate amount of the transaction price allocated to the Company's unsatisfied performance obligation and recorded in deferred revenue at March 31, 2023 is $211.6 million. The Company will recognize the deferred revenue related to the research and development services based on a cost input method, over the remaining term of the research plan.

14. Net Loss per Share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2023	2022
Numerator:		
Net loss attributable to common stockholders	$ (6,674)	$ (21,671)
Denominator:		
Weighted-average common shares outstanding, basic and diluted	32,374,299	31,246,916
Net loss per share attributable to common stockholders, basic and diluted	$ (0.21)	$ (0.69)

The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	Three Months Ended March 31,	
	2023	2022
Unvested restricted common stock	671,308	297,754
Unvested shares from early exercises	43,588	96,532
Stock options to purchase common stock	5,349,166	4,412,667
	6,064,062	4,806,953

15. Subsequent Events

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the condensed consolidated financial statements to provide additional evidence for certain estimates or to identify matters that require additional disclosure. The Company has concluded that no subsequent events have occurred that require disclosure.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q (Quarterly Report) and the audited financial information and the notes thereto included in our Annual Report on Form 10-K, which was filed with the Securities and Exchange Commission (the SEC) on March 6, 2023 (Annual Report). Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Cautionary Note Regarding Forward-Looking Statements" and *"Risk Factors" section of this Quarterly Report, our actual results could differ materially from the results described in, or implied by, the forward-looking statements contained in the following discussion and analysis. You should carefully read the "Cautionary Note Regarding Forward-Looking Statements"* and *"Risk Factors" sections of this Quarterly Report to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements contained in the following discussion and analysis.*

Overview

We are a biotechnology company that aims to transform the lives of patients by establishing Endosomal Escape Vehicle (EEV) therapeutics as a new class of medicines and become the world's foremost intracellular therapeutics company. Through our proprietary, highly versatile and modular EEV platform (EEV Platform), we are building a robust development portfolio of EEV therapeutic candidates designed to enable the efficient intracellular delivery of therapeutics in various organs and tissues with an improved therapeutic index. We have initially focused on the development of EEV therapeutics for rare neuromuscular diseases, including Duchenne muscular dystrophy (DMD) and myotonic dystrophy type 1 (DM1). In our neuromuscular disease programs, we link EEVs to small strands of nucleic acids called oligonucleotides, including phosphorodiamidate morpholino oligomers (PMOs).

Our most advanced therapeutic candidate, ENTR-601-44, is being developed for patients with DMD that are exon 44 skipping amenable. On December 19, 2022, we announced that we received a clinical hold notice from the U.S. Food and Drug Administration (FDA) regarding the Investigational New Drug (IND) application for ENTR-601-44. The FDA has requested that we gather and submit additional information regarding ENTR-601-44 and we are actively working to resolve the clinical hold in the United States as quickly as possible. Should we be delayed in submitting a response to the clinical hold in the United States or our response is not satisfactory to the FDA, the clinical hold may not be lifted on a timely basis, or at all. In addition, given the extraordinary unmet need, we are exploring a range of options globally with the goal of initiating a healthy volunteer trial in 2023. However, if our efforts in the United States and elsewhere are not successful, we may not be able to initiate our healthy volunteer clinical trial for ENTR-601-44 as planned, or at all.

On January 9, 2023, we announced the selection of a second clinical candidate within our Duchenne franchise, ENTR-601-45 for the potential treatment of people living with Duchenne muscular dystrophy who are Exon 45 skipping amenable. We plan to submit an IND application for ENTR-601-45 in the fourth quarter of 2024.

We have also entered into a Strategic Collaboration and License Agreement (the Vertex Agreement) with Vertex Pharmaceuticals Incorporated ("Vertex") pursuant to which we granted Vertex an exclusive worldwide license to research, develop, manufacture and commercialize ENTR-701, our intracellular EEV-based therapeutic candidate for the treatment of myotonic dystrophy type 1 ("DM1") that targets expanded CUG repeats in DM1 protein kinase (DMPK) mRNA transcripts, as well as any additional EEV-based therapeutic candidates that may be identified by the Company for the potential treatment of DM1 in the course of the parties' global research collaboration. The Vertex Agreement provides for a four-year global research collaboration under which Vertex will fund our continued pre-clinical development of ENTR-701, as well as the option to fund additional DM1-related research activities with a goal of identifying other EEV-based therapeutic product candidates for the potential treatment of DM1. Other than our efforts under this research collaboration, Vertex will be responsible for global development, manufacturing and commercialization of the licensed products.

On February 8, 2023, following the expiration of the waiting period and clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, Entrada and Vertex closed the Vertex Agreement. Under the terms of the Vertex Agreement, Entrada received $250.0 million from the Vertex agreement comprised of an upfront payment of $223.7 million and an equity investment of $26.3 million in our common stock at $16.26 per share.

Since our inception, we have devoted substantially all our resources to research and development efforts relating to our EEV Platform, advancing development of our portfolio of programs and general and administrative support for these operations, including raising capital. Since our inception, we have raised over $650.0 million of gross proceeds from sales of stock to leading biotechnology investors and from the Vertex Agreement.

We have incurred losses since our inception. Our net losses were $6.7 million and $21.7 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, we had an accumulated deficit of $195.0 million. We expect to continue to generate operating losses and negative operating cash flows for the foreseeable future as we advance our platform and EEV therapeutic candidates into later stages of preclinical development and, if successful, clinical development. We will not generate any revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for one or more therapeutic candidates, if ever. If we obtain regulatory approval for any therapeutic candidates, we expect to incur significant expenses related to developing our internal commercialization capability to support product sales, marketing and distribution.

Furthermore, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company. As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy, as we advance therapeutic candidates through preclinical and, if successful, into clinical development, seek regulatory approval, prepare for and, if any therapeutic candidates are approved, proceed to commercialization and operate as a public company. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through the sale of equity, debt financings or other capital sources, including potential collaborations with other companies or other strategic transactions.

If we are unable to obtain funding, we will be forced to delay, reduce, or eliminate some or all of our research and development programs, product portfolio expansion and ultimate commercialization efforts, which would adversely affect our business prospects, or we may be unable to continue operations. Although we continue to pursue these plans, we may not be successful in obtaining sufficient funding on terms acceptable to us to fund continuing operations, if at all.

Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we can generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

As of March 31, 2023, we had cash, cash equivalents and marketable securities of $411.6 million. We believe that our cash, cash equivalents and marketable securities as of March 31, 2023, together with ongoing research support and the anticipated achievement of certain milestones under the Vertex Agreement will be sufficient to extend our cash runway into the second half of 2025, supporting the Company's expansion and continued development of EEV therapeutic candidates targeting Duchenne muscular dystrophy and advance EEV-therapeutic candidates in indications beyond neuromuscular disease. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources.” To finance our operations beyond that point we will need to raise additional capital, which cannot be assured.

Components of Our Results of Operations

***Rev*enue**

All of our revenue to date has been derived from the Vertex Agreement. For the foreseeable future, we may generate revenue from research services performed and milestones achieved under the Vertex Agreement. We do not expect to generate any revenue from the sale of products unless and until such time that our product candidates have advanced through clinical development and regulatory approval, if ever. If our development efforts for our therapeutic candidates are successful and result in regulatory approval or we successfully enter into collaboration or license arrangements with third parties, we may generate revenue in the future from product sales, payments from collaboration or license arrangements including those that we may enter into with third parties, or any combination thereof.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts, and the development of our programs. These expenses include:

- personnel-related expenses, including salaries, related benefits, and stock-based compensation expense for individuals engaged in research and development functions;
- expenses incurred in connection with the discovery and preclinical development of our therapeutic candidates and research programs, including under agreements with third parties, such as consultants, contractors, and CROs;
- the cost of developing and validating our manufacturing process for use in our preclinical studies and potential future clinical trials, including the cost of raw materials used in our research and development activities, and engaging with third party CMOs;
- costs incurred in connection with the performance of research and development activities under the Vertex Agreement;
- the cost of laboratory supplies and research materials;
- the costs of payments made under third-party licensing agreements and related future payments should certain development and regulatory milestones be achieved; and
- facilities, depreciation and other direct and allocated expenses, including rent and other operating costs, incurred as a result of our research and development activities.

We expense research and development costs as incurred. Non-refundable advance payments that we make for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed, or when it is no longer expected that the goods will be delivered or the services rendered. Upfront payments under license agreements are expensed upon receipt of the license and annual maintenance fees under license agreements are expensed in the period in which they are incurred. Milestone payments under license agreements are accrued, with a corresponding expense being recognized, in the period in which the milestone is determined to be probable of achievement and the related amount is reasonably estimable.

As a preclinical-stage company in the early phases of development, our research and development costs are primarily devoted to proof-of-concept studies and our overall EEV Platform that underpins our therapeutic candidates. Our direct, external research and development expenses consist primarily of fees paid to outside consultants, CROs, CMOs and research laboratories in connection with our process development, manufacturing and clinical development activities. Our direct external research and development expenses also include fees incurred under license and intellectual property purchase agreements. We expect to track these external research and development costs on a program-by-program basis as we identify specific programs and product candidates to advance into clinical development.

We do not allocate employee costs, costs associated with our development efforts and facilities, including depreciation or other indirect costs, to specific programs because these costs are deployed across multiple programs and, as such, are not separately classified. We use internal resources and third-party consultants primarily to conduct our research and development activities as well as for managing our process development, manufacturing and clinical development activities.

Therapeutic candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will increase substantially in connection with our platform development efforts and planned preclinical and clinical development activities in the near term and in the future. We expect that the research and development expenses of our programs will increase in the near term as we initiate investigational new drug (IND)-enabling activities for our therapeutic candidates and prepare to initiate our first clinical trial. Therefore, we cannot reasonably estimate or know the nature, timing, and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of our therapeutic candidates. The successful development of our therapeutic candidates is

highly uncertain. This is due to the numerous risks and uncertainties associated with product development, including the following:

- the scope, timing, rate of progress and expenses of our ongoing and potential future research activities, including preclinical and IND-enabling studies, clinical trials and other research and development activities we decide to pursue;
- the successful initiation, enrollment and completion of clinical trials under current good clinical practices;
- the timing of filing and acceptance of INDs or comparable foreign applications that allow commencement of future clinical trials for our therapeutic candidates;
- the timing and likelihood of resolution of the clinical hold on our IND application for ENTR-601-44 as well as the initiation of a clinical trial either within or outside of the United States;
- whether our therapeutic candidates show safety and efficacy in our clinical trials and an acceptable risk-benefit profile in the intended populations;
- our ability to hire and retain key research and development personnel;
- our ability to successfully develop, obtain regulatory and marketing approvals of our therapeutic candidates for the expected indications and patient populations;
- our ability to establish and maintain agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our therapeutic candidates are approved;
- commercializing therapeutic candidates, if and when approved, whether alone or in collaboration with others;
- our ability to maintain a continued acceptable safety, tolerability and efficacy profile of our therapeutic candidates following approval;
- our ability to establish new licensing or collaboration arrangements to support our potential therapeutic candidates on favorable business terms;
- any decisions we make to discontinue, delay or modify our programs to focus on others;
- obtaining, maintaining, protecting and enforcing patent and trade secret protection and regulatory exclusivity for our therapeutic candidates;
- obtaining and maintaining adequate coverage and reimbursement from third party payors; and
- the effects of worldwide pandemics, such as COVID-19.

A change in the outcome of any of these variables with respect to the development of any of our therapeutic candidates could significantly change the costs and timing associated with the development of that therapeutic candidate. We may never succeed in obtaining regulatory approval for any of our therapeutic candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and personnel-related costs, including stock-based compensation, for our personnel in executive, legal, finance and accounting, corporate and business development, human resources and other administrative functions. General and administrative expenses also include: legal fees relating to intellectual property and corporate matters; professional fees paid for accounting, auditing, consulting and tax services; insurance costs; travel expenses; information technology expenses; and facility costs not otherwise included in research and development expenses.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount and expand our facilities to support our continued research activities and development of our programs and EEV Platform. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance, director and officer insurance and investor and public relations expenses associated with operating as a public company.

Interest and Other Income (Expense), net

Interest and other income (expense), net consists primarily of interest earned on our invested cash equivalents and marketable securities, gains and losses on disposal of fixed assets and gains and losses on foreign currency transactions.

Income Taxes

Provision for income tax expense recorded in any interim period is based on the estimated effective tax rate for the fiscal year for those tax jurisdictions that can be reliably estimated. Our calculation of the estimated effective tax rate requires us to estimate pre-tax income by tax jurisdiction as well as total tax expense for the fiscal year. Accordingly, the annual estimated effective tax rate is subject to adjustment if there are changes to the initial estimates of total tax expense or pre-tax income.

As part of the Tax Cuts and Jobs Act of 2017, beginning with the 2022 tax year, we are required to capitalize research and development expenses, as defined under Internal Revenue Code section 174. For expenses that are incurred for research and development in the U.S., the amounts will be amortized over 5 years, and expenses that are incurred for research and experimentation outside the United States will be amortized over 15 years. See Note 10, *Income Taxes,* for further discussion of our tax provision for the three months ended March 31, 2023.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of our financial statements and related disclosures requires us to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses and the disclosure of contingent assets and liabilities in our financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

There have been no material changes to our critical accounting policies and estimates from those reported in our Annual Report, except as described further in Note 2 *Summary of Significant Accounting Policies* in the condensed consolidated financial statements elsewhere in this Quarterly Report, which discusses a new policy regarding revenue recognition.

Results of Operations

Comparison of the three months ended March 31, 2023 and 2022

	Three Months Ended March 31,		
(in thousands)	**2023**	**2022**	**Change**
Collaboration revenue	$ 25,260	$ —	$ 25,260
Operating expenses:			
Research and development	23,102	15,718	7,384
General and administrative	7,938	6,433	1,505
Total operating expenses	31,040	22,151	8,889
Loss from operations	(5,780)	(22,151)	16,371
Other income:			
Interest and other income, net	2,657	480	2,177
Total other income, net	2,657	480	2,177
Loss before provision for income taxes	$ (3,123)	$ (21,671)	$ 18,548
Provision for income taxes	$ (3,551)	$ —	$ (3,551)
Net loss	$ (6,674)	$ (21,671)	$ 14,997

Collaboration Revenue

Collaboration revenue was $25.3 million for the three months ended March 31, 2023, all of which related to research services performed under the Vertex Agreement. We did not record any revenue for the three months ended March 31, 2022.

Research and Development Expenses

(in thousands)	Three Months Ended March 31, 2023	2022	Change
External research and development expenses:			
ENTR-601-44	$ 1,963	$ 3,128	$ (1,165)
Vertex agreement programs	4,015	3,484	531
ENTR-601-45	941	34	907
Other preclinical and discovery programs	811	853	(42)
Other unallocated	2,729	28	2,701
Total external costs	10,459	7,527	2,932
Internal costs, including personnel related	12,643	8,191	4,452
Total research and development expenses	$ 23,102	$ 15,718	$ 7,384

Research and development expenses were $23.1 million for the three months ended March 31, 2023, compared to $15.7 million for the three months ended March 31, 2022. The increase of $7.4 million in research and development expenses was primarily attributable to:

- an increase of $4.5 million in internal costs driven by increased headcount in our research and development function, inclusive of stock-based compensation expense of $1.3 million and $0.7 million for the three months ended March 31, 2023 and 2022, respectively, and increased facilities costs to support our expanding operations.
- an increase of $2.9 million in external costs primarily driven by the OSIF license fee and higher costs incurred as we advance our internal preclinical activities and perform research services for the programs under the Vertex Agreement.

We expect that our research and development expenses will continue to increase as we continue our current research and development activities, initiate new research programs, continue our preclinical development of therapeutic candidates and progress ENTR-601-44, ENTR-601-45, and our partnered candidate, ENTR-701, and future product candidates, into clinical trials.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2023 were $7.9 million, compared to $6.4 million for the three months ended March 31, 2022. The increase of $1.5 million was primarily attributable to the following:

- a $0.7 million increase in personnel costs, primarily a result of the increase in headcount in our general and administrative function, inclusive of stock-based compensation expense of $1.5 million and $1.1 million for the three months ended March 31, 2023 and 2022, respectively;
- a $0.4 million increase in professional services costs, primarily attributable to legal and outside consulting services to support our continued research and development activities;
- a $0.3 million increase in facility and equipment-related expenses.

Interest and Other Income, net

Total interest and other income, net was $2.7 million for the three months ended March 31, 2023, compared to $0.5 million of interest and other income for the three months ended March 31, 2022; this increase is primarily driven by higher interest rates and larger investments in debt securities.

Provision for Income Taxes

The Company recorded an income tax expense of $3.6 million for the three months ended March 31, 2023. In the three months ended March 31, 2023, the income tax expense recorded was driven largely by the projected current tax liability associated with the tax recognition of the Vertex Agreement upfront payment received in 2023. The Company reported no income tax provision for the three months ended March 31, 2022.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception in 2016, we have incurred significant operating losses. Our net losses were $6.7 million and $21.7 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023 and December 31, 2022, we had an accumulated deficit of $195.0 million and $188.3 million, respectively. We expect to incur significant expenses and operating losses for the foreseeable future as we further our platform development and advance the preclinical and, if successful, the clinical development of our programs. Since our inception, we have raised over $650 million of gross proceeds from sales of stock to leading biotechnology investors and from the Vertex Agreement. As of March 31, 2023, we had cash, cash equivalents and marketable securities of $411.6 million.

Cash Flows

The following table summarizes our cash flows for each of the periods presented:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Net cash provided by / (used in) operating activities	$ 203,399	$ (20,991)
Net cash used in investing activities	(40,444)	(181,533)
Net cash provided by financing activities	19,536	50
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 182,491	$ (202,474)

Operating Activities

For the three months ended March 31, 2023, net cash provided by operating activities was $203.4 million driven by our net loss of $6.7 million, a net decrease in our working capital of $207.0 million primarily resulting from the upfront payment received in connection with the Vertex Agreement, and adjustments for non-cash expenses relating to stock-based compensation expense of $2.8 million, depreciation expense of $0.5 million, and amortization of premiums and discounts on marketable securities of $0.2 million.

For the three months ended March 31, 2022, net cash used in operating activities was $21.0 million, consisting of our net loss of $21.7 million, a net increase in our working capital of $1.7 million, and adjustments for non-cash expenses relating to stock-based compensation expense of $1.8 million, depreciation expense of $0.4 million, and amortization of premiums and discounts on marketable securities of $0.2 million.

Investing Activities

Net cash used in investing activities was $40.4 million for the three months ended March 31, 2023, consisting primarily of $101.8 million in purchases of marketable securities, partially offset by $63.0 million from the maturities of marketable securities, and $1.6 million of purchases of property and equipment.

Net cash used in investing activities was $181.5 million for the three months ended March 31, 2022, consisting primarily of $182.6 million in purchases of marketable securities, partially offset by $1.7 million from the maturities of marketable securities, and $0.6 million from our purchases of property and equipment.

Financing Activities

Net cash provided by financing activities was $19.5 million for the three months ended March 31, 2023, consisting of $19.4 million in net proceeds from the issuance of 1,618,613 shares in connection with the Vertex Agreement and $0.1 million in proceeds from stock option exercises.

Net cash provided by financing activities was $0.1 million for the three months ended March 31, 2022, consisting of $0.1 million of stock option exercises.

Future Funding Requirements

We expect to incur significant expenses and operating losses for the foreseeable future as we advance the preclinical and, if successful, the clinical development of our programs. In addition, we expect to incur additional costs associated with operating as a public company. Our operating expenses and future funding requirements are expected to increase substantially as we continue to advance our portfolio of programs. We believe that our cash, cash equivalents and marketable securities as of March 31, 2023, together with ongoing research support and the anticipated achievement of certain milestones under the Vertex Agreement will be sufficient to extend our cash runway into the second half of 2025, supporting the Company's expansion and continued development of EEV therapeutic candidates targeting Duchenne muscular dystrophy and advance EEV-therapeutic candidates in indications beyond neuromuscular disease. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect.

Because of the numerous risks and uncertainties associated with research, development, and commercialization of our candidates, we are unable to estimate the exact amount of our working capital requirements. Our future capital requirements will depend on many factors, including costs associated with:

- the continuation of our current research programs and our preclinical development of therapeutic candidates from our current research programs;
- the timing and likelihood of resolution of the clinical hold on our IND application for ENTR-601-44 as well as the initiation of a clinical trial either within or outside of the United States;
- seeking to identify additional research programs and additional therapeutic candidates;
- advancing our existing and future therapeutic candidates into clinical development;
- initiating preclinical studies and clinical trials for any therapeutic candidates we identify and develop or expand development of existing programs into additional indications;
- maintaining, expanding, enforcing, defending and protecting our intellectual property portfolio and providing reimbursement of third-party expenses related to our patent portfolio;
- timing of manufacturing for our therapeutic candidates and commercial manufacturing if any therapeutic candidate is approved;
- establishing and maintaining clinical and commercial supply for the development and manufacture of our therapeutic candidates;
- seeking regulatory and marketing approvals for any of our therapeutic candidates that we develop, if any;
- seeking to identify, establish and maintain additional collaborations and license agreements, and the success of those collaborations and license agreements;
- ultimately establishing a sales, marketing and distribution infrastructure to commercialize any platforms for which we may obtain marketing approval, either by ourselves or in collaboration with others;
- generating revenue from commercial sales of therapeutic candidates we may develop for which we receive marketing approval;
- hiring additional personnel, including research and development, clinical and commercial personnel;
- adding operational, financial and management information systems and personnel, including personnel to support our product development;
- achieving sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;

- acquiring or in-licensing products, intellectual property, and technologies; and
- the ongoing costs of operating as a public company and recent increases in inflationary rates.

Until such time, if ever, as we can generate substantial product revenue to support our cost structure, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise funds through collaborations or other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or therapeutic candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. If we are unable to raise additional funds 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 our therapeutic candidates even if we would otherwise prefer to develop and market such therapeutic candidates ourselves.

Contractual Obligations and Commitments

Lease Commitments

During the three months ended March 31, 2023, there were no material changes to our lease commitments from those described in Note 11, *Leases,* of our financial statements in our Annual Report, with the exceptions of the amendment of our lease agreement for office space at 6 Tide Street. For additional information regarding our leased facilities, refer to Note 12, *Leases,* to our condensed consolidated financial statements in this Quarterly Report.

Purchase and Other Obligations

We enter into contracts in the normal course of business with CROs, third-party manufacturers, and other third parties for preclinical research studies and testing and manufacturing services. These contracts do not contain minimum purchase commitments and are cancellable by us upon prior written notice. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including non-cancelable obligations of our service providers, up to the date of cancellation.

We have also entered into license agreements under which we are obligated to make certain payments. During the three months ended March 31, 2023, there were no material changes to our commitments and consistencies related to our license agreements from those described in "Business—Intellectual property— License agreement with The Ohio State University" and Note 10, *Commitments and Contingencies,* to our financial statements in our Annual Report, with the exception of the sublicense fee that we became obligated to pay OSIF upon entering into the Sublicense Agreement with Vertex. For additional information regarding our license agreements, refer to Note 11, *Commitments and Contingencies,* to our condensed consolidated financial statements in this Quarterly Report.

Emerging Growth Company and Smaller Reporting Company Status

We are an "emerging growth company," (EGC), under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). Section 107 of the JOBS Act provides that an EGC can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended (the Securities Act), for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of delayed adoption of new or revised accounting standards and, therefore, we will be subject to the same requirements to adopt new or revised accounting standards as private entities.

As an EGC, we may, and intend to, take advantage of certain exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an EGC:

- we may present only two years of audited financial statements and only two years of related Management's Discussion and Analysis of Financial Condition and Results of Operations;
- we may avail ourselves of the exemption from providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended (the Sarbanes-Oxley Act);
- we may avail ourselves of the exemption from complying with any requirement that may be adopted by the Public Company Accounting Oversight Board (PCAOB) regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis;
- we may provide reduced disclosure about our executive compensation arrangements; and
- we may not require nonbinding advisory votes on executive compensation or stockholder approval of any golden parachute payments.

We will remain an EGC until the earliest to occur of (i) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering (IPO), (ii) the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more, (iii) the date on which we have issued more than $1.0 billion in non-convertible debt during the previous rolling three-year period or (iv) the date on which we are deemed to be a large accelerated filer under the Securities Exchange Act of 1934, as amended (the Exchange Act).

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Recently Issued Accounting Pronouncements

See Note 2 *Summary of Significant Accounting Policies* to our condensed consolidated financial statements included elsewhere in this Quarterly Report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and are not required to provide the information required under this item.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer (our principal executive officer and principal financial and accounting officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2023. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's (the SEC) rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

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. Based on the evaluation of our disclosure controls and procedures as of March 31, 2023, our Chief Executive Officer and our Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended March 31, 2023 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

From time to time, we may become involved in litigation or other legal proceedings arising in the ordinary course of our business. While the outcome of any such proceedings cannot be predicted with certainty, as of March 31, 2023, we were not a party to any litigation or legal proceedings that, in the opinion of our management, are probable to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on our business, financial condition, results of operations and prospects because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. Risk Factors

In evaluating the Company and our business, careful consideration should be given to the following risk factors, in addition to the other information set forth in this Quarterly Report on Form 10-K (Quarterly Report) and in other documents that we file with the Securities and Exchange Commission (SEC). Investing in our common stock involves a high degree of risk. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline and you could lose part or all of your investment. Unless otherwise indicated, reference in this section and elsewhere in this Quarterly Report to our business being adversely affected, negatively impacted or harmed will include an adverse effect on, or a negative impact or harm to, the business, reputation, financial condition, results of operations, revenue and our future prospects. The material and other risks and uncertainties summarized above and described below are not intended to be exhaustive and are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. This Quarterly Report also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below. See the section titled "Cautionary Note Regarding Forward-Looking Statements."

Risks Related to Our Limited Operating History, Financial Position and Capital Requirements

We have a limited operating history, have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We may never generate any revenue from product sales or become profitable or, if we achieve profitability, we may not be able to sustain it.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are a preclinical-stage biopharmaceutical company with a limited operating history upon which our stockholders can evaluate our business and prospects. All of our development programs, including our lead therapeutic candidates, ENTR-601-44, ENTR-601-45 and our partnered candidate ENTR-701, are in preclinical development or in the drug discovery stage. We commenced operations in 2016, and to date, we have focused primarily on organizing and staffing our company, business planning, raising capital, developing our proprietary, highly versatile and modular Endosomal Escape Vehicle (EEV) platform (EEV Platform), identifying EEV therapeutic candidates, establishing our intellectual property portfolio and conducting research and preclinical studies. Our approach to the discovery and development of therapeutic candidates based on our EEV Platform is unproven, and we do not know whether we will be able to conduct clinical studies on our therapeutic candidates, develop any therapeutic candidates that succeed in clinical development or produce products of commercial value. As an organization, we have not yet initiated or completed any clinical trials, obtained regulatory approvals, manufactured a clinical- or commercial-scale product, or arranged for a third party to do so on our behalf, or conducted sales and marketing activities necessary for successful product commercialization. Consequently, any predictions made about our future success or viability may not be as accurate as they could be if we had a history of successfully developing and commercializing biopharmaceutical products.

We have incurred significant operating losses since our inception. We do not have any products approved for sale and have not generated any product revenue since our inception. If our therapeutic candidates are not successfully developed and approved, we may never generate any significant revenue from product sales. Our net losses were $6.7 million and $21.7 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, we had an accumulated deficit of $195.0 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. All of our therapeutic candidates will require substantial additional development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase substantially as we continue our development of, seek regulatory approval for and potentially commercialize any of our therapeutic candidates.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our therapeutic candidates, identifying lead therapeutic candidates, discovering additional therapeutic candidates, conducting preclinical studies prior to submitting an Investigational new Drug (IND) application, obtaining clearance for INDs, obtaining regulatory approval for these therapeutic candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability. In addition, we have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable may have an adverse effect on the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our therapeutic candidates or even continue our operations. A decline in the value of our company could also cause our stockholders to lose all or part of their investment.

Our limited operating history may make it difficult to evaluate our technology and industry and predict our future performance. Though several groups have conducted or are conducting studies involving the intracellular delivery of therapeutic molecules, the relevance of those studies to the evaluation of therapeutic candidates developed using our EEV Platform may be difficult to ascertain. Our short history as an operating company and novel therapeutic approach make any assessment of our future success or viability subject to significant uncertainty. We will encounter risks and difficulties frequently experienced by early-stage companies in rapidly evolving fields. Failure to address these risks successfully will cause our business to suffer. Similarly, we expect that our financial condition and operating results will fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. As a result, our stockholders should not rely upon the results of any quarterly or annual period as an indicator of future operating performance.

In addition, as an early-stage company, we have encountered unforeseen expenses, difficulties, complications, delays and other known and unknown circumstances. As we advance our EEV therapeutic candidates, we will need to transition from a company with a research focus to a company capable of supporting clinical development and if successful, commercial activities. We may not be successful in such a transition.

We will require additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our development programs, commercialization efforts or other operations.

The development of biopharmaceutical therapeutic candidates is capital-intensive. We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct our ongoing and planned preclinical studies of our development programs, initiate clinical trials for our therapeutic candidates and seek regulatory approval for our current therapeutic candidates and any future therapeutic candidates we may develop. If we obtain regulatory approval for any of our therapeutic candidates, we also expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Because the outcome of any preclinical study or clinical trial is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our therapeutic candidates. Furthermore, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. Failing to raise capital when needed or on attractive terms could force us to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

We believe that our cash, cash equivalents and marketable securities as of March 31, 2023, together with ongoing research support and the anticipated achievement of certain milestones under the Vertex Agreement will be sufficient to extend our cash runway into the second half of 2025, supporting the Company's expansion and continued development of EEV therapeutic candidates targeting Duchenne muscular dystrophy and advance EEV-therapeutic candidates in indications beyond neuromuscular disease. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our operating plans and other demands on our cash resources may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other capital sources, including potentially additional collaborations, licenses and other similar arrangements. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our therapeutic candidates. Our future capital requirements will depend on many factors, including, but not limited to:

- the type, number, scope, progress, expansions, results, costs and timing of our preclinical studies and any clinical trials of the therapeutic candidates that we are pursuing or may choose to pursue in the future;
- the clinical development plans we establish for our EEV therapeutic candidates;
- the costs and timing of manufacturing for our therapeutic candidates and commercial manufacturing if any therapeutic candidate is approved;
- the costs of establishing and maintaining clinical and commercial supply for the development and manufacture of our therapeutic candidates;
- the costs, timing and outcome of regulatory review of our therapeutic candidates;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements;
- the costs of obtaining, maintaining and enforcing our patents and other intellectual property rights;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting;
- the costs associated with hiring additional personnel and consultants as our preclinical and clinical activities increase;
- the achievement of milestones or occurrence of other developments that trigger payments under any collaboration agreements, if any;
- the costs and timing of establishing or securing sales and marketing capabilities if any therapeutic candidate is approved;
- subject to receipt of regulatory approval, revenue, if any, received from commercial sales of our therapeutic candidates;
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights, including enforcing and defending intellectual property related claims; and
- the ongoing costs of operating as a public company.

Identifying potential therapeutic candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and commercialize our therapeutic candidates. In addition, our therapeutic candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if at all.

Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements or strategic partnerships with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a basis for valuing these awards change over time, including our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our programs, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current therapeutic candidates and any future therapeutic candidates, which may vary depending on the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA) or other comparable foreign regulatory authority guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional therapeutic candidates and technologies or other assets;
- the timing and outcomes of preclinical studies and clinical trials for ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 and any therapeutic candidates from our discovery programs, or competing therapeutic candidates;
- the need to conduct unanticipated clinical trials or trials that are larger or more complex than anticipated;
- competition from existing and potential future products that compete with ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any of our discovery programs, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or therapeutic candidates from any of our discovery programs;
- the level of demand for any of our therapeutic candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our therapeutic candidates, if approved, and existing and potential future products that compete with ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any of our discovery programs;
- our or our partners' ability to commercialize ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or therapeutic candidates from any of our discovery programs, if approved, inside and outside of the U.S., either independently or working with third parties;
- our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile United States and global economic and political environment.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

Risks Related to the Discovery, Development and Regulatory Approval of Our Therapeutic Candidates

We are early in our development efforts. We have not initiated clinical studies, and as a result it will be years before we commercialize a therapeutic candidate, if ever. If we are unable to identify and advance therapeutic candidates through preclinical studies and clinical trials, obtain marketing approval and ultimately commercialize them, or experience significant delays in doing so, our business will be materially harmed.

We are early in our development efforts and all our development programs, including our lead therapeutic candidates ENTR-601-44, ENTR-601-45 and our partnered candidate ENTR-701, are in the preclinical or drug discovery stage. We have invested substantially all of our research efforts to date in developing our EEV Platform, identifying potential therapeutic candidates and conducting preclinical studies. As an organization, we have never conducted any clinical trials or submitted an application for regulatory approval, and we may be unable to do so for our therapeutic candidates. Our IND for ENTR-601-44 has not yet been allowed to proceed, and we have not completed IND-enabling

studies for our other candidates. We, or our partner as applicable, will need to complete these steps to support the progression of ENTR-601-44, ENTR-601-45 and ENTR-701 into and through clinical studies. In addition, we have a development portfolio of programs that are in earlier stages of development and have not yet initiated or completed IND-enabling studies. We may never advance any therapeutic candidates through IND-enabling studies and receive authorization from the FDA, to proceed under an IND prior to initiating their clinical-stage development. Our ability to generate product revenue, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of our therapeutic candidates, which may never occur. We currently generate no revenue from sales of any product, and we may never be able to develop or commercialize a marketable product.

Commencing clinical trials in the United States is subject to acceptance by the FDA of an IND and finalizing the trial design based on discussions with the FDA and other regulatory authorities. For the FDA to accept an IND, we must complete Good Laboratory Practices (GLP) studies, which may not be successful or may take longer than we expect. The FDA may require us to complete additional preclinical studies or we may be required to satisfy other FDA requests prior to commencing clinical trials, and such requests may not currently be known or anticipated, which may cause the start of our first clinical trials to be delayed or prevent us from conducting clinical trials. For example, the FDA has placed ENTR-601-44 on clinical hold and requested that we gather and submit additional information regarding ENTR-601-44. Even after we receive and incorporate guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence any clinical trial or change their position on the acceptability of our trial design or the clinical endpoints selected, including with respect to ENTR-601-44, which may require us to complete additional preclinical studies or clinical trials, impose stricter approval conditions than we currently expect or may prevent us from conducting clinical trials. There are equivalent processes and risks applicable to clinical trial applications in other countries, including countries in the European Union (EU).

Commercialization of any therapeutic candidates we may develop will require preclinical and clinical development; regulatory and marketing approval in multiple jurisdictions, including by the FDA and the EMA; manufacturing supply, capacity and expertise; a commercial organization; and significant marketing efforts. The success of therapeutic candidates we may identify and develop will depend on many factors, including:

- timely and successful completion of preclinical studies, including toxicology studies, biodistribution studies and minimally efficacious dose studies in animals, where applicable;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- effective INDs or comparable foreign applications that allow commencement of our planned clinical trials or future clinical trials for any therapeutic candidates we may develop;
- successful enrollment and completion of clinical trials, including under the FDA's current Good Clinical Practices, GLPs and any additional regulatory requirements from foreign regulatory authorities;
- positive results from our future clinical trials that support a finding of safety and effectiveness and an acceptable risk-benefit profile in the intended populations;
- receipt of regulatory marketing approvals from applicable regulatory authorities;
- establishment of arrangements with third-party manufacturers for clinical supply and, where applicable, commercial manufacturing capabilities;
- establishment, maintenance, defense and enforcement of patent, trademark, trade secret and other intellectual property protection or regulatory exclusivity for any therapeutic candidates we may develop;
- patient recruitment and enrollment;
- commercial launch of any therapeutic candidates we may develop, if approved, whether alone or in collaboration with others;
- acceptance of the benefits and use of our therapeutic candidates we may develop, including method of administration, if and when approved, by patients, the medical community and third-party payors;
- our ability to compete effectively with other therapies and treatment options;
- maintenance of a continued acceptable safety, tolerability and efficacy profile of any therapeutic candidates we may develop following approval; and
- establishment and maintenance of healthcare coverage and adequate reimbursement by payors.

If we do not succeed in one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize any therapeutic candidates we may develop, which would materially harm our business. If we are unable to advance our therapeutic candidates to clinical development, obtain regulatory

approval and ultimately commercialize our therapeutic candidates, or experience significant delays in doing so, our business will be materially harmed.

The FDA has placed the IND application for ENTR-601-44 for the potential treatment of Duchenne muscular dystrophy on clinical hold. Should we be delayed in submitting a response to the clinical hold in the United States or our response is not satisfactory to the FDA, the clinical hold may not be lifted on a timely basis, or at all.

The FDA has placed the IND application for ENTR-601-44 for the potential treatment of Duchenne muscular dystrophy on clinical hold and requested that we gather and submit additional information regarding ENTR-601-44. We are actively working to resolve the clinical hold in the United States as quickly as possible. Should we be delayed in submitting a response to the clinical hold in the United States or our response is not satisfactory to the FDA, the clinical hold may not be lifted on a timely basis, or at all.

We are exploring a range of options globally with the goal of initiating a healthy volunteer trial in 2023. However, if our efforts in the United States and elsewhere are not successful, we may not be able to initiate our healthy volunteer clinical trial for ENTR-601-44 as planned, or at all.

Our business is highly dependent on the clinical advancement of our programs and modalities and is especially dependent on the success of our lead EEV therapeutic candidate, ENTR-601-44. Delay or failure to advance programs or modalities, including ENTR-601-44 could adversely impact our business.

Using our platform, we are developing product features for medicines based on EEVs. Over time, our platform work led to commonalities, where a specific combination of EEV technologies, delivery technologies, and manufacturing processes generated a set of product features shared by multiple programs, for example, oligonucleotide-conjugated EEVs and antibody-conjugated EEVs. This is what we call a "modality." We are utilizing early programs in a modality, such as ENTR-601-44 for oligonucleotide-conjugated EEVs, to understand the technology risks within the modality, including manufacturing and pharmaceutical properties. Our lead therapeutic candidate, ENTR-601-44, is being developed to address Duchenne muscular dystrophy (DMD) and we are highly dependent on the success of the future clinical trials of ENTR-601-44, the outcomes of which are uncertain, to further develop ENTR-601-45, our lead therapeutic candidate for patients with DMD with exon 45 skipping amenable mutations. Because ENTR-601-44 is our first EEV therapeutic candidate, if ENTR-601-44 encounters safety, efficacy, supply or manufacturing problems, developmental delays, regulatory or commercialization issues or other problems, the value of our EEV Platform, including our other therapeutic candidates such as ENTR-601-45 and our partnered candidate ENTR-701, could be greatly diminished and our development plans and business would be significantly harmed.

Even if our earlier programs in a modality are successful in any phase of development any of such earlier programs may fail at a later phase of development, and other programs within the same modality may still fail at any phase of development including at phases where earlier programs in that modality were successful. This may be a result of technical challenges unique to that program or due to biology risk, which is unique to every program. As we progress our programs through clinical development, there may be new technical challenges that arise that cause an entire modality to fail.

Our EEV therapeutic candidates are based on a novel therapeutic approach, which makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval, if at all.

Using EEV technology to develop therapeutic candidates is a new therapeutic approach and no products based on EEVs have been approved to date in the United States, the United Kingdom or the EU. As such, it is difficult to accurately predict the developmental challenges we may face for our EEV therapeutic candidates as they proceed through development. In addition, because we have not yet commenced any clinical trials with our EEV therapeutic candidates, we have not yet been able to assess safety in humans and there may be short-term or long-term effects from treatment with any therapeutic candidates that we develop that we cannot predict at this time. Also, animal models may not exist for some of the diseases we choose to pursue in our programs. As a result of these factors, it is more difficult for us to predict the time and cost of therapeutic candidate development and we cannot predict whether our EEV Platform, or any similar or competitive intracellular delivery technologies, will enable the identification, development and regulatory approval of any products. There can be no assurance that any development problems we experience in the future related to our EEV Platform or any of our research programs will not cause significant delays or unanticipated costs or that such development problems can be solved. Any of these factors may prevent us from completing our preclinical studies or any clinical trials that we may initiate or commercializing any therapeutic candidates we may develop on a timely or profitable basis, if at all.

The clinical trial requirements of the FDA and other regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a therapeutic candidate vary substantially according to the type, complexity, novelty and intended use and market of the therapeutic candidate. No products based on EEVs have been approved to date by

regulators. As a result, the regulatory approval process for therapeutic candidates such as ours is uncertain and may be more expensive and take longer than the approval process for therapeutic candidates based on other, better known or more extensively studied technologies. For example, the general approach for FDA approval of a new biologic or drug is for sponsors to seek licensure or approval based on dispositive data from well-controlled, Phase 3 clinical trials of the relevant therapeutic candidate in the relevant patient population. Phase 3 clinical trials typically involve hundreds of patients, have significant costs and take years to complete. It is difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for our therapeutic candidates in the U.S., the UK, the EU or other regions of the world or how long it will take to commercialize our therapeutic candidates. Delay or failure to obtain or unexpected costs in obtaining the regulatory approvals necessary to bring a potential therapeutic candidate to market could decrease our ability to generate sufficient product revenue and our business, financial condition, results of operations and prospects may be harmed.

Preclinical and clinical development involves a lengthy and expensive process with an uncertain outcome, and the results of preclinical studies are not necessarily predictive of the results of later preclinical studies and any clinical trials of our therapeutic candidates. We have not tested any of our therapeutic candidates in clinical trials and our therapeutic candidates may not have favorable results in clinical trials, if any, or receive regulatory approval on a timely basis, if at all.

Preclinical and clinical development is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any preclinical studies or clinical trials will be conducted as planned or completed on schedule, if at all, and failure can occur at any time during the preclinical study or clinical trial process. Any positive results from our preclinical studies of our EEV therapeutic candidates may not necessarily be predictive of the results in later preclinical studies and clinical trials. Similarly, even if we are able to complete our planned preclinical studies or clinical trials of our therapeutic candidates according to our current development timeline, the positive results from such preclinical studies and clinical trials may not be replicated in our subsequent preclinical studies or later-stage clinical trials. Despite promising preclinical or clinical results, any therapeutic candidate can unexpectedly fail at any stage of preclinical or clinical development. The historical failure rate for therapeutic candidates in our industry is high.

The results from preclinical studies or clinical trials of a therapeutic candidate may not predict the results of later clinical trials of the therapeutic candidate, and interim, topline, or preliminary results of a clinical trial are not necessarily indicative of final results. Therapeutic candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics despite having progressed through preclinical studies and initial clinical trials. In particular, while we have conducted certain preclinical studies of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 and other potential therapeutic candidates, we do not know whether ENTR-601-44, ENTR-601-45, ENTR-701 or the other potential therapeutic candidates will perform in future clinical trials as they have performed in these prior studies. The positive results we have observed for our therapeutic candidates in early, non-GLP preclinical studies and animal models may not be predictive of our future clinical trials in humans. Furthermore, for some indications that we are pursuing there are no animal models that adequately mirror the human disease to predict any level of positive results. It is not uncommon to observe results in clinical trials that are unexpected based on preclinical studies and early clinical trials, and many therapeutic candidates fail in clinical trials despite very promising early results. Unexpected observations or toxicities observed in our IND-enabling studies for example, could delay clinical trials for ENTR-601-44, ENTR-601-45, ENTR-701 or our other development programs. Moreover, preclinical and clinical data may be susceptible to varying interpretations and analyses. A number of companies in the biopharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies, and companies that have believed their therapeutic candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain FDA approval. Additionally, we may conduct clinical trials that utilize an "open-label" trial design. An "open-label" clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational therapeutic candidate or either an existing approved drug or placebo. Most typically, open-label clinical trials test only the investigational therapeutic candidate and sometimes may do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a "patient bias" where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. The results from an open-label trial may not be predictive of future clinical trial results with any of our therapeutic candidates for which we include an open-label clinical trial when studied in a controlled environment with a placebo or active control.

For the foregoing reasons, we cannot be certain that our ongoing and planned preclinical studies and planned clinical trials will be successful. Any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of our therapeutic candidates in those and other indications, which could have a material adverse effect on our business, financial condition and results of operations.

Substantial delays in the commencement, enrollment or completion of our planned clinical trials or failure to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities could prevent us from commercializing any therapeutic candidates we determine to develop on a timely basis, if at all.

The risk of failure in developing therapeutic candidates is high. It is impossible to predict when or if any therapeutic candidate would prove effective or safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any therapeutic candidate, we must complete preclinical development, submit an IND or foreign equivalent to permit initiation of clinical studies, and then conduct extensive clinical trials to demonstrate the safety and efficacy of therapeutic candidates in humans. As an organization, we submitted an IND for ENTR-601-44 in the fourth quarter of 2022, which was subsequently placed on clinical hold. We plan to advance ENTR-601-45, our EEV therapeutic candidate targeting exon 45, to IND submission in the fourth quarter of 2024. We have not previously conducted any clinical trials of any therapeutic candidates, have limited experience as a company in preparing, submitting and prosecuting regulatory filings and have not previously submitted an IND, NDA or BLA or other comparable foreign regulatory submission for any therapeutic candidate. In addition, we have had limited interactions with the FDA and cannot be certain how many clinical trials of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any other therapeutic candidates will be required or how such trials should be designed. Consequently, we may be unable to successfully and efficiently execute and complete necessary clinical trials in a way that leads to regulatory submission and approval of any of our therapeutic candidates. Clinical trials may fail to demonstrate that our therapeutic candidates are safe for humans and effective for indicated uses. Even if the clinical trials are successful, changes in marketing approval policies during the development period, changes in or the enactment or promulgation of additional statutes, regulations or guidance or changes in regulatory review for each submitted product application may cause delays in the approval or rejection of an application.

Before we can commence clinical trials for a therapeutic candidate, we must complete extensive preclinical testing and studies that support our INDs and other regulatory filings. We cannot be certain of the timely identification of a therapeutic candidate or the completion or outcome of our preclinical testing and studies and cannot predict whether the FDA will accept our proposed clinical programs or whether the outcome of our preclinical testing and studies will ultimately support the further development of any therapeutic candidates. Conducting preclinical testing is a lengthy, time-consuming and expensive process. The length of time may vary substantially according to the type, complexity and novelty of the program, and often can be several years or more per program. As a result, we cannot be sure that we will be able to submit INDs for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs will result in the FDA allowing clinical trials to begin. For example, the FDA has placed the IND application for ENTR-601-44 for the potential treatment of Duchenne muscular dystrophy on clinical hold and requested that we gather and submit additional information regarding ENTR-601-44. We are actively working to resolve the clinical hold in the United States as quickly as possible. Should we be delayed in submitting a response to the clinical hold in the United States or our response is not satisfactory to the FDA, the clinical hold may not be lifted on a timely basis, or at all. In addition, given the extraordinary unmet need, we are exploring a range of options globally with the goal of initiating a healthy volunteer trial in 2023. However, if our efforts in the United States and elsewhere are not successful, we may not be able to initiate our healthy volunteer clinical trial for ENTR-601-44 as planned, or at all.

Furthermore, therapeutic candidates are subject to continued preclinical safety studies, which may be conducted concurrently with our clinical testing. The outcomes of these safety studies may delay the launch of or enrollment in future clinical trials and could impact our ability to continue to conduct our clinical trials.

Clinical testing is expensive, is difficult to design and implement, can take many years to complete and is uncertain as to outcome. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, or at all. A failure of one or more clinical trials can occur at any stage of testing, which may result from a multitude of factors, including, but not limited to, flaws in trial design, dose selection issues, patient enrollment criteria and failure to demonstrate favorable safety or efficacy traits.

Other events that may prevent successful enrollment, initiation or timely completion of clinical development include:

- we may be unable to generate sufficient preclinical, toxicology or other *in vivo* or *in vitro* data to support the initiation of clinical trials;
- delays in reaching a consensus with regulatory authorities on trial design;
- delays in reaching agreement on acceptable terms with prospective clinical research organizations (CROs) and clinical trial sites;
- delays in opening clinical trial sites or obtaining required institutional review board (IRB) or independent ethics committee approval, or the equivalent review groups for sites outside the United States, at each clinical trial site;

- we may need to add new or additional clinical trial sites;
- imposition of a clinical hold by regulatory authorities as a result of a serious adverse event or after an inspection of our clinical trial operations or trial sites;
- negative or inconclusive results observed in clinical trials, including failure to demonstrate statistical significance, safety, purity or potency, which could lead us, or cause regulators to require us, to conduct additional clinical trials or abandon product development programs;
- positive results from our preclinical studies of our therapeutic candidates may not necessarily be predictive of the results from required later preclinical studies and clinical trials and positive results from such preclinical studies and clinical trials of our therapeutic candidates may not be replicated in subsequent preclinical studies or clinical trial results;
- failure by us, any CROs we engage or any other third parties to adhere to clinical trial requirements;
- failure to perform in accordance with applicable GCPs;
- failure by investigators to adhere to clinical trial protocols leading to variable results;
- delays in the testing, validation, manufacturing and delivery of any therapeutic candidates we may develop to the clinical sites, including delays by third parties with whom we have contracted to perform certain of those functions;
- failure of our third-party contractors to comply with regulatory requirements or to meet their contractual obligations to us in a timely manner, or at all;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;
- clinical trial sites or patients dropping out of a trial;
- selection of clinical endpoints that require prolonged periods of clinical observation or analysis of the resulting data;
- occurrence of serious adverse events associated with the therapeutic candidate that are viewed to outweigh its potential benefits;
- occurrence of serious adverse events associated with a therapeutic candidate in development by another company, which are viewed to outweigh its potential benefits, and which may negatively impact the perception of our product due to a similarity in technology or approach;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;
- the FDA or other regulatory authorities may require us to submit additional data such as long-term toxicology studies or impose other requirements before permitting us to initiate a clinical trial;
- changes in the legal or regulatory regimes domestically or internationally related to patient rights and privacy; or
- lack of adequate funding to continue the clinical trial.

After initiating a clinical trial, we could also encounter delays if the clinical trial is suspended, placed on clinical hold or terminated by us, the IRBs of the institutions in which such trials are being conducted, or the FDA or other regulatory authorities or recommended for suspension or termination by the Data Safety Monitoring Board (DSMB) for such trial. A suspension or termination may be imposed due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product or treatment, failure to establish or achieve clinically meaningful trial endpoints, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our therapeutic candidates. Further, the FDA or other regulatory authorities may disagree with our clinical trial design and our interpretation of data from preclinical studies, clinical trials, or may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their therapeutic candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA approval.

Any inability to successfully complete preclinical studies and clinical trials could result in additional costs to us or impair our ability to generate revenues from product sales, regulatory and commercialization milestones and royalties. In addition, manufacturing or formulation changes to any therapeutic candidates we may develop may require us to conduct additional studies or trials to bridge our modified therapeutic candidates to earlier versions. Clinical trial delays also could

shorten any periods during which we may have the exclusive right to commercialize any therapeutic candidates we may develop or allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize any therapeutic candidates we may develop and may harm our business, financial condition, results of operations and prospects.

Additionally, if the results of future clinical trials are inconclusive or if there are safety concerns or serious adverse events associated with any therapeutic candidates we may develop, we may:

- be delayed in obtaining marketing approval for therapeutic candidates, if at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be subject to changes in the way the product is administered;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the product or impose restrictions on its distribution in the form of a modified risk evaluation and mitigation strategy;
- be subject to the addition of labeling statements, such as warnings or contraindications;
- be sued; or
- experience damage to our reputation.

Delays or difficulties in the enrollment of patients in clinical trials could delay or prevent our receipt of necessary regulatory approvals.

Failure to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the U.S. may delay or prevent us from initiating or continuing clinical trials for our therapeutic candidates. Because the target patient populations for some of our therapeutic candidates are relatively small, it may be difficult to successfully identify patients. Although we may enter into agreements with third parties to develop companion diagnostic tests for use in some of our future clinical trials in order to help identify eligible patients in certain indications, we may experience delays in reaching, or fail to reach, agreement on acceptable terms to develop such companion diagnostic tests. Any third parties whom we engage to develop companion diagnostic tests may experience delays or may not be successful in developing such companion diagnostic tests, furthering the difficulty in identifying patients for our clinical trials. In addition, current commercially available diagnostic tests to identify appropriate patients for our clinical trials or any approved therapeutic candidates may become unavailable in the future.

Furthermore, some of our competitors have ongoing clinical trials for therapeutic candidates that treat the same indications as our therapeutic candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' therapeutic candidates.

In addition, the pediatric population is an important patient population for certain of the indications we are targeting, including DMD, and our addressable patient population estimates include pediatric populations. However, it may be more challenging to conduct studies in this population, and to locate and enroll pediatric patients. Additionally, it may be challenging to ensure that pediatric or adolescent patients adhere to clinical trial protocols. Patient enrollment and trial competition may be affected by other factors including:

- clinicians' and patients' perceived risks and benefits of the therapeutic candidate under trial, particularly therapeutic candidates developed using a novel and unproven therapeutic approach, like our EEV therapeutic candidates in relation to available or investigational drugs;
- size of the patient population, in particular for rare diseases such as the diseases on which we are initially focused, and process for identifying patients;
- design of the trial protocol;
- efforts to facilitate timely enrollment in clinical trials;
- eligibility and exclusion criteria;
- availability of competing therapies and clinical trials;
- severity of the disease or disorder under investigation;
- proximity and availability of clinical trial sites for prospective patients;

- ability to obtain and maintain patient consent;
- risk that enrolled patients will drop out before completion of the trial;
- patient referral practices of physicians; and
- ability to monitor patients adequately during and after treatment.

Our inability to identify patients appropriate for enrollment in our clinical trials, or to enroll a sufficient number of patients in our clinical trials, would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our therapeutic candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing. If we are unable to include patients with the driver of the disease, including the applicable genomic alteration for diseases in genomically defined patient populations, this could limit our ability to seek participation in the FDA's expedited development programs, including Breakthrough Therapy Designation and Fast Track Designation, or otherwise to seek to accelerate clinical development and regulatory timelines.

Even if we are able to enroll a sufficient number of patients for our clinical trials, we may have difficulty maintaining patients in our clinical trials. In our planned clinical trials that will include a placebo group, some of the patients who end up receiving placebo may perceive that they are not receiving the therapeutic candidate being tested, and they may decide to withdraw from our clinical trials to pursue other alternative therapies rather than continue the trial with the perception that they are receiving placebo. Difficulty enrolling or maintaining a sufficient number of patients to conduct our clinical trials, may require us to delay, limit or terminate clinical trials, any of which would harm our business, financial condition, results of operations and prospects.

Use of our therapeutic candidates could be associated with side effects, adverse events or other properties or safety risks, which could delay or preclude approval, cause us to suspend or discontinue clinical trials, abandon a therapeutic candidate, limit the commercial profile of an approved label or result in other significant negative consequences that could severely harm our business, prospects, operating results and financial condition.

We have not evaluated any therapeutic candidates in human clinical trials. Although other oligonucleotide therapeutics, enzyme replacement therapies and gene therapies have received regulatory approval, our EEV-based therapeutics are a novel approach to the delivery of biological therapeutics, which may present enhanced uncertainty associated with the safety profile of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 and other EEV-based therapeutics compared to more well-established classes of therapies. Moreover, it is impossible to predict when or if any therapeutic candidates we may develop will prove safe in humans. As is the case with biopharmaceuticals generally, it is likely that there may be side effects and adverse events associated with our therapeutic candidates' use. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Undesirable side effects caused by our therapeutic candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of our therapeutic candidates may only be uncovered with a significantly larger number of patients exposed to the therapeutic candidate. Any undesirable side effects or unexpected characteristics associated with our therapeutic candidates in clinical trials may lead us to elect to abandon their development or limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for the therapeutic candidate if approved. We may also be required to modify our study plans based on findings after we commence our clinical trials. Many compounds that initially showed promise in early-stage testing have later been found to cause side effects that prevented further development of the compound. In addition, regulatory authorities may draw different conclusions or require additional testing to confirm these determinations.

It is possible that as we test our therapeutic candidates in larger, longer and more extensive clinical trials, or as the use of these therapeutic candidates becomes more widespread if they receive regulatory approval, illnesses, injuries, discomforts and other adverse events that were observed in earlier trials, as well as conditions that did not occur or went undetected in previous trials, may be reported by subjects. Any findings of such side effects later in development or upon approval, if any, may harm our business, financial condition and prospects significantly.

Patients treated with our therapeutics, if approved, may experience previously unreported adverse reactions, and it is possible that the FDA or other regulatory authorities may ask for additional safety data as a condition of, or in

connection with, our efforts to obtain approval of our therapeutic candidates. If safety problems occur or are identified after our therapeutics, if any, reach the market, we may make the decision or be required by regulatory authorities to amend the labeling of our therapeutics, recall our therapeutics or even withdraw approval for our therapeutics.

Our therapeutic candidates are subject to extensive regulation and compliance, which is costly and time-consuming, and such regulation may cause unanticipated delays or prevent the receipt of the required approvals to commercialize our therapeutic candidates.

The clinical development, manufacturing, labeling, packaging, storage, record-keeping, advertising, promotion, import, export, marketing, distribution and adverse event reporting, including the submission of safety and other information, of our therapeutic candidates are subject to extensive regulation by the FDA in the United States and by comparable foreign regulatory authorities in foreign markets. In the United States, we are not permitted to market our therapeutic candidates until we receive regulatory approval from the FDA. The process of obtaining regulatory approval is expensive, often takes many years following the commencement of clinical trials and can vary substantially based upon the type, complexity and novelty of the therapeutic candidates involved, as well as the target indications and patient population. Approval policies or regulations may change, and the FDA has substantial discretion in the drug approval process, including the ability to delay, limit or deny approval of a therapeutic candidate for many reasons. Despite the time and expense invested in clinical development of therapeutic candidates, regulatory approval is never guaranteed. Neither we nor any current or future collaborator is permitted to market any of our therapeutic candidates in the United States until we receive approval from the FDA.

Prior to obtaining approval to commercialize a therapeutic candidate in the United States or abroad, we or our collaborators must demonstrate with substantial evidence from adequate and well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that such therapeutic candidates are safe and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe the preclinical or clinical data for our therapeutic candidates are promising, such data may not be sufficient to support approval by the FDA and comparable foreign regulatory authorities. The FDA or comparable foreign regulatory authorities, as the case may be, may also require us to conduct additional preclinical studies or clinical trials for our therapeutic candidates either prior to or post-approval, or may object to elements of our clinical development program.

The FDA or comparable foreign regulatory authorities can delay, limit or deny approval of a therapeutic candidate for many reasons, including:

- such authorities may disagree with the design or implementation of our or our current or future collaborators' clinical trials;
- negative or ambiguous results from our clinical trials or results may not meet the level of statistical significance required by the FDA or comparable foreign regulatory agencies for approval;
- serious and unexpected drug-related side effects may be experienced by participants in our clinical trials or by individuals using drugs similar to our therapeutic candidates;
- such authorities may not accept clinical data from trials which are conducted at clinical facilities or in countries where the standard of care is potentially different from that of the United States;
- we or any of our current or future collaborators may be unable to demonstrate that a therapeutic candidate is safe and effective, and that therapeutic candidate's clinical and other benefits outweigh its safety risks;
- such authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- such authorities may not agree that the data collected from clinical trials of our therapeutic candidates are acceptable or sufficient to support the submission of an NDA or BLA or other submission or to obtain regulatory approval in the United States or elsewhere, and such authorities may impose requirements for additional preclinical studies or clinical trials;
- such authorities may disagree regarding the formulation, labeling and/or the specifications of our therapeutic candidates;
- approval may be granted only for indications that are significantly more limited than what we apply for and/or with other significant restrictions on distribution and use;
- such authorities may find deficiencies in the manufacturing processes, approval policies or facilities of our third-party manufacturers with which we or any of our current or future collaborators contract for clinical and commercial supplies;
- regulations of such authorities may significantly change in a manner rendering our or any of our potential future collaborators' clinical data insufficient for approval; or

- such authorities may not accept a submission due to, among other reasons, the content or formatting of the submission.

With respect to foreign markets, approval procedures vary among countries and, in addition to the foregoing risks, may involve additional product testing, administrative review periods and agreements with pricing authorities. In addition, events raising questions about the safety of certain marketed biopharmaceuticals may result in increased cautiousness by the FDA and comparable foreign regulatory authorities in reviewing new drugs based on safety, efficacy or other regulatory considerations and may result in significant delays in obtaining regulatory approvals. Any delay in obtaining, or inability to obtain, applicable regulatory approvals would prevent us or any of our potential future collaborators from commercializing our therapeutic candidates.

Our approach to the discovery and development of therapeutic candidates based on our EEV Platform is unproven, and we do not know whether we will be able to develop any products of commercial value, or if competing technological approaches will limit the commercial value of our therapeutic candidates or render our EEV Platform obsolete.

The success of our business depends primarily upon our ability to identify, develop and commercialize products based on our proprietary EEV Platform, which leverages a novel and unproven approach. While we have observed favorable preclinical study results based on our EEV Platform, we have not yet succeeded and may not succeed in demonstrating efficacy and safety for any therapeutic candidates in clinical trials or in obtaining marketing approval thereafter. Our lead therapeutic candidates, ENTR-601-44, ENTR-601-45 and our partnered candidate ENTR-701, are in preclinical development and we have not yet initiated any clinical trials for any therapeutic candidate. Our research methodology and novel approach to intracellular therapeutics may be unsuccessful in identifying additional therapeutic candidates, and any therapeutic candidates based on our EEV Platform may be shown to have harmful side effects or may have other characteristics that may necessitate additional clinical testing, or make the therapeutic candidates unmarketable or unlikely to receive marketing approval. Further, because all of our therapeutic candidates and development programs are based on our EEV Platform, adverse developments with respect to one of our programs may have a significant adverse impact on the actual or perceived likelihood of success and value of our other programs.

In addition, the biotechnology and biopharmaceutical industries are characterized by rapidly advancing technologies. Our future success will depend in part on our ability to maintain a competitive position with our EEV approach. Failure to stay at the forefront of technological change in utilizing our EEV Platform to create and develop therapeutic candidates may prevent us from competing effectively. Our competitors may render our EEV approach obsolete, or limit the commercial value of our therapeutic candidates, by advances in existing technological approaches or the development of new or different approaches, potentially eliminating the advantages in our drug discovery process that we believe we derive from our research approach and proprietary technologies. By contrast, adverse developments with respect to other companies that attempt to use a similar approach to our approach may adversely impact the actual or perceived value of our EEV Platform and potential of our therapeutic candidates.

The occurrence of any of these events may force us to abandon our development efforts for a program or programs, which would have a material adverse effect on our business and could potentially cause us to cease operations.

Interim, topline and preliminary data from our preclinical studies and planned clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose interim, preliminary or topline data from our preclinical studies and planned clinical trials, which are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available. From time to time, we may also disclose interim, preliminary or topline data from our clinical studies. Interim, topline or preliminary data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between preliminary, topline or interim data and final data could significantly harm our business prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular therapeutic candidate or product and the value of our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial will be based on what is typically extensive information, and our stockholders or others may not agree

with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product, therapeutic candidate or our business. If the topline data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our therapeutic candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

We may expend our limited resources to pursue a particular therapeutic candidate or indication, such as our initial focus on developing ENTR-601-44, and fail to capitalize on therapeutic candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited human capital and financial resources, we focus on research programs and therapeutic candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other therapeutic candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and therapeutic candidates for specific indications may not yield any commercially viable therapeutic candidates. If we do not accurately evaluate the commercial potential or target market for a particular therapeutic candidate, we may relinquish valuable rights to that therapeutic candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such therapeutic candidate.

At any time and for any reason, we may determine that one or more of our discovery programs or pre-clinical or clinical therapeutic candidates or programs does not have sufficient potential to warrant the allocation of resources toward such program or therapeutic candidate. Accordingly, we may choose not to develop a potential therapeutic candidate or elect to suspend, deprioritize or terminate one or more of our discovery programs or pre-clinical or clinical therapeutic candidates or programs. Suspending, deprioritizing or terminating a program or therapeutic candidate in which we have invested significant resources, we will have expended resources on a program that will not provide a full return on our investment and may have missed the opportunity to have allocated those resources to potentially more productive uses, including existing or future programs or therapeutic candidates. For example, in 2020, we made the strategic decision to focus the majority of our immediate efforts on EEV-oligonucleotide opportunities. In order to support ENTR-501 progress, we are exploring partnership opportunities with organizations that have the resources and expertise to continue the development of ENTR-501 into and through clinical development. We continue to believe that the program will have an important role in the future treatment of patients with MNGIE.

We may not be successful in our efforts to expand our development portfolio of therapeutic candidates.

A key element of our strategy is to use our novel EEV Platform to address intracellular targets that are drivers of diseases in genomically defined patient populations with high unmet medical need in order to build a development portfolio of therapeutic candidates. Although our research and development efforts to date have resulted in a development portfolio of potential programs and therapeutic candidates, we may not be able to continue to identify intracellular disease targets and develop therapeutic candidates. We may also pursue opportunities to acquire or in-license additional businesses, technologies or products, form strategic alliances or create joint ventures with third parties to complement or augment our existing business. However, we may not be able to identify any therapeutic candidates for our development portfolio through such acquisition or in-license.

Even if we are successful in continuing to build and expand our development portfolio, the potential therapeutic candidates that we identify may not be suitable for clinical development. For example, they may be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be drugs that will be successful in clinical trials or receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize therapeutic candidates, we will not be able to obtain drug revenues in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

Where appropriate, we plan to secure approval from the FDA, EMA or comparable foreign regulatory authorities through the use of accelerated approval pathways. If we are unable to obtain such approval, we may be required to conduct additional preclinical studies or clinical trials beyond those that we contemplate, which could increase the expense of obtaining, and delay the receipt of, necessary marketing approvals. Even if we receive accelerated approval from the FDA, EMA or comparable regulatory authorities, if our confirmatory trials do not verify clinical benefit, or if we do not comply with rigorous post-marketing requirements, the FDA, EMA or such other regulatory authorities may seek to withdraw accelerated approval.

Where possible, we plan to pursue accelerated development strategies in areas of high unmet need. We may seek an accelerated approval pathway for our one or more of our therapeutic candidates from the FDA, EMA or comparable

foreign regulatory authorities. Under the accelerated approval provisions in the Federal Food, Drug, and Cosmetic Act, and the FDA's implementing regulations, the FDA may grant accelerated approval to a therapeutic candidate designed to treat a serious or life-threatening condition that provides meaningful therapeutic benefit over available therapies upon a determination that the therapeutic candidate has an effect on a surrogate endpoint or intermediate clinical endpoint that is reasonably likely to predict clinical benefit. The FDA considers a clinical benefit to be a positive therapeutic effect that is clinically meaningful in the context of a given disease, such as irreversible morbidity or mortality. For the purposes of accelerated approval, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign, or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. An intermediate clinical endpoint is a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit. The accelerated approval pathway may be used in cases in which the advantage of a new drug over available therapy may not be a direct therapeutic advantage, but is a clinically important improvement from a patient and public health perspective. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit, and the FDA is permitted to require, as appropriate, that such studies be underway prior to approval or within a specified period after the date of approval. Sponsors must also update the FDA on the status of these studies, and under FDORA, the FDA has increased authority to withdraw approval of a drug granted accelerated approval on an expedited basis if the sponsor fails to conduct such studies in a timely manner, send the necessary updates to the FDA, or if such post-approval studies fail to verify the drug's predicted clinical benefit.

Prior to seeking accelerated approval, we will seek feedback from the FDA, EMA or comparable foreign regulatory authorities and will otherwise evaluate our ability to seek and receive such accelerated approval. There can be no assurance that after our evaluation of the feedback and other factors we will decide to pursue or submit an NDA or BLA for accelerated approval or any other form of expedited development, review or approval. Similarly, there can be no assurance that after subsequent feedback from the FDA, EMA or comparable foreign regulatory authorities, we will continue to pursue or apply for accelerated approval or any other form of expedited development, review or approval, even if we initially decide to do so. Furthermore, if we decide to submit an application for accelerated approval, there can be no assurance that such application will be accepted or that any approval will be granted on a timely basis, or at all. The FDA, EMA or other comparable foreign regulatory authorities could also require us to conduct further studies prior to considering our application or granting approval of any type, including, for example, if other products are approved via the accelerated pathway and subsequently converted by FDA to full approval. In addition, the FDA currently requires, unless otherwise informed by the agency, pre-approval of promotional materials for products receiving accelerated approval, which could adversely impact the timing of the commercial launch of any of our products. A failure to obtain accelerated approval or any other form of expedited development, review or approval for our therapeutic candidate would result in a longer time period to commercialization of such therapeutic candidate, could increase the cost of development of such therapeutic candidate and could harm our competitive position in the marketplace. Thus, even if we seek to utilize the accelerated approval pathway, we may not be able to obtain accelerated approval and, even if we do, we may not experience a faster development, regulatory review or approval process for that product. In addition, receiving accelerated approval does not assure that the product's accelerated approval will eventually be converted to a traditional approval.

We may seek Fast Track designation, Breakthrough Therapy designation and/or orphan drug designation from the FDA or similar designations from other regulatory authorities for one or more of our therapeutic candidates. Even if one or more of our therapeutic candidates receive any of these designations, we may be unable to obtain or maintain the benefits associated with such designation.

The FDA has established various designations to facilitate more rapid and efficient development and approval of certain types of drugs. Such designations include Fast Track designation, Breakthrough Therapy designation, and orphan drug designation. Fast Track designation is designed to facilitate the development and expedite the review of therapies for serious conditions that fill an unmet medical need. Programs with Fast Track designation may benefit from early and frequent communications with the FDA, potential priority review and the ability to submit a rolling application for regulatory review. Fast Track designation applies to both the therapeutic candidate and the specific indication for which it is being studied. If any of our therapeutic candidates receive Fast Track designation but do not continue to meet the criteria for Fast Track designation, or if our clinical trials are delayed, suspended or terminated, or put on clinical hold due to unexpected adverse events or issues with clinical supply, we will not receive the benefits associated with the Fast Track program. Fast Track designation alone does not guarantee qualification for the FDA's priority review procedures.

A Breakthrough Therapy, on the other hand, is defined as a drug or biologic that is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug or biologic may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. For therapeutic candidates that have been designated as Breakthrough Therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control

regimens. Designation as a Breakthrough Therapy is within the discretion of the FDA, and drugs designated as Breakthrough Therapies by the FDA may also be eligible for other expedited approval programs, including accelerated approval. Even if one or more of our therapeutic candidates qualify as Breakthrough Therapies pursuant to FDA standards, the FDA may later decide that the product no longer meets the conditions for qualification. Thus, even though we may seek Breakthrough Therapy designation for one or more of our current or future therapeutic candidates, there can be no assurance that we will receive Breakthrough Therapy designation.

Regulatory authorities in some jurisdictions, including the United States and the EU, may also designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a therapeutic candidate as an orphan drug if it is a drug intended to treat a rare condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the EU, the EMA's Committee for Orphan Medicinal Products (COMP) evaluates orphan designation in respect of a product if its sponsor can establish that: (1) the product is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (i) such condition affects no more than five (5) in ten thousand (10,000) persons in the EU when the application is made, or (ii) it is unlikely that the product, without the benefits derived from orphan status, would generate sufficient return in the EU to justify the necessary investment in its development; and (3) there is no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or, if such a method exists, the product would be of significant benefit to those affected by that condition. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers, and it may entitle the therapeutic to exclusivity in the United States and the EU. Even if we obtain orphan drug designation for a therapeutic candidate, we may not be able to obtain or maintain orphan drug exclusivity for that therapeutic candidate.

If any of our programs or therapeutic candidates receive Fast Track, Breakthrough Therapy or orphan drug designation by the FDA or similar designations by other regulatory authorities, there is no assurance that we will receive any benefits from such programs or that we will continue to meet the criteria to maintain such designation. Even if we obtain such designations, we may not experience a faster development process, review or approval compared to conventional FDA procedures. A Fast Track, Breakthrough Therapy, or orphan drug designation does not ensure that a therapeutic candidate will receive marketing approval or that approval will be granted within any particular timeframe.

Obtaining and maintaining marketing approval or commercialization of our therapeutic candidates in the United States does not mean that we will be successful in obtaining marketing approval of our therapeutic candidates in other jurisdictions. Failure to obtain marketing approval in foreign jurisdictions would prevent any therapeutic candidates we may develop from being marketed in such jurisdictions, which, in turn, would materially impair our ability to generate revenue.

In order to market and sell any therapeutic candidates we may develop in the EU and many other foreign jurisdictions, we or our collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or these third parties may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our medicines in any jurisdiction, which would materially impair our ability to generate revenue.

Additionally, now that the UK is no longer part of the EU, separate applications and procedures will be required to obtain regulatory approval for our products in the UK and EU. In particular, Great Britain is no longer covered by the centralized procedure for obtaining EU-wide marketing authorizations from the EMA for medicinal products (under the Northern Ireland Protocol, the EU regulatory framework continues to apply in Northern Ireland and centralized EU authorizations continue to be recognized) and a separate process for authorization of drug products will be required in Great Britain. Until December 31, 2023, the Medicines and Healthcare Products Regulatory Agency may rely on a decision taken by the European Commission on the approval of a new marketing authorization in the centralized procedure, in order to more quickly grant a new Great Britain marketing authorization, however a separate application will still be required. On January 24, 2023, the MHRA announced that a new international recognition framework will be put in place from January 1, 2024, which will have regard to decisions on the approval of marketing authorizations made by the EMA and certain other regulators when determining an application for a new Great Britain marketing authorization.

In addition, the regulatory regime in Great Britain at present broadly aligns with EU regulations, however, longer term, Great Britain is likely to develop its own legislation that diverges from that in the EU now that its regulatory system is independent from the EU and the Trade and Cooperation Agreement entered into by the EU and UK does not provide for mutual recognition of UK and EU pharmaceutical legislation. It is possible therefore, that there will be increased regulatory complexities in the UK and EU, which could disrupt the timing of any regulatory approvals that we may determine to pursue in these jurisdictions.

The FDA, EMA and other comparable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.

We anticipate we will initially conduct clinical trials of our therapeutic candidates in the United States and we may choose to conduct our clinical trials internationally as well. The acceptance of study data by the FDA, EMA or other comparable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions. In cases where data from United States clinical trials are intended to serve as the basis for marketing approval in the foreign countries outside the United States, the standards for clinical trials and approval may be different. There can be no assurance that any United States or foreign regulatory authority would accept data from trials conducted outside of its applicable jurisdiction. If the FDA, EMA or any applicable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our therapeutic candidates not receiving approval or clearance for commercialization in the applicable jurisdiction.

Changes in methods of therapeutic candidate manufacturing or formulation may result in additional costs or delay, which could adversely affect our business, results of operations and financial condition.

As therapeutic candidates progress through preclinical and clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize yield and manufacturing batch size, minimize costs and achieve consistent quality and results. For example, we may introduce an alternative formulation of one or more of our therapeutic candidates during the course of our planned clinical trials. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our therapeutic candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our therapeutic candidates and jeopardize our ability to commercialize our therapeutic candidates, if approved, and generate revenue.

Even if we, or any collaborators we may have, obtain marketing approvals for any therapeutic candidates we may develop, the terms of approvals and ongoing regulation of our therapeutics could require the substantial expenditure of resources and may limit how we, or they, manufacture and market our therapeutics, which could materially impair our ability to generate revenue.

Any therapeutic candidate for which we obtain marketing approval, if ever, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such medicine, will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, compliance with applicable product tracking and tracing requirements, and requirements regarding the distribution of samples to physicians and recordkeeping. For example, the holder of an approved BLA is obligated to monitor and report adverse events and any failure of a product to meet the specifications in the BLA. The FDA typically advises that patients treated with genetic medicine undergo follow-up observations for potential adverse events for a 15-year period. The holder of an approved BLA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process. Even if marketing approval of a therapeutic candidate is granted, the approval may be subject to limitations on the indicated uses for which the medicine may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the medicine.

Accordingly, assuming we, or any third parties we may collaborate with, receive marketing approval for one or more therapeutic candidates we may develop, we, and such collaborators, and our and their contract manufacturers will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If we and such collaborators are not able to comply with post-approval regulatory requirements, we and such collaborators could have the marketing approvals for our therapeutics withdrawn by regulatory authorities and our, or such collaborators', ability to market any future products could be limited, which could adversely

affect our ability to achieve or sustain profitability. Further, the cost of compliance with post-approval regulations may have a negative effect on our business, operating results, financial condition and prospects.

If we fail to comply with applicable regulatory requirements following approval of any therapeutic candidates we may develop, a regulatory agency may:

- issue a warning letter asserting that we are in violation of the law;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical trials;
- refuse to approve a pending BLA or supplements to a BLA submitted by us;
- seize product; or
- refuse to allow us to enter into supply contracts, including government contracts.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize any therapeutic candidates we may develop and generate revenues.

Clinical trial and product liability lawsuits against us could divert our resources, could cause us to incur substantial liabilities and could limit commercialization of any therapeutic candidates we may develop.

We will face an inherent risk of clinical trial and product liability exposure related to the testing of any therapeutic candidates we may develop in clinical trials, and we will face an even greater risk if we commercially sell any products that we may develop. While we currently have no therapeutic candidates in clinical trials or that have been approved for commercial sale, the future use of therapeutic candidates by us in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies or others selling such products. If we cannot successfully defend ourselves against claims that our therapeutic candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any therapeutic candidates we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants and inability to continue clinical trials;
- initiation of investigations by regulators;
- significant costs to defend any related litigation;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- decline in our stock price;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any therapeutic candidates we may develop.

We will need to increase our insurance coverage if we commence clinical trials or if we commence commercialization of any therapeutic candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. If and when coverage is secured, our insurance policies may also have various exclusions and we may be subject to a product liability claim for which we have no coverage. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise. If a successful clinical trial or product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

We may develop our current or future therapeutic candidates in combination with other therapies, which would expose us to additional risks.

We may develop our current or potential future therapeutic candidates in combination with one or more currently approved therapies or therapies in development. Even if any of our current or future therapeutic candidates were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA, EMA or other comparable foreign regulatory authorities could revoke approval of the therapy used in combination with any of our therapeutic candidates, or safety, efficacy, manufacturing or supply issues could arise with these existing therapies. In addition, it is possible that existing therapies with which our therapeutic candidates are approved for use could themselves fall out of favor or be relegated to later lines of treatment. This could result in the need to identify other combination therapies for our therapeutic candidates or our own products being removed from the market or being less successful commercially.

We may also evaluate our current or future therapeutic candidates in combination with one or more other therapies that have not yet been approved for marketing by the FDA, EMA or comparable foreign regulatory authorities. We will not be able to market and sell any therapeutic candidate in combination with any such unapproved therapies that do not ultimately obtain marketing approval.

Furthermore, we cannot be certain that we will be able to obtain a steady supply of such therapies for use in developing combinations with our therapeutic candidates on commercially reasonable terms or at all. Any failure to obtain such therapies for use in clinical development and the expense of purchasing therapies in the market may delay our development timelines, increase our costs and jeopardize our ability to develop our therapeutic candidates as commercially viable therapies. If the FDA, EMA or other comparable foreign regulatory authorities do not approve or withdraw their approval of these other therapies, or if safety, efficacy, commercial adoption, manufacturing or supply issues arise with the therapies we choose to evaluate in combination with any of our current or future therapeutic candidates, we may be unable to obtain approval of or successfully market any one or all of the current or future therapeutic candidates we develop. Additionally, if the third-party providers of therapies or therapies in development used in combination with our current or future therapeutic candidates are unable to produce sufficient quantities for clinical trials or for commercialization of our current or future therapeutic candidates, or if the cost of combination therapies are prohibitive, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

Risks Related to Our Reliance on Third Parties

We rely, and expect to continue to rely, on third parties to conduct some or all aspects of our product manufacturing, research and preclinical and clinical testing, and these third parties may not perform satisfactorily.

We do not expect to independently conduct all aspects of our product manufacturing, research and preclinical and clinical testing. We currently rely, and expect to continue to rely, on third parties with respect to many of these items, including contract manufacturing organizations (CMOs) for the manufacturing of any therapeutic candidates we test in preclinical or clinical development, as well as CROs for the conduct of our animal testing and research and CROs for the conduct of our planned clinical trials. Any of these third parties may terminate their engagements with us at any time. A need to enter into alternative arrangements could delay our product development activities, and we may not be able to enter into alternative arrangements on reasonable terms, if at all.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibility to ensure compliance with all required regulations and study protocols. For example, for therapeutic candidates that we develop and commercialize on our own, we will remain responsible for ensuring that each of our IND-enabling studies and clinical trials are conducted in accordance with the study plan and protocols. Moreover, the FDA requires us to comply with GCPs for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, clinicaltrials.gov, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. If we or any of our CROs or other third parties, including trial sites, fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure our stockholders that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under conditions that comply with the FDA's GMPs. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

Although we intend to design the clinical trials for any therapeutic candidates we may develop, CROs will conduct some or all of the clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct future preclinical studies and clinical trials will also result in less direct control over the management of data developed through preclinical studies and clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- be unable to acquire the necessary supplies to perform successfully;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our preclinical studies and clinical trials and may subject us to unexpected cost increases that are beyond our control. We expect to have to negotiate budgets and contracts with CROs and trial sites, which may result in delays to our development timelines and increased costs. In addition, any third parties conducting our clinical trials will not be our employees, and except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our clinical programs. If these CROs, and any other third parties we engage do not perform preclinical studies and future clinical trials in a satisfactory manner, if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, or if they breach their obligations to us or fail to comply with regulatory requirements, the development, regulatory approval and commercialization of any therapeutic candidates we may develop may be delayed, we may not be able to obtain regulatory approval and commercialize our therapeutic candidates or our development programs may be materially and irreversibly harmed. If we are unable to rely on preclinical and clinical data collected by our CROs and other third parties, we could be required to repeat, extend the duration of or increase the size of any preclinical studies or clinical trials we conduct and this could significantly delay commercialization and require greater expenditures.

Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and other regulatory authorities for therapeutic candidates in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, clinical investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or other regulatory authorities may require us to suspend, place on clinical hold or terminate these trials or perform additional preclinical studies or clinical trials before approving our marketing applications. We cannot be certain that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP requirements. In addition, our clinical trials must be conducted with biologic product produced under cGMP requirements and may require a large number of patients. In the U.S., we also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, clinicaltrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other product development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our therapeutic candidates. As a result, our financial results and the commercial prospects for our therapeutic candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws. For any violations of laws and regulations during the conduct of our preclinical studies and clinical trials, we could be subject to warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

If any of our relationships with these third-party CROs or others terminate, we may not be able to enter into arrangements with alternative CROs or other third parties or to do so on commercially reasonable terms. Switching or adding additional CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO begins work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects. If third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our studies in accordance with regulatory requirements or our stated study plans and protocols, we will not be able to complete, or may be delayed in completing, the preclinical studies and clinical trials required to support future IND submissions and approval of any therapeutic candidates we may develop.

We are dependent on third-party vendors to provide certain licenses, products and services and our business and operations, including clinical trials, could be disrupted by any problems with our significant third-party vendors.

We engage a number of third-party suppliers and service providers to supply critical goods and services, such as contract research services, contract manufacturing services and IT services. Disruptions to the business, financial stability or operations of these suppliers and service providers, including due to strikes, labor disputes or other disruptions to the workforce, for instance, if employees are not able to come to work, or to their willingness and ability to produce or deliver such products or provide such services in a manner that satisfies the requirements put forth by the authorities, or in a manner that satisfies our own requirements, could affect our ability to develop and market our future therapeutic candidates on a timely basis. If these suppliers and service providers were unable or unwilling to continue to provide their products or services in the manner expected, or at all, we could encounter difficulty finding alternative suppliers. Even if we are able to secure appropriate alternative suppliers in a timely manner, costs for such products or services could increase significantly. Any of these events could adversely affect our results of operations and our business.

Our EEV-based therapeutic candidates are based on novel technologies and any therapeutic candidates we develop may be complex and difficult to manufacture. We may encounter difficulties in manufacturing, product release, shelf life, testing, storage, supply chain management or shipping. If we or any of our third-party manufacturers encounter such difficulties, our ability to supply material for clinical trials or any approved product could be delayed or stopped.

The manufacturing processes for our therapeutic candidates are novel. There are no medicines incorporating or utilizing our EEV Platform that have been commercialized to date or manufactured at such scale. Due to the novel nature of this technology and limited experience at larger scale production, we may encounter difficulties in manufacturing, product release, shelf life, testing, storage and supply chain management, or shipping. These difficulties could be due to any number of reasons including, but not limited to, complexities of producing batches at larger scale, equipment failure, choice and quality of raw materials and excipients, analytical testing technology, and product instability. In an effort to optimize product features, we have in the past and may in the future make changes to our therapeutic candidates in their manufacturing and stability formulation and conditions. This has in the past resulted in and may in the future result in our having to resupply batches for preclinical or clinical activities when there is insufficient product stability during storage and insufficient supply. Insufficient stability or shelf life of our therapeutic candidates could materially delay our or our strategic collaborators' ability to continue the clinical trial for that therapeutic candidate or require us to begin a new clinical trial with a newly formulated drug product, due to the need to manufacture additional preclinical or clinical supply.

Our rate of innovation is high, which has resulted in and will continue to cause a high degree of technology change that can negatively impact product comparability during and after clinical development. Furthermore, technology changes may drive the need for changes in, modification to, or the sourcing of new manufacturing infrastructure or may adversely affect third-party relationships.

The process to generate our EEV-based therapeutics is complex and, if not developed and manufactured under well-controlled conditions, can adversely impact pharmacological activity. Furthermore, we have not manufactured our EEV-based therapeutics at commercial scale. We may encounter difficulties in scaling up our manufacturing process, thereby potentially impacting clinical and commercial supply.

During clinical development of our EEV-based therapeutics, in many cases, we may have to utilize multiple batches of drug substance and drug product to meet the clinical supply requirement of a single clinical trial. Failure in our ability to scale up batch size or failure in any batch may lead to a substantial delay in our clinical trials.

As we continue developing new manufacturing processes for our drug substance and drug product, the changes we implement to manufacturing process may in turn impact specification and stability of the drug product. Changes in our manufacturing processes may lead to failure of lots and this could lead to a substantial delay in our clinical trials. Our EEV-

based therapeutic candidates may prove to have a stability profile that leads to a lower than desired shelf life of our final approved EEV-based product. This poses risk in supply requirements, wasted stock, and higher cost of goods.

Due to the number of different programs, we may have cross contamination of products inside of our factories, CROs, suppliers, or in the clinic that affect the integrity of our therapeutics.

As we scale the manufacturing output for particular programs, we plan to continuously improve yield, purity, and the pharmaceutical properties of our development candidates from IND-enabling studies through commercial launch, including shelf life stability, and solubility properties of drug product and drug substance. Because of continuous improvement in manufacturing processes, we may switch processes for a particular program during development. However, after the change in process, more time is required for pharmaceutical property testing, such as 6 or 12 month stability testing. That may require resupplying clinical material, or making additional cGMP batches to keep up with clinical trial demand before such pharmaceutical property testing is completed.

We are utilizing a number of raw materials and excipients that are either new to the pharmaceutical industry or are being employed in a novel manner. Some of these raw materials and excipients have not been scaled to a level to support commercial supply and could experience unexpected manufacturing or testing failures, or supply shortages. Such issues with raw materials and excipients could cause delays or interruptions to clinical and commercial supply of our therapeutic candidates. Further, now and in the future one or more of our programs may have a single source of supply for raw materials and excipients.

We may establish a number of analytical assays to assess the quality of our EEV-based therapeutic candidates. We may identify gaps in our analytical testing strategy that might prevent release of product or could require product withdrawal or recall. For example, we may discover new impurities that have an impact on product safety, efficacy, or stability. This may lead to an inability to release our therapeutic candidates until the manufacturing or testing process is rectified.

We may find that our therapeutic candidates are extremely temperature sensitive, and we may learn that any or all of our therapeutics are less stable than desired. We may also find that transportation conditions negatively impact product quality. This may require changes to the formulation or manufacturing process for one or more of our therapeutic candidates and result in delays or interruptions to clinical or commercial supply. In addition, the cost associated with such transportation services and the limited pool of vendors may also add additional risks of supply disruptions.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we currently rely on third parties to manufacture our therapeutic candidates and to perform quality testing, we must, at times, share our proprietary technology and confidential information, including trade secrets, with them. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements, and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are intentionally or inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets and despite our efforts to protect our trade secrets, a competitor's discovery of our proprietary technology and confidential information or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business, financial condition, results of operations and prospects.

We may from time to time be dependent on single-source suppliers for some of the components and materials used in the therapeutic candidates we may develop.

We may from time to time depend on single-source suppliers for some of the components and materials used in any therapeutic candidates we may develop. We cannot ensure that these suppliers or service providers will remain in business, have sufficient capacity or supply to meet our needs or that they will not be purchased by one of our competitors or another company that is not interested in continuing to work with us. Our use of single-source suppliers of raw materials, components, key processes and finished goods could expose us to several risks, including disruptions in supply, price increases or late deliveries. There are, in general, relatively few alternative sources of supply for substitute components. These vendors may be unable or unwilling to meet our future demands for our clinical trials or commercial sale. Establishing additional or replacement suppliers for these components, materials and processes could take a substantial amount of time and it may be difficult to establish replacement suppliers who meet regulatory requirements.

Any disruption in supply from any single-source supplier or service provider could lead to supply delays or interruptions which would damage our business, financial condition, results of operations and prospects.

If we have to switch to a replacement supplier, the manufacture and delivery of any therapeutic candidates we may develop could be interrupted for an extended period, which could adversely affect our business. Establishing additional or replacement suppliers, if required, may not be accomplished quickly. If we are able to find a replacement supplier, the replacement supplier would need to be qualified and may require additional regulatory authority approval, which could result in further delay. While we seek to maintain adequate inventory of the single source components and materials used in our therapeutics, any interruption or delay in the supply of components or materials, or our inability to obtain components or materials from alternate sources at acceptable prices in a timely manner, could impair our ability to meet the demand for our investigational medicines.

We have and may in the future enter into collaborations, licenses and other similar arrangements with third parties for the research, development and commercialization of certain of the therapeutic candidates we may develop, including our collaboration with Vertex. If any such arrangements are not successful, we may not be able to capitalize on the market potential of those therapeutic candidates.

We may seek third-party collaborators for the research, development and commercialization of certain of the therapeutic candidates we may develop. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our partners dedicate to the development or commercialization of any therapeutic candidates we may seek to develop with them. Our ability to generate revenues from these arrangements will depend on our abilities to successfully perform the functions assigned to them in these arrangements. We cannot predict the success of any arrangement that we enter into.

Collaborations involving our research programs or any therapeutic candidates we may develop pose numerous risks to us, including the following:

- collaborators would have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any therapeutic candidates we may develop or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay programs, preclinical studies or clinical trials, provide insufficient funding for programs, preclinical studies or clinical trials, stop a preclinical study or clinical trial or abandon a therapeutic candidate, repeat or conduct new clinical trials or require a new formulation of a therapeutic candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with any therapeutic candidates we may develop if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- collaborators may be acquired by a third party having competitive products or different priorities, causing the emphasis on our product development or commercialization program under such collaboration to be delayed, diminished or terminated;
- collaborators with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products;
- collaborators may not properly obtain, maintain, enforce or defend our intellectual property or proprietary rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- if a collaborator of ours is involved in a business combination, the collaborator might de-emphasize or terminate the development or commercialization of any therapeutic candidate licensed to it by us;
-
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development, or commercialization of any therapeutic candidates we may develop or that result in costly litigation or arbitration that diverts management attention and resources;
- we may lose certain valuable rights under certain circumstances, including if we undergo a change of control;

- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable therapeutic candidates we may develop; and
- our collaborators' business or operations could be disrupted due to reasons outside of our control, such as the COVID-19 pandemic, which could have an adverse impact on their development and commercialization efforts or the prospects of our collaboration;
- collaboration agreements may not lead to development or commercialization of therapeutic candidates in the most efficient manner or at all.

If our collaborations do not result in the successful development and commercialization of therapeutic candidates, or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of therapeutic candidates could be delayed, and we may need additional resources to develop therapeutic candidates. In addition, if one of our collaborators terminates its agreement with us, we may find it more difficult to find a suitable replacement collaborator or attract new collaborators, and our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected. All of the risks relating to product development, regulatory approval and commercialization described in this Quarterly Report apply to the activities of our collaborators.

For example, we will have limited influence and control over the development and commercialization activities of Vertex Pharmaceuticals Incorporated (Vertex) in the development and commercialization of ENTR-701 or certain other product candidates. Vertex's development and commercialization activities may adversely impact our own efforts. Failure by Vertex to meet its obligations under the Strategic Collaboration and License Agreement (the Vertex Agreement), to apply sufficient efforts at developing and commercializing collaboration products, or to comply with applicable legal or regulatory requirements, may materially adversely affect our business and our results of operations. In addition, to the extent we rely on Vertex to commercialize any products upon obtaining regulatory approval, we may receive less revenues than if we commercialized these products ourselves, which could materially harm our prospects.

These relationships, or those like them, may require us to incur non-recurring and other charges, increase our near- and long-term expenditures, issue securities that dilute our existing stockholders, or disrupt our management and business. In addition, we could face significant competition in seeking appropriate collaborators, and the negotiation process is time-consuming and complex. Our ability to reach definitive collaboration agreements will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of several factors. If we license rights to any therapeutic candidates we or our collaborators may develop, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture.

If conflicts arise between us and our current or potential collaborators, these parties may act in a manner adverse to us and could limit our ability to implement our strategies.

If conflicts arise between us and our current or potential collaborators, the other party may act in a manner adverse to us and could limit our ability to implement our strategies. Our collaborators may develop, either alone or with others, products in related fields that are competitive with the therapeutic candidates we may develop that are the subject of these collaborations with us. Competing products, either developed by the collaborators or to which the collaborators have rights, may result in the withdrawal of support for our therapeutic candidates.

Some of our future collaborators could also become our competitors. Our collaborators could develop competing products, preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, terminate their agreements with us prematurely, fail to devote sufficient resources to the development and commercialization of products, or merge with or be acquired by a third party who may do any of these things. Any of these developments could harm our product development efforts.

If we are not able to establish collaborations on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our product development and research programs and the potential commercialization of any therapeutic candidates we may develop will require substantial additional cash to fund expenses. For some of the therapeutic candidates we may develop, we may decide to collaborate with other pharmaceutical and biotechnology companies for the development and potential commercialization of those therapeutic candidates.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the

terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA, the EMA or similar regulatory authorities outside the United States, the potential market for the subject therapeutic candidate, the costs and complexities of manufacturing and delivering such therapeutic candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The collaborator may also consider alternative therapeutic candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us.

Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the therapeutic candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization, reduce the scope of any sales or marketing activities, or increase our own expenditures on the development of the therapeutic candidate.

Risks Related to Commercialization of Our Therapeutic Candidates

The commercial success of our therapeutic candidates will depend upon the degree of market acceptance of such therapeutic candidates by physicians, patients, healthcare payors and others in the medical community.

Our therapeutic candidates may not be commercially successful. Even if any of our therapeutic candidates receive regulatory approval, they may not gain market acceptance among physicians, patients, healthcare payors or the medical community. The commercial success of any of our current or future therapeutic candidates will depend significantly on the broad adoption and use of the resulting product by physicians and patients for approved indications. The degree of market acceptance of our therapeutics will depend on a number of factors, including:

- the demonstration of clinical efficacy and safety compared to other more-established products;
- the indications for which our therapeutic candidates are approved;
- the limitation of our targeted patient population and other limitations or warnings contained in any FDA-approved labeling;
- the acceptance of a new drug for the relevant indication by healthcare providers and their patients;
- the pricing and cost-effectiveness of our therapeutics, as well as the cost of treatment with our therapeutics in relation to alternative treatments and therapies;
- our ability to obtain and maintain sufficient third-party coverage and adequate reimbursement from government healthcare programs, including Medicare and Medicaid, private health insurers and other third-party payors;
- the willingness of patients to pay all, or a portion of, out-of-pocket costs associated with our therapeutics in the absence of sufficient third-party coverage and adequate reimbursement;
- any restrictions on the use of our therapeutics, and the prevalence and severity of any adverse effects;
- potential product liability claims;
- the timing of market introduction of our therapeutics as well as competitive drugs;
- the effectiveness of our or any of our current or potential future collaborators' sales and marketing strategies; and
- unfavorable publicity relating to the product.

If any therapeutic candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors or patients, we may not generate sufficient revenue from that product and may not become or remain profitable. Our efforts to educate the medical community and third-party payors regarding the benefits of our therapeutics may require significant resources and may never be successful.

Even if we are able to commercialize any of our therapeutic candidates, if approved, such therapeutic candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing and reimbursement for new products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a therapeutic candidate in a particular country, but then be subject to price regulations that delay our commercial launch of the therapeutic candidate, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the therapeutic candidate in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more therapeutic candidates, even if our therapeutic candidates obtain marketing approval.

Our ability to commercialize any therapeutic candidates successfully also will depend in part on the extent to which coverage and reimbursement for these therapeutic candidates and related treatments will be available from government authorities, private health insurers and other organizations. In the U.S. and markets in other countries, patients generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

In the United States, the principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services (CMS), an agency within the U.S. Department of Health and Human Services (HHS). CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. The availability of coverage and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford treatments. Sales of these or other products that we may identify will depend substantially, both domestically and abroad, on the extent to which the costs of our therapeutics will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If coverage and adequate reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our therapeutics. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment. Factors payors consider in determining reimbursement are based on whether the product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular products. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for products. We cannot be sure that coverage will be available for any therapeutic candidate that we commercialize and, if coverage is available, the level of reimbursement.

Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any therapeutic candidate that we commercialize and, if reimbursement is available, the level of reimbursement. In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price (ASP) and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the EU provides options for its Member States to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular therapeutic candidate to currently available therapies. A Member State may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement

limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our therapeutic candidates. Historically, products launched in the EU do not follow price structures of the U.S. and generally prices tend to be significantly lower.

We face significant competition, and if our competitors develop technologies or therapeutic candidates more rapidly than we do or their technologies are more effective, our business and our ability to develop and successfully commercialize products may be adversely affected.

The biotechnology and biopharmaceutical industries are characterized by rapid advancing technologies, intense competition and a strong emphasis on proprietary and novel products and therapeutic candidates. Our competitors have developed, are developing or may develop products, therapeutic candidates and processes competitive with our therapeutic candidates. Any therapeutic candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we may attempt to develop therapeutic candidates. Our competitors include larger and better funded pharmaceutical, biopharmaceutical, biotechnological and therapeutics companies. Moreover, we may also compete with universities and other research institutions who may be active in the indications we are targeting and could be in direct competition with us. We also compete with these organizations to recruit management, scientists and clinical development personnel, which could negatively affect our level of expertise and our ability to execute our business plan. We will also face competition in establishing clinical trial sites, enrolling subjects for clinical trials and in identifying and in-licensing new therapeutic candidates. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Currently, patients with DMD are treated with corticosteroids to manage the inflammatory component of the disease. EMFLAZA (deflazacort) is an FDA-approved corticosteroid marketed by PTC Therapeutics, Inc. (PTC). In addition, there are four FDA-approved exon skipping drugs: EXONDYS 51 (eteplirsen), VYONDYS 53 (golodirsen), and AMONDYS 45 (casimersen), which are PMOs approved for the treatment of patients with DMD who are amenable to exon 51, exon 53 and exon 45 skipping, respectively, and are marketed by Sarepta Therapeutics, Inc. (Sarepta), and VILTEPSO (vitolarsen), a PMO approved for the treatment of patients with DMD who are amenable to exon 53 skipping, which is marketed by Nippon Shinyaku Co. Ltd. Companies focused on developing treatments for DMD that target dystrophin mechanisms, as does our DMD program, include Sarepta with SRP-5051, a peptide-linked PMO currently being evaluated following a Phase 2 clinical trial for patients amenable to exon 51 skipping along with other exon targets in development for exon skipping amenable populations 53, 45, 50, 52 and 44 in preclinical development, Nippon Shinyaku Co. Ltd., which recently announced FDA clearance to initiate a phase 2 study for patients amenable to exon 44 skipping in Japan, PTC with ataluren, a small molecule targeting nonsense mutations in a Phase 3 clinical trial, Avidity Biosciences, Inc. (Avidity), which announced the initiation of its Phase 1/2 clinical trial with antibody oligonucleotide conjugates for exon 44 (AOC-1044), and has similar programs for patients amenable to exon 45 skipping, and additional undisclosed programs in preclinical development, Wave Life Sciences Ltd., which is clinically evaluating WVE-N531, a splicing clinical candidate that is designed to target exon 53 within the dystrophin gene and has additional undisclosed candidates in preclinical development, Dyne Therapeutics, Inc. (Dyne), which is pursuing antibody fragment-oligonucleotide conjugates for exons 44, 45, 51 (clinical candidate DYNE-251), and 53 as well as additional undisclosed candidates, PepGen, Inc. with PGN-EDO51, a clinical candidate designed to address exon 51, along with discovery programs targeting exons 53, 44, and 45, LocanaBio which is in preclinical development with LBIO115 using U7 snRNAs packaged in scAAV9 to address exon 51 skipping amenable patients, and BioMarin Pharmaceutical Inc., which is in preclinical development with BMN 351, an antisense oligonucleotide therapy for exon 51. In addition, several companies are developing gene therapies to treat DMD, including Pfizer Inc. (PF-06939926), Sarepta (SRP-9001 and Galgt2 gene therapy program), Solid Biosciences Inc. (SGT-003), and REGENXBIO (RGX-202). Gene editing treatments that are in preclinical development are also being pursued by Vertex and Sarepta. We are also aware of several companies targeting non-dystrophin mechanisms for the treatment of DMD.

We expect to face competition from existing products and products in development for each of our wholly owned and partnered therapeutic candidates. There are currently no approved therapies to treat the underlying cause of DM1. Therapeutic candidates currently in development to treat DM1 include: tideglusib, a GSK3-ß inhibitor in late-stage clinical development by AMO Pharma Ltd. for the congenital phenotype of DM1; AOC-1001, an antibody linked siRNA in clinical development by Avidity; DYNE-101, an antibody fragment conjugated to an ASO targeting DM1 protein kinase knockdown in clinical development by Dyne; EDODM1, a linear peptide conjugated to a PMO targeting CUG repeats in preclinical development by PepGen, Inc., in preclinical development; a small molecule targeting GTG repeats in preclinical development by Design Therapeutics, Inc.; gene editing treatments in preclinical development by Vertex; an RNA-targeting gene therapy in preclinical development by Locana, Inc.; and small molecules interacting with RNA in preclinical development by Expansion Therapeutics, Inc.

The only currently-approved therapies for Pompe disease are alglucosidase alfa (Lumizyme in the United States, Myozyme in other geographies) and avalglucosidase alfa-ngpt (Nexviazyme in the United States), which are both forms of

ERT delivered via IV infusions. There is one next-generation GAA enzyme in registration from Amicus Therapeutics Inc. (Amicus), and there are four gene therapies in the early stages of clinical development from Astellas Pharma Inc., Bayer AG, Roche Holding AG and Lacerta Therapeutics, Inc. There are five gene therapies in preclinical development from AVROBIO, Inc., Amicus, and Selecta Biosciences, Inc.. There is one GYS1 inhibitor in Phase 2 development from Maze Therapeutics Inc. (now licensed to Sanofi, pending deal close) and a preclinical therapy targeting GYS1 inhibition from Aro Biotherapeutics.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for any therapeutic candidate, we will face competition based on many different factors, including the safety and effectiveness of our therapeutics, the ease with which our therapeutics can be administered and the extent to which patients accept relatively new routes of administration, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, more convenient, less expensive or marketed and sold more effectively than any products we may develop. Competitive products or technological approaches may make any products we develop, or our EEV Platform, obsolete or noncompetitive before we recover the expense of developing and commercializing our therapeutic candidates. If we are unable to compete effectively, our opportunity to generate revenue from the sale of our therapeutics we may develop, if approved, could be adversely affected.

Risks Related to Our Business Operations and Industry

Our future success depends on our ability to retain key employees and to attract, retain and motivate qualified personnel.

We are highly dependent on the research expertise of Natarajan Sethuraman, Ph.D., our Chief Scientific Officer, and the development and management expertise of Dipal Doshi, our President and Chief Executive Officer, as well as the other principal members of our management, scientific and clinical team. Although we have entered into employment agreements and/or offer letters with our executive officers, each of them may terminate their employment with us at any time.

Our industry has experienced a high rate of turnover in recent years. Our ability to compete in the highly competitive pharmaceuticals industry depends upon our ability to attract, retain and motivate highly skilled and experienced personnel with scientific, clinical, regulatory, manufacturing and management skills and experience. We conduct our operations in the Boston area, a region that is home to many other pharmaceutical companies as well as many academic and research institutions, resulting in fierce competition for qualified personnel. We may not be able to attract or retain qualified personnel in the future due to the intense competition for a limited number of qualified personnel among pharmaceutical companies. Many of the other pharmaceutical companies against which we compete have greater financial and other resources, different risk profiles and a longer history in the industry than we do. Our competitors may provide higher compensation, more diverse opportunities and/or better opportunities for career advancement. Any or all of these competing factors may limit our ability to continue to attract and retain high quality personnel, which could negatively affect our ability to successfully develop and commercialize our therapeutic candidates and to grow our business and operations as currently contemplated.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. For example, employment of our key employees is at-will, which means that any of our employees could leave our employment at any time, with or without notice.

In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel. Failure to succeed in clinical trials may make it more challenging to recruit and retain qualified scientific personnel.

We expect to expand our development and regulatory capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of March 31, 2023, we had 130 full-time employees. We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of clinical development, clinical operations, manufacturing, regulatory affairs and, if any of our therapeutic candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth and with developing sales, marketing and distribution infrastructure, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources.

Further, we currently rely, and for the foreseeable future will continue to rely, in substantial part on certain third-party contract organizations, advisors and consultants to provide certain services, including assuming substantial responsibilities for the conduct of our clinical trials and the manufacture of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any future therapeutic candidates. We cannot assure our stockholders that the services of such third-party contract organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by our vendors or consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we or our partners may not be able to obtain marketing approval of ENTR-601-44, ENTR-601-45, ENTR-701 or any future therapeutic candidates or otherwise advance our business. We cannot assure our stockholders that we will be able to properly manage our existing vendors or consultants or find other competent outside vendors and consultants on economically reasonable terms, or at all.

If we are not able to effectively manage growth and expand our organization, we may not be able to successfully implement the tasks necessary to further develop and commercialize ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701, our other development portfolio therapeutic candidates or any future therapeutic candidates and, accordingly, may not achieve our research, development and commercialization goals.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our therapeutic candidates and decrease the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our therapeutic candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any therapeutic candidates for which we obtain marketing approval.

For example, the ACA was passed in 2010 and substantially changed the way healthcare is financed by both governmental and private insurers, and continues to significantly impact the U.S. pharmaceutical industry.

Among the provisions of the ACA of importance to our potential therapeutic candidates are the following:

- annual fees and taxes on manufacturers of certain branded prescription drugs;
- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products;
- a Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the federal Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- requirements to report financial arrangements with physicians and teaching hospitals;
- a requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Other legislative changes have been proposed and adopted since the ACA was enacted. The Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year. Subsequent legislation extended the 2% payment reduction which remains in effect through 2030. The American Taxpayer Relief Act of 2012 further reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

The Inflation Reduction Act of 2022 (the IRA) includes several provisions that may impact our business to varying degrees, including provisions that create a $2,000 out-of-pocket cap for Medicare Part D beneficiaries, impose new manufacturer financial liability on all drugs in Medicare Part D, allow the U.S. government to negotiate Medicare Part B and Part D pricing for certain high-cost drugs and biologics without generic or biosimilar competition, require companies to pay rebates to Medicare for drug prices that increase faster than inflation, and delay the rebate rule that would limit the fees that pharmacy benefit managers can charge. Further, under the IRA, orphan drugs are exempted from the Medicare drug price negotiation program, but only if they have one rare disease designation and for which the only approved indication is for that disease or condition. If a product receives multiple rare disease designations or has multiple approved indications, it may not qualify for the orphan drug exemption. The effect of the IRA on our business and the healthcare industry in general is not yet known.

Further, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. President Biden has issued multiple executive orders that have sought to reduce prescription drug costs. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, both the Biden administration and Congress have indicated that it will continue to seek new legislative measures to control drug costs.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our therapeutics. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, financial condition, results of operations and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our therapeutic candidates, if any, may be. It is also possible that additional governmental action is taken in response to pandemics, such as COVID-19.

Failure or security breaches, loss or leakage of data and other disruptions of our internal information technology systems, or those of our third-party CROs or other vendors, contractors or consultants could result in material disruption of our development programs, compromise sensitive information related to our business or prevent us from accessing critical information, potentially exposing us to liability or otherwise adversely affecting our business.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We also have outsourced elements of our operations to third parties, and as a result we manage a number of third-party CROs, vendors, and other contractors and consultants who have access to our confidential information.

Despite the implementation of security measures, given their size and complexity and the increasing amounts of confidential information that they maintain, our internal information technology systems and those of our third-party CROs, vendors and other contractors and consultants are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and

electrical failures, as well as security breaches from inadvertent or intentional actions by our employees, third-party CROs, vendors, contractors, consultants, business partners and/or other third parties, or from cyber-attacks by malicious third parties (including the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information), which may compromise our system infrastructure, or that of our third-party CROs, vendors and other contractors and consultants, or lead to data leakage. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. We may not be able to anticipate all types of security threats, nor may we be able to implement preventive measures effective against all such security threats. The techniques used by cyber criminals change frequently, may not be recognized until launched and can originate from a wide variety of sources, including outside groups such as external service providers, organized crime affiliates, terrorist organizations or hostile foreign governments or agencies. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or those of our third-party CROs, vendors and other contractors and consultants, or inappropriate disclosure of confidential or proprietary information, we could incur liability and reputational damage and the further development and commercialization of ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any future therapeutic candidates could be delayed. The costs related to significant security breaches or disruptions could be material and exceed the limits of the cybersecurity insurance we maintain against such risks. If the information technology systems of our third-party CROs, vendors and other contractors and consultants become subject to disruptions or security breaches, we may have insufficient recourse against such third parties and we may have to expend significant resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring.

Our data protection efforts and our investment in information technology will prevent significant breakdowns, data leakages, breaches in our systems, or those of our third-party CROs, vendors and other contractors and consultants, or other cyber incidents that could have a material adverse effect upon our reputation, business, operations or financial condition. For example, if such an event were to occur and cause interruptions in our operations, or those of our third-party CROs, vendors and other contractors and consultants, it could result in a material disruption of our programs and the development of our therapeutic candidates could be delayed. In addition, the loss of clinical trial data for ENTR-601-44, ENTR-601-45, our partnered candidate ENTR-701 or any other therapeutic candidates could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Furthermore, significant disruptions of our internal information technology systems or those of our third-party CROs, vendors and other contractors and consultants, or security breaches could result in the loss, misappropriation and/or unauthorized access, use, or disclosure of, or the prevention of access to, confidential information (including trade secrets or other intellectual property, proprietary business information and personal information), which could result in financial, legal, business and reputational harm to us. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our clinical trial subjects or employees, could harm our reputation directly, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business.

A pandemic, epidemic or outbreak of an infectious disease, such as COVID-19, may materially and adversely affect our business and could cause a disruption to the development of our therapeutic candidates.

The COVID-19 pandemic broadly affected the global economy and financial markets, and put a significant strain on healthcare resources. In the United States, President Biden's administration announced that it will end COVID-19 emergency declarations on May 11, 2023. The ultimate extent of the impact of the COVID-19 pandemic on our business, preclinical studies and planned clinical trials, financial condition and results of operations is uncertain and will depend on future developments. Worldwide pandemics, such as COVID-19, may affect our ability to initiate and complete preclinical studies, delay the initiation of our planned clinical trials, disrupt regulatory activities or have other adverse effects on our business, results of operations, financial condition and prospects.

To date, we have not experienced a material financial impact or significant business disruptions, including with our vendors, or impairments of any of our assets as a result of the COVID-19 pandemic. While COVID-19 restrictions have been generally lifted, we plan to continue to follow, recommendations from federal, state and local governments regarding workplace policies, practices and procedures. We expect to continue to take actions if and as may be required or recommended by government authorities or as we determine are in the best interests of our employees and other business partners. We are continuing to monitor any impact of the COVID-19 pandemic on our business, financial condition, results of operations and prospects.

Failure to comply with environmental, health and safety laws and regulations could subject us to fines or penalties or incur costs that could harm our business.

We are subject to numerous foreign, federal, state and local environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources, including any available insurance.

In addition, our leasing and operation of real property may subject us to liability pursuant to certain of these laws or regulations. Under existing U.S. environmental laws and regulations, current or previous owners or operators of real property and entities that disposed or arranged for the disposal of hazardous substances may be held strictly, jointly and severally liable for the cost of investigating or remediating contamination caused by hazardous substance releases, even if they did not know of and were not responsible for the releases.

We could incur significant costs and liabilities which may adversely affect our financial condition and operating results for failure to comply with such laws and regulations, including, among other things, civil or criminal fines and penalties, property damage and personal injury claims, costs associated with upgrades to our facilities or changes to our operating procedures, or injunctions limiting or altering our operations.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations, which are becoming increasingly more stringent, may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Our relationships with customers, third-party payors, physicians and healthcare providers will be subject to applicable anti-kickback, fraud and abuse, and other laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, and diminished profits.

Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any therapeutic candidates for which we obtain regulatory approval. Our current and future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we conduct research and would market, sell and distribute our therapeutics. As a pharmaceutical company, even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. Restrictions under applicable federal and state healthcare laws and regulations that may affect our ability to operate include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, the purchase, lease, order, arrangement, or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation. Violations are subject to civil and criminal fines and penalties for each violation, plus up to three times the remuneration involved, imprisonment, and exclusion from government healthcare programs. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act or federal civil money penalties;
- the federal civil and criminal false claims laws and civil monetary penalty laws, such as the federal False Claims Act, which impose criminal and civil penalties and authorize civil whistleblower or qui tam actions, against individuals or entities for, among other things: knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent; knowingly making, using or causing to be made or used, a false statement of record material to a false or fraudulent claim or obligation to pay or transmit money or property to the federal government or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay money to the federal government. Manufacturers can be held liable under the federal False Claims Act even when they do not submit claims directly to government payors if they are deemed to "cause" the

submission of false or fraudulent claims. The federal False Claims Act also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the federal False Claims Act and to share in any monetary recovery;

- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which created new federal criminal statutes that prohibit a person from knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false, fictitious, or fraudulent statements or representations in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH) and their respective implementing regulations, including the Final Omnibus Rule published in January 2013, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates, independent contractors or agents of covered entities, that perform services for them that involve the creation, maintenance, receipt, use, or disclosure of, individually identifiable health information relating to the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, there may be additional federal, state and non-U.S. laws which govern the privacy and security of health and other personal information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts;
- the U.S. federal transparency requirements under the ACA, including the provision commonly referred to as the Physician Payments Sunshine Act, and its implementing regulations, which requires applicable manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program to report annually to CMS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain other licensed health care practitioners (defined to include physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and anesthesiologist assistants, and certified-nurse midwives) and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members;
- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we are subject to state and foreign equivalents of each of the healthcare laws and regulations described above, among others, some of which may be broader in scope and may apply regardless of the payor. Many U.S. states have adopted laws similar to the federal Anti-Kickback Statute and False Claims Act, and may apply to our business practices, including, but not limited to, research, distribution, sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental payors, including private insurers. In addition, some states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. Several states also impose other marketing restrictions or require pharmaceutical companies to make marketing or price disclosures to the state and require the registration of pharmaceutical sales representatives. State and foreign laws, including for example the European Union (EU) General Data Protection Regulation (which became effective on May 25, 2018) and the United Kingdom (UK) General Data Protection Regulation (which became effective following UK withdrawal from the EU as of January 2021) also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. There are ambiguities as to what is required to comply with these state requirements and if we fail to comply with an applicable state law requirement we could be subject to penalties. Finally, there are state and foreign laws governing the privacy and security of health information, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time and resource consuming and can divert a company's attention from the business.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including administrative, civil and criminal penalties, damages, fines, disgorgement, the exclusion from participation in federal and state healthcare programs, individual imprisonment, reputational harm, and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Further, defending against any such actions can be costly and time-consuming, and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. If any of the physicians or other providers or entities with whom we expect to do business is found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment. If any of the above occur, our ability to operate our business and our results of operations could be adversely affected.

Our employees and independent contractors, including principal investigators, CROs, consultants and vendors, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk that our employees and independent contractors, including principal investigators, CROs, consultants and vendors may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate: (i) the laws and regulations of the FDA and other similar regulatory requirements, including those laws that require the reporting of true, complete and accurate information to such authorities, (ii) manufacturing standards, including cGMP requirements, (iii) federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the United States and abroad or (iv) laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, the creation of fraudulent data in our preclinical studies or clinical trials or illegal misappropriation of drug product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. In addition, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, imprisonment, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We are subject to certain U.S. and certain foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations. We can face serious consequences for violations.

U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations prohibit, among other things, companies and their employees, agents, CROs, legal counsel, accountants, consultants, contractors and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of these laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We also expect our non-U.S. activities to increase over time. We expect to rely on third parties for research, preclinical studies and clinical trials and/or to obtain necessary permits, licenses, patent

registrations and other marketing approvals. We can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

We may engage in strategic transactions that could impact our liquidity, increase our expenses and present significant distractions to our management.

From time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of intellectual property, products or technologies. Additional potential transactions that we may consider in the future include a variety of business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any future transactions could increase our near and long-term expenditures, result in potentially dilutive issuances of our equity securities, including our common stock, or the incurrence of debt, contingent liabilities, amortization expenses or acquired in-process research and development expenses, any of which could affect our financial condition, liquidity and results of operations. Future acquisitions may also require us to obtain additional financing, which may not be available on favorable terms or at all. These transactions may never be successful and may require significant time and attention of our management. In addition, the integration of any business that we may acquire in the future may disrupt our existing business and may be a complex, risky and costly endeavor for which we may never realize the full benefits of the acquisition. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business. Accordingly, although there can be no assurance that we will undertake or successfully complete any additional transactions of the nature described above, any additional transactions that we do complete could have a material adverse effect on our business, results of operations, financial condition and prospects.

Legislation or other changes in U.S. tax law could adversely affect our business and financial condition.

The rules dealing with U.S. federal, state, and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our common stock. In recent years, many changes have been made to applicable tax laws and changes are likely to continue to occur in the future. For example, under Section 174 of the Internal Revenue Code of 1986, as amended (the Code), in taxable years beginning after December 31, 2021, expenses that are incurred for research and development in the U.S. will be capitalized and amortized, which may have an adverse effect on our cash flow. Future changes in tax laws could have a material adverse effect on our business, cash flow, financial condition or results of operations.

It cannot be predicted whether, when, in what form, or with what effective dates, new tax laws may be enacted, or regulations and rulings may be enacted, promulgated or issued under existing or new tax laws, which could result in an increase in our or our stockholders' tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law or in the interpretation thereof. We urge investors to consult with their legal and tax advisers regarding the implications of potential changes in tax laws on an investment in our common stock.

Our ability to use our U.S. net operating loss carryforwards and certain other U.S. tax attributes may be limited.

Our ability to use our U.S. federal and state net operating losses to offset potential future taxable income and related income taxes that would otherwise be due is dependent upon our generation of future taxable income, and we cannot predict with certainty when, or whether, we will generate sufficient taxable income to use all of our net operating losses.

Under current law, unused U.S. federal net operating losses generated for tax years beginning after December 31, 2017 are not subject to expiration and may be carried forward indefinitely. Such U.S. federal net operating losses generally may not be carried back to prior taxable years, except that, net operating losses generated in 2018, 2019 and 2020 may be carried back to each of the five tax years preceding the tax years of such losses. Additionally, for taxable years beginning after December 31, 2020, the deductibility of such U.S. federal net operating losses is limited to 80% of our taxable income in any future taxable year. In addition, both our current and our future unused U.S. federal net operating losses and tax credits may be subject to limitation under Sections 382 and 383 of the Code, if we undergo an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a rolling three-year period. We may have experienced such ownership changes in the past, and we may experience ownership changes in the future as a result of shifts in our stock ownership, some of which are outside our control. Our net operating losses and tax credits may also be impaired or restricted under state law. As of December 31, 2022, we had U.S.

federal net operating loss carryforwards of approximately $119.3 million, and our ability to utilize those net operating loss carryforwards could be limited by an "ownership change" as described above, which could result in increased tax liability to us.

We plan to distribute our technology, biology, execution and financing risks across a wide variety of therapeutic areas, disease states, programs, and technologies. However, our assessment of, and approach to, risk may not be comprehensive or effectively avoid delays or failures in one or more of our programs or modalities. Failures in one or more of our programs or modalities could adversely impact other programs or modalities in our development portfolio and have a material adverse impact on our business, results of operations and ability to fund our business.

We are creating a new category of potential therapeutics based on EEVs to improve the lives of patients. We have designed our strategy and operations to realize the full potential value and impact of EEVs over a long time horizon across a broad array of human diseases. We have made investments in our platform, infrastructure, and clinical capabilities that have enabled us to establish a development portfolio of several programs in development. As our therapeutic candidates and discovery programs progress, we or others may determine: that certain of our risk allocation decisions were incorrect or insufficient; that we made platform level technology mistakes; that individual programs or our EEV science in general has technology or biology risks that were unknown or underappreciated; that our choices on how to develop our infrastructure to support our scale will result in an inability to manufacture our therapeutics for clinical trials or otherwise impair our manufacturing; or that we have allocated resources in such a way that large investments are not recovered and capital allocation is not subject to rapid re-direction. All of these risks may relate to our current and future programs sharing similar science (including EEV science) and infrastructure, and in the event material decisions in any of these areas turn out to have been incorrect or under-optimized, we may experience a material adverse impact on our business and ability to fund our operations and we may never realize what we believe is the potential of EEVs.

While we will attempt to diversify our risks by developing one or more programs in each modality, there are risks that are unique to each modality and risks that are applicable across modalities. These risks may impair our ability to advance one or more of our programs in clinical development, obtain regulatory approval, or ultimately commercialize our programs, or cause us to experience significant delays in doing so, any of which may materially harm our business.

Certain features in our therapeutic candidates, including those related to large enzymes, antibodies and oligonucleotides, and their components, may result in foreseen and unforeseen risks that are active across some or all of our modalities. In addition, the biology risk across much of our development portfolio represents targets and pathways not clinically validated by one or more approved drugs. While we believe we have made progress in seeking to reduce biology risk in certain settings, the risk that the targets or pathways that we have selected may not be effective could continue to apply across our current and future programs. Any such portfolio spanning risks, whether known or unknown, if realized in any one of our programs would have a material and adverse effect on our other programs and on our business as a whole.

Successful development of intracellular therapeutics is highly uncertain and is dependent on numerous factors, many of which are beyond our control. Intracellular therapeutics that appear promising in the early phases of development may fail to reach the market for several reasons, including:

- nonclinical or preclinical testing or study results may show our EEV-therapeutics to be less effective than desired or to have harmful or problematic side effects or toxicities;
- clinical trial results may show our oligonucleotides to be less effective than expected (e.g., a clinical trial could fail to meet its primary endpoint(s)) or to have unacceptable side effects or toxicities;
- failure to receive the necessary regulatory approvals or a delay in receiving such approvals. Among other things, such delays may be caused by slow enrollment in clinical trials, patients dropping out of trials, length of time to achieve trial endpoints, additional time requirements for data analysis, NDA or BLA preparation, discussions with the FDA, a failure to align with the FDA regarding clinical trial endpoints and related approval criteria,an FDA request for additional nonclinical or clinical data, or unexpected safety or manufacturing issues;
- manufacturing costs, formulation issues, pricing or reimbursement issues, or other factors that make our EEV-therapeutics uneconomical; and
- proprietary rights of others and their competing products and technologies that may prevent our EEV-therapeutics from being commercialized.

Adverse developments affecting the financial services industry, such as actual events or concerns involving liquidity, defaults, or non-performance by financial institutions or transactional counterparties, could adversely affect the Company's current and projected business operations and its financial condition and results of operations.

Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank ("SVB") was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership. Although a statement by the Department of the Treasury, the Federal Reserve and the FDIC indicated that all depositors of SVB would have access to all of their money after only one business day of closure, including funds held in uninsured deposit accounts, borrowers under credit agreements, letters of credit and certain other financial instruments with SVB, Signature Bank or any other financial institution that is placed into receivership by the FDIC, may be unable to access undrawn amounts thereunder. Although we are not a borrower or party to any such instruments with SVB, Signature or any other financial institution currently in receivership, if we were to borrow money in the future and if any of our lenders or counterparties to any such instruments were to be placed into receivership, we may be unable to access such funds. In addition, if any of our customers, suppliers or other parties with whom we conduct business are unable to access funds pursuant to such instruments or lending arrangements with such a financial institution, such parties' ability to pay or perform their obligations to us or to enter into new commercial arrangements requiring additional payments to us or additional funding could be adversely affected. In this regard, counterparties to SVB credit agreements and arrangements, and third parties such as beneficiaries of letters of credit (among others), may experience direct impacts from the closure of SVB and uncertainty remains over liquidity concerns in the broader financial services industry, including for example in the case of First Republic Bank and Credit Suisse during March 2023. Similar impacts have occurred in the past, such as during the 2008-2010 financial crisis.

Inflation and rapid increases in interest rates have led to a decline in the trading value of previously issued government securities with interest rates below current market interest rates. Although the U.S. Department of Treasury, FDIC and Federal Reserve Board have announced a program to provide up to $25 billion of loans to financial institutions secured by certain of such government securities held by financial institutions to mitigate the risk of potential losses on the sale of such instruments, widespread demands for customer withdrawals or other liquidity needs of financial institutions for immediately liquidity may exceed the capacity of such program. Additionally, there is no guarantee that the U.S. Department of Treasury, FDIC and Federal Reserve Board will provide access to uninsured funds in the future in the event of the closure of other banks or financial institutions, or that they would do so in a timely fashion.

Although we assess our banking and customer relationships as we believe necessary or appropriate, our access to funding sources and other credit arrangements in amounts adequate to finance or capitalize our current and projected future business operations could be significantly impaired by factors that affect the Company, the financial institutions with which the Company has credit agreements or arrangements directly, or the financial services industry or economy in general. These factors could include, among others, events such as liquidity constraints or failures, the ability to perform obligations under various types of financial, credit or liquidity agreements or arrangements, disruptions or instability in the financial services industry or financial markets, or concerns or negative expectations about the prospects for companies in the financial services industry. These factors could involve financial institutions or financial services industry companies with which the Company has financial or business relationships, but could also include factors involving financial markets or the financial services industry generally.

The results of events or concerns that involve one or more of these factors could include a variety of material and adverse impacts on our current and projected business operations and our financial condition and results of operations. These could include, but may not be limited to, the following:

- Delayed access to deposits or other financial assets or the uninsured loss of deposits or other financial assets;
- Potential or actual breach of statutory, regulatory or contractual obligations, including obligations that require the Company to maintain letters of credit or other credit support arrangements;
- Termination of cash management arrangements and/or delays in accessing or actual loss of funds subject to cash management arrangements.

In addition, investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Any decline in available funding or access to our cash and liquidity resources could, among other risks, adversely impact our ability to meet our operating expenses, financial obligations or fulfill our other obligations, result in breaches of our financial and/or contractual obligations or result in violations of federal or state wage and hour laws. Any of these impacts, or any other impacts resulting from the factors described above or other related or similar factors not described above, could have material adverse impacts on our liquidity, our current and/or planned business operations, and our current or projected financial condition and results of operations.

In addition, any further deterioration in the macroeconomic economy or financial services industry could lead to losses or defaults by our suppliers, which in turn, could have a material adverse effect on our current and/or planned business operations and our current or projected results of operations and financial condition. For example, a customer may fail to make payments when due, default under their agreements with us, become insolvent or declare bankruptcy, or a supplier may determine that it will no longer deal with us as a customer. In addition, a customer or supplier could be adversely affected by any of the liquidity or other risks that are described above as factors that could result in material adverse impacts on the Company, including but not limited to delayed access or loss of access to uninsured deposits or loss of the ability to draw on existing credit facilities involving a troubled or failed financial institution. Any customer, collaborator or supplier bankruptcy or insolvency, or the failure of any customer or collaborator to make payments when due, or any breach or default by a customer, collaborator or supplier, or the loss of any significant supplier or collaborator relationships, could result in material losses to the Company and may have a material adverse impact on our business.

Risks Related to Our Intellectual Property

If we or our collaborators are unable to obtain and maintain patent protection for our therapeutic programs and other proprietary technologies we develop, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our therapeutic programs and other proprietary technologies we may develop may be adversely affected.

Our success depends in large part on our ability and the abilities of our collaborators to obtain and maintain patent protection in the United States and other countries with respect to our therapeutic programs and other proprietary technologies we may develop. In order to protect our proprietary position, we have filed or intend to file patent applications in the United States and abroad relating to our therapeutic programs and other proprietary technologies we may develop; however, there can be no assurance that any such patent applications will issue as granted patents. If we are unable to obtain or maintain patent protection with respect to our therapeutic programs and other proprietary technologies we may develop, our business, financial condition, results of operations and prospects could be materially harmed.

Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions, obtain, maintain and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our protection. In addition, we may rely on third-party collaborators or licensors to file patent applications relating to therapeutic programs or proprietary technology that may be developed or in-licensed. We cannot predict whether the patent applications we are currently pursuing, or that we or our third-party collaborators or licensors may pursue, will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient protection against competitors or other third parties.

The patent prosecution process is expensive, time-consuming, and complex, and we may not be able to file, prosecute, maintain, enforce, or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output in time to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. In addition, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our inventions and the prior art allow our inventions to be patentable over the prior art. Furthermore, publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we or our licensors were the first to make the inventions claimed in any of our owned or licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions.

No consistent policy regarding the scope of claims allowable in patents in the biotechnology field has emerged in the United States, and the patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our patent applications may not result in patents being issued which protect our therapeutic programs and other proprietary technologies we may develop or which effectively prevent others from commercializing competitive technologies and products. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. We do not currently have issued patents that cover all of our technology or therapeutic candidates. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications

filed by us in the future. Moreover, even issued patents do not provide us with the right to practice our technology in relation to the commercialization of our therapeutics. The area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our patented therapeutic candidates and practicing our proprietary technology. Our issued patents, those that may issue in the future and those that we in-license may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our therapeutic candidates. Furthermore, our competitors may independently develop similar technologies.

Moreover, the claim coverage in a patent application can be significantly reduced before the patent is granted. Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Any patents issuing from our patent applications may be challenged, narrowed, circumvented or invalidated by third parties. Consequently, we do not know whether our therapeutic programs and other proprietary technology will be protectable or remain protected by valid and enforceable patents. For example, we do not currently have any issued patents covering any of our oligonucleotide therapeutic candidates. The extent to which any patents, if and when granted, will cover our therapeutic candidates is uncertain. Even if a patent is granted, our competitors or other third parties may be able to circumvent the patent by developing similar or alternative technologies or products in a non-infringing manner which could materially adversely affect our business, financial condition, results of operations and prospects. In addition, given the amount of time required for the development, testing and regulatory review of our therapeutic programs and eventual therapeutic candidates, patents protecting the therapeutic candidates might expire before or shortly after such therapeutic candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

The issuance of a patent is not conclusive as to its inventorship, scope, validity, or enforceability and our patents may be challenged in the courts or patent offices in the United States and abroad. We may be subject to a third-party pre-issuance submission of prior art to the United States Patent and Trademark Office (USPTO) or in other jurisdictions, or become involved in opposition, derivation, revocation, reexamination, post-grant and *inter partes* review, or other similar proceedings challenging our patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our patent rights, allow third parties to commercialize our therapeutic programs and other proprietary technologies we may develop and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us.

In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future therapeutic candidates.

Our rights to develop and commercialize any therapeutic candidates are subject and may in the future be subject, in part, to the terms and conditions of licenses granted to us by third parties. If we fail to comply with our obligations under our current or future intellectual property license agreements or otherwise experience disruptions to our business relationships with our current or any future licensors, we could lose intellectual property rights that are important to our business.

We are and expect to continue to be reliant upon third-party licensors for certain patent and other intellectual property rights that are important or necessary to the development of our therapeutic programs, eventual therapeutic candidates, and proprietary technologies. For example, we rely on a license from Ohio State Innovation Foundation (OSIF), an affiliate of The Ohio State University (OSU) to certain patent rights and know-how of OSU. Our license agreement with OSIF imposes, and we expect that any future license agreement will impose, specified diligence, milestone payments, royalty payments, commercialization, development and other obligations on us and require us to meet development timelines, or to exercise diligent or commercially reasonable efforts to develop and commercialize licensed products, in order to maintain the licenses. These milestone payments, and other payments associated with the license, will make it less profitable for us to develop and potentially commercialize our therapeutic candidate. If this agreement is terminated, we could lose intellectual property rights that may be important to our business, potentially be liable for damages to the licensor or potentially be prevented from developing and commercializing our therapeutic candidate. Termination of the agreement or reduction or elimination of our rights under the agreement may also potentially result in us being required to negotiate a new or reinstated agreement with less favorable terms, and it is possible that we may be unable to obtain any such additional license at a reasonable cost or on reasonable terms, if at all. In that event, we may be required to spend significant time and resources to redesign our therapeutic candidate or the method for manufacturing it or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. For more information on the terms of the license agreement with OSIF, see “Business-Intellectual Property-License Agreement

with The Ohio State University" in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on November 1, 2021.

Furthermore, our licensors have, or may in the future have, the right to terminate a license if we materially breach the agreement and fail to cure such breach within a specified period or in the event we undergo certain bankruptcy events. In spite of our best efforts, our current or any future licensors might conclude that we have materially breached our license agreements and might therefore terminate the license agreements. If our license agreements are terminated, we may lose our rights to develop and commercialize therapeutic candidates and technology, lose patent protection, experience significant delays in the development and commercialization of our therapeutic candidates and technology, and incur liability for damages. If these in-licenses are terminated, or if the underlying intellectual property fails to provide the intended exclusivity, our competitors or other third parties could have the freedom to seek regulatory approval of, and to market, products and technologies identical or competitive to ours and we may be required to cease our development and commercialization of certain of our therapeutic candidates and technology. In addition, we may seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties, including our competitors, to receive licenses to a portion of the intellectual property that is subject to our existing licenses and to compete with any therapeutic candidates we may develop and our technology. Any of the foregoing could have a material adverse effect on our competitive position, business, financial condition, results of operations and prospects.

Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted and obligations imposed under the license agreement and other interpretation-related issues;
- our or our licensors' ability to obtain, maintain and defend intellectual property and to enforce intellectual property rights against third parties;
- the extent to which our technology, therapeutic candidates and processes infringe, misappropriate or otherwise violate the intellectual property of the licensor that is not subject to the license agreement;
- the sublicensing of patent and other intellectual property rights under our license agreements;
- our diligence, development, regulatory, commercialization, financial or other obligations under the license agreement and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our current or future licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, any current or future license agreements to which we are a party, including our license agreement with OSIF, are likely to be, complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our diligence, development, regulatory, commercialization, financial or other obligations under the relevant agreement. In addition, if disputes over intellectual property that we have licensed or any other dispute related to our license agreements prevent or impair our ability to maintain our current license agreements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected therapeutic candidates and technology. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

License agreements we may enter into in the future may be non-exclusive. Accordingly, third parties may also obtain non-exclusive licenses from such licensors with respect to the intellectual property licensed to us under such license agreements. Accordingly, these license agreements may not provide us with exclusive rights to use such licensed patent and other intellectual property rights, or may not provide us with exclusive rights to use such patent and other intellectual property rights in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and any therapeutic candidates we may develop in the future.

Moreover, some of our in-licensed patent and other intellectual property rights may in the future be subject to third party interests such as co-ownership. If we are unable to obtain an exclusive license to such third-party co-owners' interest, in such patent and other intellectual property rights, such third-party co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. We or our licensors may need the cooperation of any such co-owners of our licensed patent and other intellectual property rights in order to enforce them against third parties, and such cooperation may not be provided to us or our licensors.

Additionally, we may not have complete control over the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications that we license from third parties. It is possible that our licensors' filing, prosecution and maintenance of the licensed patents and patent applications, enforcement of patents against infringers or defense of such patents against challenges of validity or claims of enforceability may be less vigorous than if we had conducted them ourselves, and accordingly, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced and defended in a manner consistent with the best interests of our business. If our licensors fail to file, prosecute, maintain, enforce and defend such patents and patent applications, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, our right to develop and commercialize any of our technology and any therapeutic candidates we may develop that are the subject of such licensed rights could be adversely affected and we may not be able to prevent competitors or other third parties from making, using and selling competing products.

Furthermore, our owned and in-licensed patent rights may be subject to a reservation of rights by one or more third parties, including the U.S. government. Pursuant to the Bayh-Dole Act of 1980, the U.S. government has certain rights in inventions developed with government funding. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. When new technologies are developed with government funding, in order to secure ownership of patent rights related to the technologies, the recipient of such funding is required to comply with certain government regulations, including timely disclosing the inventions claimed in such patent rights to the U.S. government and timely electing title to such inventions. A failure to meet these obligations may lead to a loss of rights or the unenforceability of relevant patents or patent applications. In addition, the U.S. government has the right, under certain limited circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (1) adequate steps have not been taken to commercialize the invention; (2) government action is necessary to meet public health or safety needs; or (3) government action is necessary to meet requirements for public use under federal regulations (also referred to as march-in rights). If the U.S. government exercised its march-in rights in our current or future intellectual property rights that are generated through the use of U.S. government funding or grants, we could be forced to license or sublicense intellectual property developed by us or that we license on terms unfavorable to us, and there can be no assurance that we would receive compensation from the U.S. government for the exercise of such rights. If the U.S. government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. The U.S. government's rights may also permit it to disclose the funded inventions and technology, which may include our confidential information, to third parties and to exercise march-in rights to use or allow third parties to use the technology that was developed using U.S. government funding. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. Any of the foregoing could harm our business, financial condition, results of operations and prospects significantly.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, maintaining, enforcing and defending patents and other intellectual property rights on our technology and any therapeutic candidates we may develop in all jurisdictions throughout the world would be prohibitively expensive, and accordingly, our intellectual property rights in some jurisdictions outside the United States could be less extensive than those in the United States. In some cases, we or our licensors may not be able to obtain patent or other intellectual property protection for certain technology and therapeutic candidates outside the United States. In addition, the laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our licensors may not be able to obtain issued patents or other intellectual property rights covering any therapeutic candidates we may develop and our technology in all jurisdictions outside the United States and, as a result, may not be able to prevent third parties from practicing our and our licensors' inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Third parties may use our technologies in jurisdictions where we and our licensors have not pursued and obtained patent or other intellectual property protection to develop their own products and, further, may export otherwise infringing, misappropriating or violating products to territories where we have patent or other intellectual property protection, but enforcement is not as strong as that in the United States. These products may compete with any therapeutic candidates we may develop and our technology and our or our licensors' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Additionally, many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain jurisdictions, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology and pharmaceutical products, which could make it difficult for us to stop the infringement, misappropriation or other violation of our patent and other intellectual property rights or marketing of competing products in violation of our intellectual property rights generally. For example, an April 2019 report from the Office of the United States Trade Representative identified a number of countries, including China, Russia, Argentina, Chile and India, where challenges to the procurement and enforcement of patent rights have been reported. Proceedings to enforce our or our licensors' patent and other intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patent and other intellectual property rights at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We or our licensors may not prevail in any lawsuits that we or our licensors initiate and, if we or our licensors prevail, the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many jurisdictions have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many jurisdictions limit the enforceability of patents against government agencies or government contractors. In these jurisdictions, the patent owner may have limited remedies, which could materially diminish the value of such patents. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected. Patent protection must ultimately be sought on a country-by-country basis, which is an expensive and time-consuming process with uncertain outcomes. Accordingly, we may choose not to seek patent protection in certain countries, and we will not have the benefit of patent protection in such countries.

Issued patents covering any therapeutic candidates we may develop could be found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad.

Our owned and licensed patent rights may be subject to priority, validity, inventorship and enforceability disputes. If we or our licensors are unsuccessful in any of these proceedings, such patent rights may be narrowed, invalidated or held unenforceable, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or we may be required to cease the development, manufacture and commercialization of one or more of our therapeutic candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we or one of our licensors initiate legal proceedings against a third party to enforce a patent covering any of any therapeutic candidates we may develop or our technology, the defendant could counterclaim that the patent covering the therapeutic candidate or technology is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, lack of written description or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld information material to patentability from the USPTO, or made a misleading statement, during prosecution. Third parties also may raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, interference proceedings, derivation proceedings, post grant review, *inter partes* review and equivalent proceedings such as opposition, invalidation and revocation proceedings in foreign jurisdictions. Such proceedings could result in the revocation or cancellation of or amendment to our patents in such a way that they no longer cover any therapeutic candidates we may develop or our technology or no longer prevent third parties from competing with any therapeutic candidates we may develop or our technology. The outcome following legal assertions of invalidity and unenforceability is unpredictable. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a distraction to management and other employees. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which the patent examiner and we or our licensing partners were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we could lose at least part, and perhaps all, of the patent protection on one or more of our therapeutic candidates or technology. Such a loss of patent protection could have a material adverse effect on our business, financial condition, results of operations and prospects.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over

the lifetime of our owned or licensed patents and applications. In certain circumstances, we rely on our licensing partners to pay these fees due to U.S. and non-U.S. patent agencies. The USPTO and various non-U.S. government agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. In some cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in a partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Changes in patent law in the United States or worldwide could diminish the value of patents in general, thereby impairing our ability to protect any therapeutic candidates we may develop and our technology.

Changes in either the patent laws or interpretation of patent laws in the United States and worldwide, including patent reform legislation such as the Leahy-Smith America Invents Act (the Leahy-Smith Act), could increase the uncertainties and costs surrounding the prosecution of any owned or in-licensed patent applications and the maintenance, enforcement or defense of any current in-licensed issued patents and issued patents we may own or in-license in the future. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These changes include provisions that affect the way patent applications are prosecuted, redefine prior art, provide more efficient and cost-effective avenues for competitors to challenge the validity of patents, and enable third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent at USPTO-administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. Assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first-to-file system in which, assuming that the other statutory requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. As such, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our in-licensed issued patents and issued patents we may own or in-license in the future, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our therapeutic candidates or (ii) invent any of the inventions claimed in our or our licensor's patents or patent applications.

The Leahy-Smith Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim unpatentable even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to review patentability of our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Therefore, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or in-licensed patent applications and the enforcement or defense of our owned or in-licensed issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. As one example, in the case *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the U.S. Supreme Court held that certain claims to DNA molecules are not patentable simply because they have been isolated from surrounding material. Moreover, in 2012, the USPTO issued a guidance memo to patent examiners indicating that process claims directed to a law of nature, a natural phenomenon or a naturally occurring relation or correlation that do not include additional elements or steps that integrate the natural principle into the claimed invention such that the natural principle is practically applied and the claim amounts to significantly more than the natural principle itself should be rejected as directed to patent-ineligible subject matter. Accordingly, in view of the guidance memo, there can be no assurance that claims in our patent rights covering any therapeutic candidates we may develop or our technology will be held by the USPTO or equivalent foreign patent offices or by courts in the United States or in foreign jurisdictions to cover patentable subject matter. This combination of events has created uncertainty with respect to the validity and enforceability of patents once obtained. Depending on future actions

by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on our patent rights and our ability to protect, defend and enforce our patent rights in the future.

If we do not obtain patent term extension and data exclusivity for any therapeutic candidates we may develop, our business may be harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of any therapeutic candidates we may develop and our technology, one or more of our U.S. patents that we license or may own in the future may be eligible for limited patent term extension under Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent extension term of up to five years as compensation for patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent may be extended and only those claims covering the approved product, a method for using it or a method for manufacturing it may be extended. The application for the extension must be submitted prior to the expiration of the patent for which extension is sought and within 60 days of FDA approval. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. However, we may not be granted an extension because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. In addition, to the extent we wish to pursue patent term extension based on a patent that we in-license from a third party, we would need the cooperation of that third party. If we are unable to obtain patent term extension or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims challenging the inventorship or ownership of our patent and other intellectual property rights.

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in-licensed patent rights, trade secrets or other intellectual property as an inventor or co-inventor. For example, we or our licensors may have inventorship disputes arise from conflicting obligations of employees, consultants or others who are involved in developing our therapeutic candidates or technology. Litigation may be necessary to defend against these and other claims challenging inventorship or our or our licensors' ownership of our owned or in-licensed patent rights, trade secrets or other intellectual property. If we or our licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of or right to use intellectual property that is important to any therapeutic candidates we may develop or our technology. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection for our therapeutic programs and other proprietary technologies we may develop, we also rely on trade secrets and confidentiality agreements to protect our unpatented know-how, technology, and other proprietary information and to maintain our competitive position. With respect to our EEV Platform and development programs, we consider trade secrets and know-how to be one of our important sources of intellectual property, including our extensive knowledge of oligonucleotide drug delivery techniques and antibody conjugation. Trade secrets and know-how can be difficult to protect. In particular, the trade secrets and know-how in connection with our EEV Platform, development programs and other proprietary technology we may develop may over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology and the movement of personnel with scientific positions in academic and industry.

We seek to protect these trade secrets and other proprietary technology, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. We cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less

willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or other third party, our competitive position would be materially and adversely harmed.

We may be subject to claims that third parties have an ownership interest in our trade secrets. For example, we may have disputes arise from conflicting obligations of our employees, consultants or others who are involved in developing our therapeutic candidate. Litigation may be necessary to defend against these and other claims challenging ownership of our trade secrets. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable trade secret rights, such as exclusive ownership of, or right to use, trade secrets that are important to our therapeutic programs and other proprietary technologies we may develop. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management and other employees.

We may not be successful in obtaining necessary rights to any therapeutic candidate we may develop through acquisitions and in-licenses.

We currently own or exclusively license intellectual property rights covering certain aspects of our therapeutic programs. Other pharmaceutical companies and academic institutions may also have filed or are planning to file patent applications potentially relevant to our business. In order to avoid infringing these third-party patents, we may find it necessary or prudent to obtain licenses to such patents from such third-party intellectual property holders. However, we may be unable to secure such licenses or otherwise acquire or in-license any compositions, methods of use, processes or other intellectual property rights from third parties that we identify as necessary for our therapeutic programs and other proprietary technologies we may develop. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to successfully obtain rights to required third party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or therapeutic candidate, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims that our employees, consultants or advisors have wrongfully used or disclosed alleged trade secrets of their current or former employers or claims asserting ownership of what we regard as our own intellectual property.

Some of our employees, consultants and advisors are currently or were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these individuals have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations and prospects.

Third-party claims of intellectual property infringement, misappropriation or other violations against us or our collaborators may prevent or delay the development and commercialization of our therapeutic programs and other proprietary technologies we may develop.

Our commercial success depends in part on our ability to avoid infringing, misappropriating and otherwise violating the patents and other intellectual property rights of third parties. There is a substantial amount of complex litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as

well as administrative proceedings for challenging patents, including interference, derivation and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. As discussed above, recently, due to changes in U.S. law referred to as patent reform, new procedures including *inter partes* review and post-grant review have also been implemented. As stated above, this reform adds uncertainty to the possibility of challenge to our patents in the future.

Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we are commercializing or plan to commercialize our therapeutic programs and in which we are developing other proprietary technologies. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our therapeutic programs and commercializing activities may give rise to claims of infringement of the patent rights of others. We are aware of third party patents that may cover certain aspects of therapeutic candidates that we are developing or may develop. We cannot assure our stockholders that our therapeutic programs and other proprietary technologies we may develop will not infringe existing or future patents owned by third parties. We may not be aware of patents that have already been issued and that a third party, for example, a competitor in the fields in which we are developing our therapeutic programs, might assert as infringed by us. It is also possible that patents owned by third parties of which we are aware, but which we do not believe we infringe or that we believe we have valid defenses to any claims of patent infringement, could be found to be infringed by us. It is not unusual that corresponding patents issued in different countries have different scopes of coverage, such that in one country a third-party patent does not pose a material risk, but in another country, the corresponding third-party patent may pose a material risk to our planned products. As such, we review third-party patents in the relevant pharmaceutical markets. In addition, because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that we may infringe.

In the event that any third party claims that we infringe their patents or that we are otherwise employing their proprietary technology without authorization and initiates litigation against us, even if we believe such claims are without merit, a court of competent jurisdiction could hold that such patents are valid, enforceable and infringed by us. In this case, the holders of such patents may be able to block our ability to commercialize the infringing products or technologies unless we obtain a license under the applicable patents, or until such patents expire or are finally determined to be held invalid or unenforceable. Such a license may not be available on commercially reasonable terms or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize the infringing products or technologies or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business.

Defense of infringement claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and other employee resources from our business, and may impact our reputation. In the event of a successful claim of infringement against us, we may be enjoined from further developing or commercializing the infringing products or technologies. In addition, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties and/or redesign our infringing products or technologies, which may be impossible or require substantial time and monetary expenditure. In that event, we would be unable to further develop and commercialize our therapeutic candidate or technologies, which could harm our business significantly. Further, we cannot predict whether any required license would be available at all or whether it would be available on commercially reasonable terms. In the event that we could not obtain a license, we may be unable to further develop our therapeutic candidate and commercialize our product, if approved, which could harm our business significantly. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms.

Engaging in litigation defending against third parties alleging infringement of patent and other intellectual property rights is very expensive, particularly for a company of our size, and time-consuming. Some of our competitors may be able to sustain the costs of litigation or administrative proceedings more effectively than we can because of greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

We may in the future pursue invalidity proceedings with respect to third-party patents. The outcome following legal assertions of invalidity is unpredictable. Even if resolved in our favor, these legal proceedings may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In

addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such proceedings adequately. Some of these third parties may be able to sustain the costs of such proceedings more effectively than we can because of their greater financial resources. If we do not prevail in the patent proceedings the third parties may assert a claim of patent infringement directed at our therapeutic candidates.

We may become involved in lawsuits to protect or enforce our patents and other intellectual property rights, which could be expensive, time-consuming and unsuccessful.

Third parties, such as a competitor, may infringe our patent rights. In an infringement proceeding, a court may decide that a patent owned by us is invalid or unenforceable or may refuse to stop the other party from using the invention at issue on the grounds that the patent does not cover the technology in question. In addition, our patent rights may become involved in inventorship, priority or validity disputes. To counter or defend against such claims can be expensive and time-consuming. An adverse result in any litigation proceeding could put our patent rights at risk of being invalidated or interpreted narrowly. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we are given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, which may not survive such proceedings. Moreover, any name we have proposed to use with our therapeutic candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA or an equivalent administrative body in a foreign jurisdiction objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA or equivalent body. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark.

We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Furthermore, assertions of potential trademark infringement or possible market confusion may lead to coexistence agreements in order to avoid costly disputes related to our trademarks. As a consequence, we may be forced to amend the list of goods and services covered by our trademarks more narrowly than as originally filed and intended, which could adversely affect our ability to establish name recognition. For example, the description of goods and services for our Entrada trademark was amended twice to settle potential disputes with two other biopharmaceutical companies as part of

coexistence agreements. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, domain name or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to our therapeutic candidate or utilize similar technology but that are not covered by the claims of the patents that we license or may own;
- we might not have been the first to make the inventions covered by our current or future patent applications;
- we might not have been the first to file patent applications covering our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our current or future patent applications will not lead to issued patents;
- any patent issuing from our current or future patent applications may be held invalid or unenforceable, including as a result of legal challenges by our competitors or other third parties;
- our competitors or other third parties might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have engaged in scientific collaborations in the past and will continue to do so in the future and our collaborators may develop adjacent or competing products that are outside the scope of our patents;
- we may not develop additional proprietary technologies that are patentable;
- the patents of others may harm our business; and
- we may choose not to file for patent protection in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent application covering such intellectual property.

The occurrence of any of these events would have a material adverse effect on our business, financial condition, results of operations and prospects.

We partially depend on intellectual property licensed from third parties, and our licensors may not always act in our best interest. If we fail to comply with our obligations under our intellectual property licenses, if the licenses are terminated or if disputes regarding these licenses arise, we could lose significant rights that are important to our business.

We are dependent, in part, on patents, know-how and proprietary technology licensed from others. Our licenses to such patents, know-how and proprietary technology may not provide exclusive rights in all relevant fields of use and in all territories in which we may wish to develop or commercialize our therapeutics in the future. The agreements under which we license patents, know-how and proprietary technology from others are complex, and certain provisions in such agreements may be susceptible to multiple interpretations.

If we fail to comply with obligations under any license agreements, our licensors may have the right to terminate our license, in which event we would not be able to develop or market technology or therapeutic candidates covered by the intellectual property licensed under these agreements. In addition, we may need to obtain additional licenses from our existing licensors and others to advance our research or allow commercialization of therapeutic candidates we may develop. It is possible that we may be unable to obtain any additional licenses at a reasonable cost or on reasonable terms, if at all. In either event, we may be required to expend significant time and resources to redesign our technology, therapeutic candidates, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected technology or therapeutic candidates.

If we or our licensors fail to adequately protect our licensed intellectual property, our ability to commercialize therapeutic candidates could suffer. We do not have complete control over the maintenance, prosecution and litigation of

our in-licensed patents and patent applications and may have limited control over future intellectual property that may be in-licensed. For example, we cannot be certain that activities such as the maintenance and prosecution by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. It is possible that our licensors' infringement proceedings or defense activities may be less vigorous than had we conducted them ourselves, or may not be conducted in accordance with our best interests.

In addition, the resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant patents, know-how and proprietary technology, or increase what we believe to be our financial or other obligations under the relevant agreement. Disputes that may arise between us and our licensors regarding intellectual property subject to a license agreement could include disputes regarding:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our therapeutic candidates and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected technology or therapeutic candidates. As a result, any termination of or disputes over our intellectual property licenses could result in the loss of our ability to develop and commercialize our EEV Platform, or EEV products, or we could lose other significant rights, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

For example, our agreements with certain of our third-party research partners provide that improvements developed in the course of our relationship may be owned solely by either us or our third-party research partner, or jointly between us and the third party. If we determine that rights to such improvements owned solely by a research partner or other third party with whom we collaborate are necessary to commercialize our therapeutic candidates or maintain our competitive advantage, we may need to obtain a license from such third party in order to use the improvements and continue developing, manufacturing or marketing our therapeutic candidates. We may not be able to obtain such a license on an exclusive basis, on commercially reasonable terms, or at all, which could prevent us from commercializing our therapeutic candidates or allow our competitors or others the chance to access technology that is important to our business. We also may need the cooperation of any co-owners of our intellectual property in order to enforce such intellectual property against third parties, and such cooperation may not be provided to us.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development portfolio through acquisitions and in-licenses.

The growth of our business may depend in part on our ability to acquire, in-license or use third-party proprietary rights. For example, our therapeutic candidates may require specific formulations to work effectively and efficiently, we may develop therapeutic candidates containing our compounds and pre-existing pharmaceutical compounds, or we may be required by the FDA or comparable foreign regulatory authorities to provide a companion diagnostic test or tests with our therapeutic candidates, any of which could require us to obtain rights to use intellectual property held by third parties. In addition, with respect to any patents we may co-own with third parties, we may require licenses to such co-owners interest to such patents. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary or important to our business operations. In addition, we may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. Were that to happen, we may need to cease use of the compositions or methods covered by those third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe on those intellectual property rights, which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, which means that our competitors may also receive access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

Additionally, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. In certain cases, these institutions provide us with an option

to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Even if we hold such an option, we may be unable to negotiate a license from the institution within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies that may be more established or have greater resources than we do may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our therapeutic candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. There can be no assurance that we will be able to successfully complete these types of negotiations and ultimately acquire the rights to the intellectual property surrounding the additional therapeutic candidates that we may seek to develop or market. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of certain programs and our business financial condition, results of operations and prospects could suffer.

We, our collaborators and our service providers may be subject to a variety of privacy and data security laws and contractual obligations, which could increase compliance costs and our failure to comply with them could subject us to potentially significant fines or penalties and otherwise harm our business.

We maintain a large quantity of sensitive information, including confidential business and patient health information in connection with our preclinical studies, and are subject to laws and regulations governing the privacy and security of such information. The global data protection landscape is rapidly evolving, and we may be affected by or subject to new, amended or existing laws and regulations in the future, including as our operations continue to expand or if we operate in foreign jurisdictions. These laws and regulations may be subject to differing interpretations, which adds to the complexity of processing personal data. Guidance on implementation and compliance practices are often updated or otherwise revised.

In the United States, there are numerous federal and state privacy and data security laws and regulations governing the collection, use, disclosure and protection of personal information, including federal and state health information privacy laws, federal and state security breach notification laws and federal and state consumer protection laws. Each of these laws is subject to varying interpretations and constantly evolving. By way of example, HIPAA imposes privacy and security requirements and breach reporting obligations with respect to individually identifiable health information upon "covered entities" (health plans, health care clearinghouses and certain health care providers), and their respective business associates, individuals or entities that create, received, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HIPAA mandates the reporting of certain breaches of health information to the U.S. Department of Health and Human Services (HHS), affected individuals and if the breach is large enough, the media. Entities that are found to be in violation of HIPAA may be subject to significant civil, criminal and administrative fines and penalties and/or additional reporting and oversight obligations. Even when HIPAA does not apply, failing to take appropriate steps to keep consumers' personal information secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act (FTCA), 15 U.S.C § 45(a). The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards.

In addition, certain state laws govern the privacy and security of health information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. By way of example, the California Consumer Privacy Act (CCPA), which went into effect on January 1, 2020, gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

Further, a new California ballot initiative, the California Privacy Rights Act (CPRA), was passed by California voters on November 3, 2020. The CPRA which became effective on January 1, 2023 creates additional obligations with respect to processing and storing personal information. Additionally, some observers have noted that the CCPA and CPRA could mark the beginning of a trend toward more stringent privacy legislation in the U.S., which could increase our potential liability and adversely affect our business. Already, in the United States, we have witnessed significant developments at the state level. For example, on March 2, 2021, Virginia enacted the Consumer Data Protection Act

(CDPA), which became effective on January 1, 2023 and, on July 8, 2021, Colorado's governor signed the Colorado Privacy Act (CPA), into law. This law will become effective on July 1, 2023. Moreover, on March 24, 2022, Utah's governor signed the Utah Consumer Privacy Act (UCPA), into law. The UCPA will take effect on December 31, 2023. Most recently, on April 28, 2022, the Connecticut state legislature passed "An Act Concerning Personal Data Privacy and Online Monitoring". Once signed, the Connecticut Act will take effect on July 1, 2023. While the new state laws incorporate many similar concepts, there are also several key differences in the scope, application, and enforcement of the law that will change the operational practices of regulated businesses. The new laws will, among other things, impact how regulated businesses collect and process personal sensitive data, conduct data protection assessments, transfer personal data to affiliates, and respond to consumer rights requests.

A number of other states have proposed new privacy laws, some of which are similar to the above discussed recently passed laws. Such proposed legislation, if enacted, may add additional complexity, variation in requirements, restrictions and potential legal risk, require additional investment of resources in compliance programs, impact strategies and the availability of previously useful data and could result in increased compliance costs and/or changes in business practices and policies. The existence of comprehensive privacy laws in different states in the country would make our compliance obligations more complex and costly and may increase the likelihood that we may be subject to enforcement actions or otherwise incur liability for noncompliance.

We will be subject to the data protection laws of the European Union (EU) and United Kingdom (UK) in relation to personal data we collect from these territories. These laws impose additional obligations and risk upon our business, including substantial expenses and changes to business operations that are required to comply with these laws. The withdrawal of the UK from the EU (Brexit) and the subsequent separation of the data protection regimes of these territories means we are required to comply with separate data protection laws in the EU and UK which may lead to additional compliance costs and could increase our overall risk. The collection, use, storage, disclosure, transfer, and other processing of personal data in the EU is governed by the provisions of the General Data Protection Regulation, or the EU GDPR. Further to Brexit, the EU GDPR ceased to apply in the UK at the end of the transition period on December 31, 2020. As of January 1, 2021, the UK's European Union (Withdrawal) Act 2018 incorporated the EU GDPR into UK law along with the UK Data Protection Act 2018, referred to as the UK GDPR and together with the EU GDPR, referred to as the GDPR. Failure to comply with the GDPR, and any supplemental European Economic Area, or EEA, country's national data protection laws which may apply by virtue of the location of the individuals whose personal data we collect, may result in fines and other administrative penalties, including monetary penalties of up to €20/£17.5 million or 4% of worldwide revenue (whichever is higher). The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR.

The GDPR imposes several requirements relating to processing personal data, including the requirement to provide notice to individuals about personal data processing activities, the lawful basis for processing personal data, having data processing agreements with third parties who process personal data, appointing data protection officers, conducting data protection impact assessments, record-keeping, responding to individuals' requests to exercise their rights in respect of their personal data, notification of data breaches to the competent national data protection authority, and the implementation of safeguards to protect the security and confidentiality of personal data. The GDPR also imposes several additional requirements relating to the processing of health and other sensitive data which may require us to obtain consent from the individuals to whom the personal data relates.

The GDPR imposes strict rules on the transfer of personal data out of the EEA/UK to countries not regarded by the European Commission and the UK government as providing adequate protection, or third countries, including the United States. These transfers are prohibited unless an appropriate safeguard specified by data protection laws is implemented, such as the Standard Contractual Clauses, or SCCs, approved by the European Commission, or a derogation applies. A decision by the Court of Justice of the European Union, or CJEU, in 2020 Case C-311/18 (Data Protection Commissioner v Facebook Ireland and Maximillian Schrems or Schrems II) invalidated the EU-U.S. Privacy Shield Framework (which was one of the primary mechanisms used by U.S. companies to import personal data from the EEA in compliance with the GDPR's cross-border data transfer restrictions) and introduced substantial new requirements to the use of the SCCs, including the requirement to assess the risk of the transfer taking into account the laws in the destination country. As a result of these developments, the European Commission published updated versions of the SCCs, with businesses required to have replaced all previous versions as of December 2022. Finalizing the implementation of the updated SCCs may continue to necessitate significant contractual overhaul of our data transfer arrangements with customers, sub-processors and vendors. The UK is not subject to the European Commission's new SCCs but the UK Information Commissioner's Office has published the UK's own transfer mechanisms for personal data originating from the UK (the International Data Transfer Agreement and International Data Transfer Addendum (each an IDTA)), which are in force as of March 21, 2022. The IDTA requires the same case-by-case risk assessment of the transfer. The international transfer obligations under the EEA and UK data protection regimes will require significant effort and cost, and may result in us needing to make strategic considerations around where EEA/UK personal data is located and which service providers

we can utilize for the processing of EEA/UK personal data, particularly as the enforcement around GDPR international transfer compliance obligations is currently unclear. The above transfer requirements and other future developments regarding the flow of data across borders could increase the cost and complexity of delivering our services in some markets and may lead to governmental enforcement actions, litigation, fines, and penalties or adverse publicity, which could adversely affect our business and financial position.

Although the UK is regarded as a third country under the EU's GDPR, the European Commission (EC) has now issued a decision recognizing the UK as providing adequate protection under the EU GDPR and, therefore, transfers of personal data originating in the EU to the UK remain unrestricted. Like the EU GDPR, the UK GDPR restricts personal data transfers outside the UK to countries not regarded by the UK as providing adequate protection.

The UK Government has also now introduced a Data Protection and Digital Information Bill, or the UK Bill, into the UK legislative process with the intention for this bill to reform the UK's data protection regime following Brexit. If passed, the final version of the UK Bill may have the effect of further altering the similarities between the UK and EU data protection regime and threaten the UK Adequacy Decision from the EU Commission. This may lead to additional compliance costs and could increase our overall risk.

Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous and time-intensive process, and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. If we fail to comply with any such laws or regulations, we may face significant fines and penalties that could adversely affect our business, financial condition and results of operations.

Use of open source software could impose limitations on us that may adversely affect our business.

Should use of open source software be necessary for commercialization of our therapeutic candidates, such use could impose limitations on our ability to commercialize. As a result, as we seek to use our platform in connection with commercially available products, we may be required to license software under different license terms, which may not be possible on commercially reasonable terms, if at all. If we are unable to license software components on terms that permit its use for commercial purposes, we may be required to replace those software components, which could result in delays, additional cost and additional regulatory approvals.

Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the software code. Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain of the open source licenses, be required to release the source code of our proprietary software to the public. This could allow our competitors to create similar products with lower development effort and time, and ultimately could result in a loss of product sales for us. Although we monitor our use of open source software, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that those licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our therapeutic candidates. We could be required to seek licenses from third parties in order to continue offering our therapeutic candidates, to re-engineer our therapeutic candidates or to discontinue the sale of our therapeutic candidates in the event re-engineering cannot be accomplished on a timely basis, any of which could materially and adversely affect our business, financial condition, results of operations and prospects.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor or other third party will discover our trade secrets or that our trade secrets will be misappropriated or disclosed.

Because we currently rely on certain third parties to manufacture all or part of our drug product and to perform quality testing, and because we collaborate with various organizations and academic institutions for the advancement of our product engine and development portfolio, we must, at times, share our proprietary technology and confidential information, including trade secrets, with them. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements and other similar agreements with our collaborators, advisors, employees, consultants and contractors prior to beginning research or disclosing any proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors or other third parties, are inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Despite our efforts to protect our trade

secrets, our competitors may discover our trade secrets, either through breach of these agreements, independent development or publication of information including our trade secrets by third parties. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's or other third party's discovery of our proprietary technology and confidential information or other unauthorized use or disclosure would impair our competitive position and may harm our business, financial condition, results of operations and prospects.

Rights to improvements to our therapeutic candidates may be held by third parties.

In the course of testing our therapeutic candidates, we may enter into agreements with third parties to conduct clinical testing, which may provide that improvements to our therapeutic candidates may be owned solely by a party or jointly between the parties. If we determine that rights to such improvements owned solely by a third party are necessary to commercialize our therapeutic candidates or maintain our competitive advantage, we may need to obtain a license from such third party in order to use the improvements and continue developing, manufacturing or marketing the therapeutic candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain such a license, it could be granted on non-exclusive terms, thereby giving our competitors and other third parties access to the same technologies licensed to us. Failure to obtain a license on commercially reasonable terms or at all, or to obtain an exclusive license, could prevent us from commercializing our therapeutic candidates or force us to cease some of our business operations, which could materially harm our business. If we determine that rights to improvements jointly owned between us and a third party are necessary to commercialize our therapeutic candidates or maintain our competitive advantage, we may need to obtain an exclusive license from such third party. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such improvements, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of our intellectual property in order to enforce such intellectual property against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

We may be subject to claims that we have wrongfully hired an employee from a competitor or that we or our employees have wrongfully used or disclosed alleged confidential information or trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industries, in addition to our employees, we engage the services of consultants to assist us in the development of our therapeutic candidate, and other proprietary technologies. Many of these consultants, and many of our employees, were previously employed at, or may have previously provided or may be currently providing consulting services to, other pharmaceutical companies including our competitors or potential competitors. We may become subject to claims that we, our employees or a consultant inadvertently or otherwise used or disclosed trade secrets or other information proprietary to their former employers or their former or current clients. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely affect our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team and other employees.

Risks Related to Ownership of Our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock and as a result it may be difficult for our stockholders to sell their shares of our common stock.

Prior to our initial public offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained. The lack of an active market may impair our stockholders' ability to sell their shares at the time they wish to sell them or at a price that they consider reasonable. The lack of an active market may also reduce the fair market value of our stockholders' shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies, technologies or other assets by using our shares of common stock as consideration.

Recent volatility in capital markets and lower market prices for many securities may affect our ability to access new capital through sales of shares of our common stock or issuance of indebtedness, which may harm our liquidity, limit our ability to grow our business, pursue acquisitions or improve our operating infrastructure and restrict our ability to compete in our markets.

Our operations consume substantial amounts of cash, and we intend to continue to make significant investments to support our business growth, respond to business challenges or opportunities, develop new solutions, retain or expand our current levels of personnel, improve our existing solutions, enhance our operating infrastructure, and potentially acquire

complementary businesses and technologies. Our future capital requirements may be significantly different from our current estimates and will depend on many factors, including the need to:

- finance unanticipated working capital requirements;
- develop or enhance our technological infrastructure and our existing solutions;
- pursue acquisitions or other strategic relationships; and
- respond to competitive pressures.

Accordingly, we may need to pursue equity or debt financings to meet our capital needs. With uncertainty in the capital markets and other factors, such financing may not be available on terms favorable to us or at all. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our common stock. Any debt financing secured by us in the future could involve additional restrictive covenants relating to our capital-raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. If we are unable to obtain adequate financing or financing on terms satisfactory to us, we could face significant limitations on our ability to invest in our operations and otherwise suffer harm to our business.

The market price of our common stock may be volatile, and investors could lose all or part of their investment.

The trading price of our common stock is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. The stock market in general, and pharmaceutical and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies.

Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this Quarterly Report, these factors include:

- the timing and results of INDs, preclinical studies and clinical trials of our therapeutic candidates or those of our competitors;
- the success of competitive products or announcements by potential competitors of their product development efforts;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- any delay in our regulatory filings for our therapeutic candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings;
- adverse developments concerning our potential future in-house manufacturing facilities or CMOs;
- regulatory actions with respect to our therapeutics or therapeutic candidates or our competitors' products or therapeutic candidates;
- actual or anticipated changes in our growth rate relative to our competitors;
- the size and growth of our initial target markets;
- unanticipated serious safety concerns related to the use of our therapeutic candidates;
- regulatory or legal developments in the U.S. and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- significant lawsuits, including patent or stockholder litigation;
- publication of research reports about us or our industry, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- the recruitment or departure of key personnel;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;

- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- market conditions in the pharmaceutical and biotechnology sector;
- changes in the structure of healthcare payment systems;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other stockholders;
- expiration of market stand-off or lock-up agreements;
- the impact of any natural disasters or public health emergencies, such as the ongoing COVID-19 pandemic;
- general economic, political, industry and market conditions such as recessions, interest rates, fuel prices, foreign currency fluctuations, international tariffs, social, political and economic risks and acts of war (such as the conflict between Russian and Ukraine) or terrorism; and
- other events or factors, many of which are beyond our control.

The realization of any of the above risks or any of a broad range of other risks, including those described in this "Risk factors" section, could have a dramatic and adverse impact on the market price of our common stock.

If securities or industry analysts do not publish research or reports, or if they publish adverse or misleading research or reports, regarding us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us, our business or our market. In the event that one or more of the analysts who covers us issues adverse or misleading research or reports regarding us, our business model, our intellectual property, our stock performance or our market, or if our operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

As widely reported, global credit and financial markets have experienced extreme volatility and disruptions in the past several years, most recently due to the COVID-19 pandemic, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions, whether due to the effects of the COVID-19 pandemic or otherwise, will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive.

Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse event on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive these difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget.

Our stock price may decline due in part to the volatility of the stock market and the general economic downturn.

Our business is affected by macroeconomic conditions, including rising inflation, interest rates and supply chain constraints.

Various macroeconomic factors could adversely affect our business and the results of our operations and financial condition, including changes in inflation, interest rates and overall economic conditions and uncertainties such as those resulting from the current and future conditions in the global financial markets. Recent supply chain constraints have led to higher inflation, which if sustained could have a negative impact on the Company's product development and operations. If inflation or other factors were to significantly increase our business costs, our ability to develop our current pipeline and

new therapeutic products may be negatively affected. Interest rates, the liquidity of the credit markets and the volatility of the capital markets could also affect the operation of our business and our ability to raise capital on favorable terms, or at all, in order to fund our operations. Similarly, these macroeconomic factors could affect the ability of our third-party suppliers and manufacturers to manufacture clinical trial materials for our product candidates.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately 77.1% of our outstanding voting stock as of March 31, 2023. These stockholders, acting together, may be able to impact matters requiring stockholder approval. For example, they may be able to impact elections of directors, amendments of our organizational documents or approval of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that investors may feel are in their best interest as one of our stockholders. The interests of this group of stockholders may not always coincide with each investor's interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, and might affect the prevailing market price for our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our 2021 Plan, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock.

Pursuant to our 2021 Stock Option and Incentive Plan (2021 Plan), our management is authorized to grant stock options to our employees, directors and consultants. If the number of shares reserved under our 2021 Plan is increased pursuant to the terms of the 2021 Plan, our stockholders may experience additional dilution, which could cause our stock price to fall.

Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or therapeutic candidates.

We do not have any committed external source of funds or other support for our development and commercialization efforts, and we cannot be certain that additional funding will be available on acceptable terms, or at all. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, our stockholders' ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. Any future debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, selling or licensing our assets, making capital expenditures, declaring dividends or encumbering our assets to secure future indebtedness. Such restrictions could adversely impact our ability to conduct our operations and execute our business plan.

As a result of our recurring losses from operations and recurring negative cash flows from operations, there is uncertainty regarding our ability to maintain liquidity sufficient to operate our business effectively. If we raise additional funds through future collaborations, licenses and other similar arrangements, we may have to relinquish valuable rights to our future revenue streams, research programs, therapeutic candidates or EEV Platform, or grant licenses on terms that may not be favorable to us and/or that may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed or on terms acceptable to us, we would be required to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market therapeutic candidates that we would otherwise prefer to develop and market ourselves. Any of the above

events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

We are an "emerging growth company" and a smaller reporting company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies and smaller reporting companies will make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (JOBS Act). For as long as we continue to be an emerging growth company, we intend to take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in our periodic reports;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act);
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and
- exemptions from the requirements of holding nonbinding advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.235 billion in annual revenue; (ii) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to continue to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to any appreciation in the value of their stock.

Anti-takeover provisions in our certificate of incorporation, our bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our fourth amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of

our company or changes in our management that the stockholders of our company may deem advantageous. These provisions include, among other things:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder actions through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the board of directors acting pursuant to a resolution approved by the affirmative vote of a majority of the directors then in office;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action;
- a requirement of approval by the affirmative vote of a majority of the outstanding shares of our voting stock to amend or repeal specified provisions of our certificate of incorporation, and the affirmative vote of a majority of the outstanding shares of each class entitled to vote thereon as a class, at a duly constituted meeting of stockholders called expressly for such purpose; and
- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

In addition, Section 203 of the General Corporation Law of the State of Delaware (DGCL) prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our fourth amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or preventing a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

Our bylaws designate certain courts as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated bylaws provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any state law claims for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of, or a claim based on, fiduciary duty owed by any of our current or former directors, officers, and employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein (Delaware Forum Provision). The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Exchange Act. Our amended and restated bylaws further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the U.S. shall be the sole and exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act (Federal Forum Provision). In addition, our amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our common stock is deemed to have notice of and consented to the foregoing provisions; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision in our amended and restated bylaws may impose additional litigation costs on stockholders in pursuing any such claims. Additionally, the forum selection clauses in our amended and restated bylaws may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. In addition, while the

Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court were "facially valid" under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the federal district courts of the U.S. may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

Our failure to meet Nasdaq's continued listing requirements could result in a delisting of our common stock.

If we fail to satisfy Nasdaq's continued listing requirements, such as the corporate governance requirements or the minimum closing bid price requirement, Nasdaq may take steps to delist our common stock. Such a delisting would likely have a negative effect on the price of our common stock and would impair our stockholders' ability to sell or purchase our common stock when our stockholders wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with Nasdaq's listing requirements.

General Risk Factors

We have incurred and will continue to incur increased costs as a result of operating as a public company, and our management is required to devote substantial time to related compliance initiatives.

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an "emerging growth company." We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (Exchange Act), the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and Nasdaq. Our management and other personnel devote and will need to continue to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly, which will increase our operating expenses. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage, particularly in light of recent cost increases related to coverage. We cannot accurately predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

In addition, as a public company we are required to incur additional costs and obligations in order to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act. Under these rules, beginning with our second annual report on Form 10-K after we become a public company, we are required to make a formal assessment of the effectiveness of our internal control over financial reporting, and once we cease to be an emerging growth company, we may be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we are engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of our internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are designed and operating effectively, and implement a continuous reporting and improvement process for internal control over financial reporting.

If we experience material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

We may in the future discover material weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls over financial reporting, we may not be able to produce timely and accurate financial statements. If that were to happen, our investors could lose confidence in our reported financial information, the market price of our stock could decline, and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the SEC or other regulatory authorities.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We are subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

Our insurance policies are expensive and only protect us from some business risks, which will leave us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include property, general liability, employment benefits liability, business automobile, workers' compensation, and directors' and officers', employment practices and fiduciary liability insurance. We do not know, however, if we will be able to maintain insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our financial position and results of operations.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs and biologics or modifications to approved drugs and biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business.

Since March 2020 when foreign and domestic inspections of facilities were largely placed on hold, the FDA has been working to resume pre-pandemic levels of inspection activities, including routine surveillance, bioresearch monitoring and pre-approval inspections. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, and the FDA does not determine a remote interactive evaluation to be adequate, the agency has stated that it generally intends to issue, depending on the circumstances, a complete response letter or defer action on the application until an inspection can be completed. During the COVID-19 pandemic, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications.

Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to a worldwide pandemic, such as COVID-19, and may experience delays in their regulatory activities. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory

authorities from conducting their regular inspections, reviews, or other regulatory activities, including formal and informal interactions with product developers, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our future regulatory submissions, which could have a material adverse effect on our business.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Set forth below is information regarding shares of equity securities sold, and options granted, by us during the three months ended March 31, 2023 that were not registered under the Securities Act of 1933, as amended (the Securities Act).

Recent Sales of Unregistered Equity Securities

On December 7, 2022, the Company entered into a stock purchase agreement (the Stock Purchase Agreement) with Vertex Pharmaceuticals Incorporated (Vertex), pursuant to which Vertex agreed to purchase from the Company 1,618,613 shares (the Shares) of the Company's common stock, par value $0.0001 per share, in a private placement transaction for an aggregate purchase price of approximately $26.3 million or $16.26 per share. The purchase price per Share is equal to one hundred five percent (105%) of the daily volume-weighted average per share price of the Company's common stock on the Nasdaq Global Market over the ten trading days ending on and including the last trading day prior to the execution of the Stock Purchase Agreement. On February 8, 2023, following the expiration of the waiting period and clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, the private placement transaction closed.

Use of Proceeds from our Initial Public Offering of Common Stock

In November 2021, the Company completed its initial public offering (IPO) in which the Company issued and sold 10,436,250 shares of its common stock, including 1,361,250 shares pursuant to the full exercise of the underwriters' option to purchase additional shares, at a public offering price of $20.00 per share. All of the shares of common stock issued and sold in our IPO were registered under the Securities Act pursuant to a registration statement on Form S-1, as amended (File No. 333-260160), which was declared effective by the Securities and Exchange Commission (the SEC) on October 28, 2021. Goldman Sachs & Co. LLC, Cowen and Company, LLC and Evercore Group L.L.C. acted as joint book-running managers for the offering.

The aggregate net proceeds received by the Company from the IPO were approximately $190.7 million, after deducting underwriting discounts and commissions of $14.6 million, and offering expenses payable by the Company of $3.4 million. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10% or more of any class of our equity securities or to any other affiliates.

There has been no material change in our planned use of the net proceeds from the offering as described in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on November 1, 2021.

Purchase of Equity Securities

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

The exhibits listed on the Exhibit Index immediately preceding such exhibits, which is incorporated herein by reference, are filed or furnished as part of this Quarterly Report on Form 10-Q (Quarterly Report).

Exhibit No.	Description
3.1	Fourth Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed by the Registrant on November 2, 2021).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed by the Registrant on November 2, 2021).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1 filed by the Registrant on October 25, 2021).
4.2	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, effective as of March 29, 2021 (incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-1 filed by the Registrant on October 8, 2021).
10.16*†	Strategic Collaboration and License Agreement, dated December 7, 2022, by and between the Registrant and Vertex Pharmaceuticals Incorporated.
10.17*†	Sublicense Agreement dated December 7, 2022, by and between the Registrant and Vertex Pharmaceuticals Incorporated.
10.18†	Amended and Restated Non-Employee Director Compensation Policy
31.1†	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2†	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1†+	Certifications of Principal Executive Officer and Principal Financial Officer 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 in as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101)

† Filed herewith.

* Portions of this exhibit (indicated by asterisks) have been omitted in accordance with Item 601(b)(10) of Regulation S-K.

+ The certifications furnished in Exhibit 32.1 hereto are deemed to be furnished with this Quarterly Report and will not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

SIGNATURES

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

Date: May 10, 2023

ENTRADA THERAPEUTICS, INC.

By:	/s/ Dipal Doshi
Name:	Dipal Doshi
Title:	President and Chief Executive Officer (Principal Executive Officer)

By:	/s/ Kory Wentworth
Name:	Kory Wentworth
Title:	Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 10.16

CERTAIN CONFIDENTIAL INFORMATION, MARKED BY [***] HAS BEEN EXCLUDED FROM THIS EXHIBIT BECAUSE IT IS BOTH NOT MATERIAL AND IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

STRATEGIC COLLABORATION AND LICENSE AGREEMENT

BETWEEN

VERTEX PHARMACEUTICALS INCORPORATED

AND

ENTRADA THERAPEUTICS, INC.

December 7, 2022

STRATEGIC COLLABORATION AND LICENSE AGREEMENT

This Strategic Collaboration and License Agreement (this "**Agreement**") is entered into as of December 7, 2022 (the "**Execution Date**") by and between Vertex Pharmaceuticals Incorporated, a corporation organized under the laws of the Commonwealth of Massachusetts ("**Vertex**"), and Entrada Therapeutics, Inc., a corporation organized under the laws of the State of Delaware ("**Company**"). Vertex and Company each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**."

RECITALS

WHEREAS, Company owns or controls certain Patents and Know-How relating to EEV-PMOs for the treatment of DM1;

WHEREAS, Vertex is a biopharmaceutical company that possesses expertise in developing and commercializing human therapeutics;

WHEREAS, simultaneously with entering into this Agreement, Company and Vertex are entering into a Sublicense Agreement, pursuant to which Company grants to Vertex, and Vertex accepts, a sublicense to exploit Products under certain patents and know-how owned by OSIF;

WHEREAS, simultaneously with entering into this Agreement, Company and Vertex are entering into a Stock Purchase Agreement, pursuant to which Company will issue, and Vertex will purchase, shares of common stock of Company on the terms and conditions set forth therein;

WHEREAS, Vertex and Company desire to enter into this Agreement, pursuant to which Company would perform certain research activities and grant to Vertex an exclusive license to exploit novel products for the treatment or prevention of DM1, using Company's proprietary EEV delivery peptides; and

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 following meanings:

1.1. "**AAA**" has the meaning set forth in Section 11.12.2.

1.2. "**Acquisition Transaction**" has the meaning set forth in Section 4.6.

1.3. "**Additional Progress Report**" has the meaning set forth in Section 2.1.8

1.4. "**Additional Research Activities**" has the meaning set forth in Section 2.1.4.

1.5. "**Additional Research Budget**" has the meaning set forth in Section 2.1.4.

1.6. "**Additional Research Plan**" has the meaning set forth in Section 2.1.4.

1.7. "**Adverse Event**" has the meaning set forth in the Applicable Law for such term (or comparable term), and will generally mean any untoward medical occurrence in a subject in any Clinical Trial or patient who has received a therapeutic product, medical device or placebo, and which does not necessarily have a causal relationship with such therapeutic product, medical device or placebo, including any unfavorable and unintended sign (including an abnormal laboratory finding), symptom or disease temporally associated with the use of the applicable therapeutic product, medical device or placebo whether or not related to such therapeutic product, medical device or placebo.

1.8. "**Affiliate**" means, as of any point in time and for so long as such relationship continues to exist with respect to any Person, any other Person that controls, is controlled by or is under common control with such Person. A Person will be regarded as in control of another Person if it (a) owns or controls, directly or indirectly, more than 50% of the equity securities of the subject Person entitled to vote in the election of directors (or, in the case of a Person that is not a corporation, for the election of the corresponding managing authority), or (b) possesses, directly or indirectly, the power to direct or cause the direction of the management or policies of such Person (whether through ownership of securities or other ownership interests, by contract or otherwise).

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

1.10. "**Alliance Manager**" has the meaning set forth in Section 3.4.1.

1.11. "**Annual Net Sales**" means, with respect to a Product, the aggregate Net Sales of the Product sold by Vertex, its Affiliates or Sublicensees in the Field in the Territory during a Calendar Year and only during the Royalty Term for such Product(s) in the applicable country.

1.12. "**Antitrust Clearance Date**" means, with respect to an HSR Filing made with respect to this Agreement, the earliest date on which the Parties have actual knowledge that (a) all applicable waiting periods under the HSR Act have expired or have been terminated and (b) if any other Antitrust Filings were made, all applicable waiting periods have expired or been terminated or all applicable consents have been received with respect to such Antitrust Filings as necessary to permit Vertex to consummate the transactions contemplated under this Agreement.

1.13. "**Antitrust Filing**" means an HSR Filing or any other antitrust filing by Company or Vertex or any of their Affiliates to comply with antitrust clearance processes with respect to the transactions contemplated by this Agreement.

1.14. "**Applicable Law**" means all applicable laws, statutes, rules, regulations and other pronouncements having the effect of law of any federal, national, multinational, state, provincial, county, city or other political subdivision, agency or other body, domestic or foreign, including any applicable rules, regulations, guidelines, or other requirements of the Regulatory Authorities that may be in effect from time to time.

1.15. "**Approval Application**" means a BLA, NDA or similar application or submission for a Product filed with a Regulatory Authority in a country or group of countries to obtain marketing approval for a biological or pharmaceutical product in that country or group of countries.

1.16. "**Arbitration Notice**" has the meaning set forth in Section 11.12.2.

1.17. "**Audited Party**" has the meaning set forth in Section 5.11.

1.18. "**Auditing Party**" has the meaning set forth in Section 5.11.

1.19. "**Baseball Arbitration**" means the arbitration process set forth in Schedule 1.19.

1.20. "**Baseball Expert**" has the meaning set forth in Schedule 1.19.

1.21. "**BLA**" means a Biologics License Application that is submitted to the FDA for marketing approval for a Product pursuant to 21 C.F.R. § 601.2.

1.22. "**Breaching Party**" means the Party that the other Party believes is in material breach of this Agreement.

1.23. "**Business Day**" means a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in Boston, Massachusetts are authorized or obligated to close.

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

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

1.26. "**CDA**" has the meaning set forth in Section 1.45.

1.27. "**Change of Control**" means, with respect to a Party, (a) a merger or consolidation of such Party with a Third Party that results in the voting securities of such Party outstanding immediately prior thereto, or any securities into which such voting securities have been converted or exchanged, ceasing to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately after such merger or consolidation, (b) a transaction or series of related transactions in which a Third Party, together with its Affiliates, becomes the beneficial owner of more than 50% of the combined voting power of the outstanding securities of such Party, or (c) the sale or other transfer to a Third Party of all or substantially all of such Party's business or assets to which the subject matter of this Agreement relates.

1.28. "**Clinical Trial**" means a study in humans that is required to be conducted in accordance with GCP and is designed to generate data in support of an Approval Application.

1.29. "**Combination Product**" has the meaning set forth in Section 1.117.

1.30. "**Commercialize**" or "**Commercializing**" means to (a) market, promote, distribute, offer for sale, sell, have sold, import, export or otherwise commercialize a Product, (b) conduct activities, other than Research, Development and Manufacturing, in preparation for the foregoing activities, including obtaining Price Approval or (c) conduct post-Marketing Approval studies (including Clinical Trials). When used as a noun, "Commercialization" means any activities involved in Commercializing.

1.31. "**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. [***]

1.32. "**Common Ownership Legislation**" means the legislation on conditions for patentability and novelty, as codified at 35 U.S.C. § 102(c) (Common Ownership Under Joint Research Agreements).

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

1.34. "**Company Agreement Know-How**" has the meaning set forth in Section 6.1.1.

1.35. "**Company Agreement Patents**" has the meaning set forth in Section 6.1.1.

1.36. "**Company Agreement Technology**" has the meaning set forth in Section 6.1.1.

1.37. "**Company Breach Event**" has the meaning set forth in Section 9.2.3(a).

1.38. "**Company Core Technology**" means Company's [***].

1.39. "**Company Core Technology Improvement**" means any Know-How that is generated by or on behalf of a Party or its Affiliates or Third Parties acting on its or their behalf, whether alone or jointly with the other Party or its Affiliates or Third Parties acting on its or their behalf, in each case, in the performance of activities under this Agreement, whether or not patented or patentable, to the extent that such Know-How is an improvement or enhancement to the Company Core Technology.

1.40. "**Company In-License Agreements**" has the meaning set forth in Section 5.6.

1.41. "**Company Indemnified Party**" has the meaning set forth in Section 8.1.

1.42. "**Competitive Infringement**" has the meaning set forth in Section 6.4.1.

1.43. "**Competitive Product**" means, with respect to a particular Product in a particular country, a product on the market in such country commercialized by any Third Party that is not a Sublicensee and that is not otherwise authorized to sell such product by, and did not purchase such product in a chain of distribution that included, any of Vertex or its Affiliates or Sublicensees, that [***].

1.44. "**Compliance**" means, with respect to a Party, the adherence by such Party and its Affiliates to Applicable Law and such Party's Party Specific Regulations, in each case with respect to the activities to be conducted under this Agreement.

1.45. "**Confidential Information**" means, with respect to each Party, all Know-How or other information, including proprietary information (whether or not patentable) regarding or embodying such Party's technology, agents, products, business information or objectives, that is communicated in any way or form by or on behalf of the Disclosing Party to the Receiving Party or its permitted recipients, pursuant to this Agreement or that certain Mutual Confidentiality Agreement between Vertex and Company dated [***], and that certain Confidentiality Agreement between Vertex and Company dated [***] (together, the "**CDA**"), whether or not such Know-How or other information is identified as confidential at the time of disclosure. The terms of this Agreement will be considered Confidential Information of both Parties, with both Parties deemed to be the Receiving Party of such Confidential Information. [***]. Notwithstanding any provision of this Section 1.45 to the contrary, Confidential

Information does not include any Know-How or information that: (a) was already known by the Receiving Party (other than under an obligation of confidentiality) at the time of disclosure by or on behalf of the Disclosing Party; (b) was generally available to the public or part of the public domain at the time of its disclosure to the Receiving Party; (c) became generally available to the public or part of the public domain after its disclosure to the Receiving Party, other than through any act or omission of the Receiving Party in breach of its obligations under this Agreement; (d) is disclosed to the Receiving Party (other than under an obligation of confidentiality) by a Third Party who has no obligation to the Disclosing Party not to disclose such information to the Receiving Party; or (e) is independently discovered or developed by or on behalf of the Receiving Party without the use of any Confidential Information belonging to the Disclosing Party. Confidential Information disclosed to the Receiving Party hereunder will not be deemed to fall within the foregoing exceptions merely because broader or related information falls within such exceptions, nor will combinations of elements or principles be considered to fall within the foregoing exceptions merely because individual elements of such combinations fall within such exceptions.

1.46. "**Control**" or "**Controlled**" means, with respect to a Party and to any Know-How, Patent or Materials, possession on the Effective Date or at any time during the Term of the ability by such Party or its Affiliate (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, Patent or Materials, *provided* that any Know-How, Patent or Materials in-licensed or acquired by Company or its Affiliates under a Proposed New Company Agreement will not be deemed "Controlled" by Company unless and until such Proposed New Company Agreement becomes a New Company Agreement under Section 5.7.2 (and only for so long as it remains a New Company Agreement thereunder). [***].

1.47. "**Cover**," "**Covering**" or "**Covers**" means, with respect to a compound, product or other technology and a Patent, that, in the absence of a license granted under, or ownership of, such Patent, the making, using, keeping, selling, offering for sale or importation of such compound, product or other technology would infringe such Patent or, as to a pending claim included in such Patent, the making, using, keeping, selling, offering for sale or importation of such compound, product or other technology would infringe such Patent if such pending claim were to issue in an issued patent without modification.

1.48. "**Development**" means, with respect to a Licensed Agent or Product, all clinical and non-clinical research and development activities conducted after filing of an IND for such Licensed Agent or 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 (other than post-Marketing Approval Clinical Trials), regulatory affairs, pharmacovigilance, Clinical Trial regulatory activities and obtaining and maintaining Marketing Approval. When used as a verb, "Develop" or "Developing" means to engage in Development.

1.49. "**Disclosing Party**" has the meaning set forth in Section 10.1.

1.50. "**Dispute**" has the meaning set forth in Section 11.12.

1.51. "**Distracting Product**" has the meaning set forth in Section 4.6.

1.52. "**Distributor**" means a Third Party to whom Vertex or its Affiliates or Sublicensees grant a right to sell or distribute a Product, that purchases its requirements for such Product from Vertex or its Affiliates or Sublicensees and does not otherwise make any royalty or other payments to Vertex or its Affiliates or Sublicensees with respect to Vertex's, its Affiliates'

or its Sublicensees' intellectual property rights or Products, including any payments that are calculated on the basis of a percentage of, or profit share on, such Third Party's sale of Products.

1.53. "**Divest**" means, with respect to a Distracting Product, the sale, exclusive license or other transfer by Company and its Affiliates of all of their research, development, manufacturing and commercialization rights with respect to such Distracting Product to a Third Party without the retention or reservation of any research, development, manufacturing or commercialization obligation, interest or participation rights (other than solely an economic interest or the right to enforce customary terms contained in the relevant agreements effectuating such transaction).

1.54. "**DM1**" means myotonic dystrophy type 1.

1.55. "**DMPK**" means myotonic dystrophy protein kinase.

1.56. "**DOJ**" has the meaning set forth in Section 4.8.1.

1.57. "**EEV**" means an endosomal escape vehicle.

1.58. "**EEV Delivered Molecule**" means any EEV-linked molecule that contains an EEV that is [***].

1.59. "**EEV-PMO**" means an EEV-linked phosphorodiamidate morpholino oligomer.

1.60. "**Effective Date**" means the later of (a) the Execution Date or (b) the Business Day after the Schedule Revision Date; *provided* that the Effective Date will not occur if either Party has exercised its termination right under Section 9.2.1.

1.61. "**EMA**" means the European Medicines Agency and any successor entity thereto.

1.62. "**ENTR-701**" has the meaning set forth in Section 1.102.

1.63. "**Europe**" means (a) the economic, scientific and political organization of member states of the European Union as it may be constituted from time to time, which as of the Effective Date consists of Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and that certain portion of Cyprus included in such organization (the "**European Union**"), (b) the United Kingdom of Great Britain and Northern Ireland, (c) any member country of the European Economic Area that is not otherwise a member of the European Union, and (d) any country not otherwise included in clauses (a), (b) or (c) [***]. For clarity, "Europe" will at all times be deemed to include each of [***].

1.64. **"European Commission"** means the European Commission or any successor entity that is responsible for granting marketing approvals authorizing the sale of pharmaceuticals in Europe.

1.65. "**European Union**" has the meaning set forth in Section 1.63.

1.66. "**Execution Date**" has the meaning set forth in the Preamble.

1.67. "**Executive Officers**" means the [***] of Company, as of the Execution Date, [***], or such [***] designee, and the [***] of Vertex, as of the Execution Date, [***], or such [***] designee, or any other executive designated by a Party in writing who has the authority to resolve the applicable matter referred to the Executive Officers in accordance with this Agreement.

1.68. "**Exploit**" means, with respect to a Licensed Agent or Product, to Research, Develop, Manufacture, have Manufactured, use, keep, sell, offer for sale, import, export, Commercialize and otherwise exploit such Licensed Agent or Product.

1.69. "**FD&C Act**" means the United States Federal Food, Drug, and Cosmetic Act, as amended, and the rules and regulations promulgated thereunder.

1.70. "**FDA**" means the United States Food and Drug Administration and any successor entity thereto.

1.71. "**Field**" means [***].

1.72. "**First Commercial Sale**" means, with respect to a Product in any country in the Territory, [***].

1.73. "**Force Majeure**" means a condition, the occurrence and continuation of which is beyond the reasonable control of a Party, including an act of God, governmental acts or restrictions, war, civil commotion, labor strike or lock-out, epidemic or pandemic, flood, failure or default of public utilities or common carriers, and destruction of production facilities or materials by fire, earthquake, storm or like catastrophe.

1.74. "**FTC**" has the meaning set forth in Section 4.8.1.

1.75. "**FTE**" means [***] of work per annum devoted to or in support of the Research Activities that is carried out by one or more qualified scientific or technical employees (excluding Third Party contractors) of Company or its Affiliates.

1.76. "**FTE Costs**" means, for any period, the FTE Rate multiplied by the number of FTEs who perform a specified activity under this Agreement.

1.77. "**FTE Rate**" means [***]; *provided* that such rate will increase or decrease on January 1 of each Calendar Year starting with [***] in accordance with the percentage year-over-year increase or decrease in the Consumer Price Index – Urban Wage Earners and Clerical Workers, US City Average, All Items, 1982-84 = 100, published by the United States Department of Labor, Bureau of Labor Statistics (or its successor equivalent index) over the 12 month period preceding each such January 1. The FTE Rate includes (a) all wages and salaries, employee benefits, bonus, travel and entertainment, supplies and other direct expenses and (b) indirect allocations, including all general and administrative expenses, human resources, finance, occupancy and depreciation.

1.78. "**GAAP**" means United States generally accepted accounting principles, consistently applied.

1.79. "**GCP**" means good clinical practices, which are the then-current standards for Clinical Trials for pharmaceuticals, as set forth in the FD&C Act or other Applicable Law, and such standards of good clinical practice as are required by the Regulatory Authorities of Europe and other organizations and governmental authorities in countries for

which the applicable Licensed Agent or Product is intended to be Developed, to the extent such standards are not less stringent than United States standards.

1.80. "**GLP**" means the then-current good laboratory practice standards promulgated or endorsed by the FDA as defined in 21 C.F.R. Part 58, or comparable regulatory standards in jurisdictions outside of the United States, to the extent such standards are not less stringent than United States standards.

1.81. "**GMP**" means the then-current Good Manufacturing Practices as specified in the United States Code of Federal Regulations, ICH Guideline Q7A, or equivalent laws, rules or regulations of an applicable Regulatory Authority at the time of manufacture, to the extent such standards are not less stringent than United States standards.

1.82. "**Government Official**" means (a) any elected or appointed government official (e.g., a member of a ministry of health), (b) any employee or person acting for or on behalf of a government official, Governmental Authority, or other enterprise performing a governmental function, (c) any political party, candidate for public office, officer, employee, or person acting for or on behalf of a political party or candidate for public office, and (d) any employee or person acting for or on behalf of a public international organization (e.g., the United Nations). For clarity, healthcare professionals or healthcare providers employed by government-owned hospitals will be considered Government Officials.

1.83. "**Governmental Authority**" means any court, agency, department, authority or other instrumentality of any national, state, county, city or other political subdivision.

1.84. "**Grantor**" has the meaning set forth in Section 5.7.1.

1.85. [***].

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

1.87. "**HSR Filing**" means a filing by Company and Vertex or their ultimate parent entities as that term is defined in the HSR Act with the FTC and the DOJ of a Notification and Report Form for Certain Mergers and Acquisitions (as that term is defined in the HSR Act) with respect to the transactions contemplated under this Agreement together with all required documentary attachments thereto.

1.88. "**IND**" means any Investigational New Drug application filed with the FDA pursuant to Part 312 of Title 21 of the U.S. Code of Federal Regulations or a similar application or submission for a Product filed with a Regulatory Authority in a country or group of countries.

1.89. "**Indemnified Party**" has the meaning set forth in Section 8.1.3.

1.90. "**Indemnifying Party**" has the meaning set forth in Section 8.1.3.

1.91. "**Initiation**" or "**Initiate**" means, with respect to any Clinical Trial, first dosing in such Clinical Trial of the first human subject with the disease or condition for which the Product in such Clinical Trial is intended.

1.92. "**Insolvency Event**" has the meaning set forth in Section 9.2.5.

1.93. "**IP Committee**" has the meaning set forth in Section 3.2.

1.94. "**JAMS**" has the meaning set forth in Schedule 1.19.

1.95. "**Joint Agreement Know-How**" has the meaning set forth in Section 6.1.3.

1.96. "**Joint Agreement Patents**" has the meaning set forth in Section 6.1.3.

1.97. "**Joint Agreement Technology**" has the meaning set forth in Section 6.1.3.

1.98. "**JRC**" has the meaning set forth in Section 3.1.1.

1.99. "**Know-How**" means data, results, protocols, chemical structures, chemical sequences, materials, inventions, know-how, formulas, trade secrets, techniques, methods, processes, procedures and developments, and other scientific, technical or manufacturing information, whether or not patentable; provided that Know-How does not include Patents.

1.100. "**Lead Prosecuting Party**" has the meaning set forth in Section 6.2.5.

1.101. "**Liability**" has the meaning set forth in Section 8.1.

1.102. "**Licensed Agents**" means (a) that compound known as ENTR-701 with the chemical structure set forth on Schedule 1.102 ("**ENTR-701**"), [***].

1.103. "**Licensed Know-How**" means any Know-How Controlled by Company or its Affiliates on or after the Effective Date that is necessary or useful to Research, Develop, Manufacture or Commercialize Licensed Agents or Products in the Field. Notwithstanding the foregoing, Licensed Know-How will not include "OSIF Know-How" as defined in the Sublicense Agreement.

1.104. "**Licensed Patents**" means any Patents, including Company Agreement Patents and Joint Agreement Patents, Controlled by Company or its Affiliates on or after the Effective Date that claim or disclose any Licensed Know-How or otherwise Cover the Licensed Agents or Products in the Field. Notwithstanding the foregoing, Licensed Patents will not include "OSIF Patents" as defined in the Sublicense Agreement.

1.105. "**Licensed Platform Patent**" means [***].

1.106. "**Licensed Product-Specific Patent**" means [***].

1.107. "**Licensed Technology**" means the Licensed Patents and Licensed Know-How.

1.108. "**Licensee**" has the meaning set forth in Section 5.7.2.

1.109. [***].

1.110. "**Major Market Country**" means any one of the following countries: [***].

1.111. "**Manufacture**" or "**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 Licensed Agent or Product.

1.112. "**Manufacturing Cost**" means [***].

1.113. "**Manufacturing Transfer Date**" means the date on which [***].

1.114. "**Marketing Approval**" means, with respect to a Product in a particular jurisdiction, all approvals (including regular or accelerated approval of a BLA or NDA), licenses, registrations or authorizations necessary for the Commercialization of such Product in such jurisdiction, including, with respect to the United States, approval of an Approval Application for such Product by the FDA and with respect to Europe, approval of an Approval Application for such Product by the European Commission or the applicable Regulatory Authority in any particular country in Europe.

1.115. "**Materials**" means chemical compounds, biological materials, including Clinical Trial samples, cell lines, EEVs, lipids, assays, viruses and vectors, and other materials.

1.116. "**NDA**" means a new drug application that is submitted to the FDA for marketing approval for a Product, pursuant to 21 C.F.R. § 314.3.

1.117. "**Net Sales**" means the [***] for Products sold by Vertex (including sales generated from named patient programs and excluding sales deferred for GAAP accounting purposes until such sales are recognized), its Affiliates or Sublicensees (the "**Selling Party**") to Third Parties (including Distributors), less the following deductions from such [***] amounts:

(a) [***];

(b) [***];

(c) [***];

(d) [***];

(e) [***];

(f) [***].

Only items that are deducted from the Selling Party's [***] of Product(s), as included in the Selling Party's published financial statements and that are in accordance with GAAP, applied on a consistent basis, will be deducted from such [***] for purposes of the calculation of Net Sales; *provided* that amounts written off by the Selling Party by reason of uncollectible debt pursuant to clause (a) or amounts of compulsory payments deducted pursuant to clause (f) above, respectively, may be deducted from Net Sales in accordance with clause (a) or clause (f) above, respectively, regardless of whether such amounts are classified as deduction from gross sales in the Selling Party's published financial statements.

A qualifying amount may be deducted only once regardless of the number of the preceding categories that describes 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 and payment of any royalties due will be reported with a subsequent quarterly report. Sales between or among Vertex, its Affiliates and Sublicensees will be excluded from the

computation of Net Sales if such sales are not intended for end use, but Net Sales will include the subsequent final sales to Third Parties by Vertex or any such Affiliates or Sublicensees. A Product will not be deemed to be sold if the Product is provided free of charge to a Third Party in reasonable quantities as a sample consistent with industry standard promotional and sample practices. For clarity, Net Sales include sales such as so-called "treatment IND sales," "named patient sales," and "compassionate use sales," even if such sales occur prior to receipt of Marketing Approval.

If a sale, transfer or other disposition with respect to a Product involves consideration other than cash or is not at arm's length, the Net Sales from such sale, transfer or other disposition will be calculated based on the average Net Sales price of the Product in arm's length sales for cash in the relevant country during the same Calendar Quarter as such sale, transfer or other disposition or, in the absence of such sales, based on the fair market value of the Product as mutually determined by the Parties.

Solely for purposes of calculating Net Sales, [***] ("**Other Product**") (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) (such combination product, a "**Combination Product**"), Net Sales of such Combination Product for the purpose of determining the payments due to Company pursuant to this Agreement will be calculated by [***]. If the [***] selling price of a [***] in such country [***] can be determined but the [***] selling price of the Other Product in such country cannot be determined, Net Sales in such country for purposes of determining royalty payments will be calculated by [***]. If such separate sales are not made in a country, Net Sales will be calculated by [***].

1.118. "**New Company Agreement**" has the meaning set forth in Section 5.7.2.

1.119. "**Non-Breaching Party**" means the Party that believes the other Party is in material breach of this Agreement.

1.120. "**Ongoing Study**" means [***].

1.121. "**OSIF**" means Ohio State Innovation Foundation, with an address at 1524 North High Street, Columbus, OH 43201.

1.122. "**OSIF Agreement**" means that certain Exclusive License Agreement, dated December 14, 2018, by and between Company and OSIF.

1.123. "**Other Joint Patents**" has the meaning set forth in Section 6.2.5.

1.124. "**Other Product**" has the meaning set forth in Section 1.117.

1.125. "**Other Safety Information**" means all emerging and known information about the Products involving known or potential risks to humans including: misuse, abuse, overdose, off-label use, medication error, lack of effect, suspected transmission of an infectious agent, occupational exposure, pregnancy exposure or any use of a falsified product.

1.126. "**Out-of-Pocket Costs**" means, with respect to a Party, costs and expenses paid by such Party or its Affiliates to Third Parties (or payable to Third Parties and accrued in accordance with GAAP), other than employees of such Party or its Affiliates.

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

1.128. "**Party Specific Regulations**" means all non-monetary judgments, decrees, orders or similar decisions issued by any Governmental Authority specific to a Party, and all consent decrees, corporate integrity agreements, or other agreements or undertakings of any kind by a Party with any Governmental Authority, in each case as the same may be in effect from time to time and applicable to a Party's activities contemplated by this Agreement.

1.129. "**Patent Challenge**" has the meaning set forth in Section 9.4.

1.130. "**Patents**" means the rights and interests in and to issued patents and pending patent applications in any country, jurisdiction or region (including inventor's certificates and utility models), including all provisionals, non-provisionals, substitutions, continuations, continuations-in-part, divisionals, renewals and all patents granted thereon, and all reissues, reexaminations, extensions, confirmations, revalidations, registrations and patents of addition thereof, including patent term extensions and supplementary protection certificates, international patent applications filed under the Patent Cooperation Treaty (PCT) and any foreign equivalents to any of the foregoing.

1.131. "**Person**" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, incorporated association, joint venture or similar entity or organization, including a government or political subdivision or department or agency of a government.

1.132. "**Pivotal Clinical Trial**" means, with respect to a Product, a Clinical Trial in humans performed to gain evidence with statistical significance of the efficacy of such Product in a target population, and to obtain expanded evidence of safety for such Product that is needed to evaluate the overall benefit-risk relationship of such Product, to form the basis for filing an Approval Application and obtaining Marketing Approval from a Regulatory Authority for such Product. [***].

1.133. "**Price Approval**" means, in any country where a Governmental Authority authorizes reimbursement for, or approves or determines pricing for, pharmaceutical products, receipt (or, if required to make such authorization, approval or determination effective, publication) of such reimbursement authorization or pricing approval or determination.

1.134. "**Proceeding**" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), prosecution, contest, hearing, inquiry, inquest, audit, examination or investigation that is, has been or may in the future be commenced, brought, conducted or heard at law or in equity or before any Governmental Authority.

1.135. "**Product**" means any product, medical therapy, preparation or substance, comprising or employing a Licensed Agent, in any form or formulation, and whether alone or together with one or more other therapeutically active ingredients, delivery devices or other components. [***].

1.136. "**Progress Report**" has the meaning set forth in Section 2.1.8

1.137. "**Proposed New Company Agreement**" has the meaning set forth in Section 5.7.1.

1.138. "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" means, with regard to a Patent, the preparing, filing, prosecuting and maintenance of such Patent, as well as handling re-examinations and reissues with respect to such Patent, together with the conduct

of interferences, derivation proceedings, the defense of oppositions, post-grant patent proceedings (such as inter partes review and post grant review) and other similar proceedings with respect to the particular Patent. For clarification, "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" will not include any other enforcement actions taken with respect to a Patent.

1.139. "**Receiving Party**" has the meaning set forth in Section 10.1.

1.140. "**Recipient**" has the meaning set forth in Section 10.8.

1.141. "**Regulatory Approval**" means the technical, medical and scientific licenses, registrations, authorizations, clearances, accreditations and approvals (including approvals of Approval Applications, supplements and amendments, pre- and post- approvals, and labeling approvals) of any Regulatory Authority, necessary for the research, development, clinical testing, commercial manufacture, distribution, marketing, promotion, offer for sale, use, import, export or sale of a pharmaceutical product in a regulatory jurisdiction, including Marketing Approval but excluding Price Approval.

1.142. "**Regulatory Authority**" means, with respect to a country in the Territory, any national (*e.g.*, the FDA), supra-national (*e.g.*, the European Commission, the Council of the European Union, or the EMA), regional, state or local regulatory agency, department, bureau, commission, council or other Governmental Authority involved in the granting of Regulatory Approvals or Price Approvals for pharmaceutical products in such country or countries.

1.143. "**Regulatory Filings**" means, collectively: (a) all (i) INDs or other filings needed to initiate clinical testing of any pharmaceutical product, (ii) Approval Applications, establishment license applications and drug master files, (iii) applications for designation as an "Orphan Product(s)" under the Orphan Drug Act, (iv) applications for "Fast Track" status, "Breakthrough Therapy" status or "Regenerative Medicine Advances Therapy Designation" under Section 506 of the FD&C Act (21 U.S.C. § 356) or (y) for a Special Protocol Assessment under Section 505(b)(4)(B) and (C) of the FD&C Act (21 U.S.C. § 355(b)(4)(B)) and all other similar filings (including counterparts of any of the foregoing in any country or region in the Territory); (b) any applications for Regulatory Approval or Price Approval and other applications, filings, dossiers or similar documents submitted to a Regulatory Authority in any country for the purpose of obtaining Regulatory Approval or Price Approval from that Regulatory Authority; (c) any supplements and amendments to any of the foregoing; and (d) any correspondence with any Regulatory Authority relating to any of the foregoing.

1.144. "**Regulatory Materials**" has the meaning set forth in Section 9.6.2(f).

1.145. "**Representatives**" has the meaning set forth in Section 10.8.

1.146. "**Research**" means conducting research activities to discover, design, optimize, deliver and advance Licensed Agents and Products, including pre-clinical studies and optimization up to the filing of an IND for such Licensed Agent or Product, but excluding Development, Manufacture and Commercialization. When used as a verb, "Researching" means to engage in Research. [***].

1.147. "**Research Activities**" has the meaning set forth in Section 2.1.1.

1.148. "**Research Budget**" has the meaning set forth in Section 2.1.1.

1.149. "**Research Plan**" has the meaning set forth in Section 2.1.1.

1.150. "**Research Program**" means the research program to [***].

1.151. "**Research Term**" means the period beginning on the Effective Date and ending after four years.

1.152. "**Residual Knowledge**" means knowledge, techniques, experience and Know-How that are (a) reflected in any Confidential Information owned or Controlled by the Disclosing Party and (b) retained in the unaided memory of any authorized representative of the Receiving Party after having access to such Confidential Information. A Person's memory will be considered to be unaided if the Person has not intentionally memorized the Confidential Information for the purpose of retaining and subsequently using or disclosing it.

1.153. "**Rights**" has the meaning set forth in Section 11.1.

1.154. "**Royalty Information**" has the meaning set forth in Section 10.8.

1.155. "**Royalty Term**" means, with respect to a Product in a country, the period commencing on the first sale of such Product giving rise to Net Sales in such country and ending upon the latest of: (a) the expiration of the last Valid Claim of a Licensed Patent that Covers such Product in such country; (b) [***] after the First Commercial Sale of such Product in such country; and (c) expiration of all applicable regulatory exclusivity periods, including data exclusivity, in such country with respect to such Product.

1.156. "**Rules**" has the meaning set forth in Section 11.12.3(a).

1.157. "**Safety Data Exchange Agreement**" has the meaning set forth in Section 2.8.2.

1.158. "**Schedule Revision Date**" means the earlier of (a) the [***] following the Antitrust Clearance Date and (b) the day on or after the Antitrust Clearance Date on which Company provides to Vertex either [***].

1.159. "**Selected Third Party Intellectual Property**" means, with respect to a Licensed Agent or Product, Patents or Know-How owned or controlled by a Third Party (but not then included in Licensed Technology) that [***].

1.160. "**Selected Third Party Intellectual Property Costs**" means Out-of-Pocket Costs, including upfront payments, purchase price, milestones, royalties, license fees, option fees, option exercise fees and other payments paid or payable by Vertex or its Affiliates or Sublicensees to a Third Party that owns or controls Selected Third Party Intellectual Property (or that, prior to the applicable transaction with Vertex or its Affiliates or Sublicensees, owned or controlled Selected Third Party Intellectual Property) to license or acquire such Selected Third Party Intellectual Property; *provided* that, if the applicable Selected Third Party Intellectual Property relates to both a Licensed Agent or Product and one or more other programs of Vertex or its Affiliates or Sublicensees, then any such Out-of-Pocket Costs that are not specific to the Research, Development, Manufacturing or Commercialization of a Licensed Agent or Product (*e.g.*, upfront payments, purchase price, etc.) will be [***].

1.161. "**Selling Party**" has the meaning set forth in Section 1.117.

1.162. "**Stock Purchase Agreement**" means that certain Stock Purchase Agreement by and between Company and Vertex, dated as of the Execution Date.

1.163. "**Subcontractor**" has the meaning set forth in Section 2.1.6.

1.164. "**Sublicense**" means, when used as a verb, directly or indirectly, to sublicense, grant any other right with respect to, or agree not to assert, the rights granted to Vertex hereunder. When used as a noun, "Sublicense" means any agreement to Sublicense.

1.165. "**Sublicense Agreement**" means that certain Sublicense Agreement by and between Company and Vertex, dated as of the Execution Date.

1.166. "**Sublicensee**" means a Third Party, other than a Distributor or service provider, to whom Vertex (or a Sublicensee or Affiliate) sublicenses any of the rights granted to Vertex hereunder during the Term.

1.167. "**Successful Completion of Ongoing Study**" means Company's completion of its Ongoing Study with final reports [***].

1.168. "**Supply Agreement**" has the meaning set forth in Section 2.4.2.

1.169. "**Term**" has the meaning set forth in Section 9.1.

1.170. "**Territory**" means [***].

1.171. "**Third Party**" means any Person other than Vertex, Company or their respective Affiliates.

1.172. "**Third Party Infringement Claim**" has the meaning set forth in Section 6.2.7.

1.173. "**Third Party Publication**" has the meaning set forth in Section 10.6.2.

1.174. "**Transferee Party**" has the meaning set forth in Section 2.1.9.

1.175. "**Transferor Party**" has the meaning set forth in Section 2.1.9.

1.176. "**Transparency Laws**" means any Applicable Law that requires certain companies in the pharmaceutical or healthcare industry to disclose and report information regarding payments made and agreements entered into with healthcare professionals or other individuals and entities carrying out activities in certain countries.

1.177. "**U.S. Bankruptcy Code**" means 11 U.S.C. §§ 101-1532, as amended, and the rules and regulations promulgated thereunder.

1.178. "**United States**" or "**U.S.**" means the United States of America and all of its districts, territories and possessions.

1.179. "**Valid Claim**" means a claim (a) of any issued, unexpired United States or foreign Patent, which has not, in the country of issuance, been donated to the public, disclaimed, or held invalid or unenforceable by a court of competent jurisdiction in an unappealed or unappealable decision, or (b) of any United States or foreign patent application, which has not, in the country in question, been cancelled, withdrawn, or abandoned. Notwithstanding the foregoing, on a country-by-country basis, a patent application pending for more than [***] from the [***] with respect thereto will not be considered to have any Valid Claim for purposes of this Agreement unless and until a patent that meets the criteria set forth in clause (a) above with respect to such application issues.

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

1.181. "**Vertex Agreement Know-How**" has the meaning set forth in Section 6.1.2.

1.182. "**Vertex Agreement Patents**" has the meaning set forth in Section 6.1.2.

1.183. "**Vertex Agreement Technology**" has the meaning set forth in Section 6.1.2.

1.184. "**Vertex Core Technology**" means [***].

1.185. "**Vertex Core Technology Improvement**" any Know-How that is generated by or on behalf of a Party or its Affiliates or Third Parties acting on its or their behalf, whether alone or jointly with the other Party or its Affiliates or Third Parties acting on its or their behalf, in each case, in the performance of activities under this Agreement, whether or not patented or patentable, to the extent that such Know-How is [***].

1.186. "**Vertex Indemnified Party**" has the meaning set forth in Section 8.1.2.

ARTICLE 2.
RESEARCH, DEVELOPMENT, MANUFACTURING AND COMMERCIALIZATION

2.1. Research.

2.1.1. Research Plan & Budget. During the Research Term, the Parties will collaborate in the Research Program pursuant to a research plan (such plan, as may be amended pursuant to Section 2.1.2, the "**Research Plan**"). All of the activities with respect to the Research of Licensed Agents and Product to be conducted by the Parties under this Agreement during the Research Term will be set forth in the Research Plan (such activities, the "**Research Activities**"). The Research Plan will include a budget for any Research Activities to be conducted by Company (such budget, the "**Research Budget**"). The Research Plan and Research Budget may be amended as set forth in this Agreement. The initial Research Plan and initial Research Budget are set forth in Schedule 2.1.1 and Section 1, Section 2, and Section 4 thereof includes all Research Activities related to on-going pre-clinical studies with respect to ENTR-701.

2.1.2. Amendments to Research Plan and Budget. During the Research Term, in addition to the Research Activities described in the last sentence of Section 2.1.1, the Parties will conduct Research related to [***] as described in Section 3 of the initial Research Plan set forth in Schedule 2.1.1. Within [***] after the Effective Date, the JRC will amend (i) the initial Research Plan to include a detailed plan for the Research Activities set forth in this Section 2.1.2, and (ii) the initial Research Budget to include Company's FTE Costs, Out-of-Pocket Costs, and Manufacturing Costs for such Research Activities. In addition, during the Research Term, the Research Plan and Research Budget will be reviewed at least [***] by the JRC and the JRC will amend the Research Plan and Research Budget during such review as is appropriate to reflect any material developments and adjustments to the planned Research Activities. In addition, the JRC may amend the Research Plan and Research Budget at any other time during the Research Term to adjust the Research of Licensed Agents and Products.

2.1.3. Conduct of the Research. Each Party, directly or through its Affiliates or permitted Subcontractors, will use Commercially Reasonable Efforts to conduct the activities allocated to it in the Research Plan in accordance with the Research Plan, including the timelines set forth therein, and in a professional and timely manner. Each Party will, and will require its Affiliates and Subcontractors to, perform its obligations under the Research Plan in compliance with Applicable Law. [***]. Vertex will reimburse Company in accordance with

Section 5.8 for Company's FTE Costs and Out-of-Pocket Costs incurred in conducting such Research Activities in accordance with the Research Plan and Research Budget.

2.1.4. Additional Research. Following the Research Term, upon Vertex's request for Company to conduct certain additional Research activities with respect to Licensed Agents and Products, the Parties will discuss in good faith and, if the Parties agree that Company will conduct such activities, agree on a plan (each, an "**Additional Research Plan**") and budget (each, an "**Additional Research Budget**") for such activities (the "**Additional Research Activities**"). If the Parties agree on the Additional Research Plan and Additional Research Budget, then Company, directly or through its Affiliates or Subcontractors engaged in accordance with Section 2.1.4, will use Commercially Reasonable Efforts to perform the Additional Research Activities in accordance with the Additional Research Plan, including the timelines set forth therein, and in a professional and timely manner. Company will, and will require its Affiliates and Subcontractors to, perform its obligations under the Additional Research Plan in compliance with Applicable Law. [***]. Vertex will reimburse Company in accordance with Section 5.8 for Company's FTE Costs and Out-of-Pocket Costs incurred in conducting such Additional Research Activities in accordance with the Additional Research Plan and Additional Research Budget. The Parties may amend any Additional Research Plan and Additional Research Budget upon mutual consent.

2.1.5. Company Pre-Clinical Studies. [***].

2.1.6. Subcontracting. Each Party may engage consultants, subcontractors, academic researchers or other vendors (each, a "**Subcontractor**") to perform Research Activities allocated to such Party under the Research Plan or Additional Research Activities allocated to such Party under the Additional Research Plan, as applicable; *provided* that Company will not engage any Subcontractor, other than to the extent set forth in the Research Plan or Additional Research Plan, as applicable, without Vertex's written consent. Each such contract between a Party and a Subcontractor will be consistent with the provisions of this Agreement and will include confidentiality provisions that are at least as restrictive as those described in ARTICLE 10 except with respect to the duration of such obligations which will be commercially reasonable and customary for agreements of the applicable type. Each Party will be responsible for the effective and timely management of and payment of its Subcontractors. The engagement of any Subcontractor in compliance with this Section 2.1.6 will not relieve the applicable Party of its obligations under this Agreement.

2.1.7. Records. Each Party will maintain, and cause its Affiliates and Subcontractors to maintain, records of its activities under the Research Plan or Additional Research Plan in sufficient detail and in good scientific manner appropriate for scientific, patent and regulatory purposes, which will be complete and accurate in all material respects and will fully and properly reflect all work done, data and developments made, and results achieved.

2.1.8. Progress Reports. During the Research Term, each Party will furnish to the JRC, within [***] after the end of each [***], an update on such Party's progress under the Research Plan with respect to the performance of the Research Activities during the relevant [***], including a summary of any results and data generated by or on behalf of such Party or its Affiliates under the Research Plan during the relevant [***] (each, a "**Progress Report**"). For so long any Additional Research Plan is in effect, Company will furnish to Vertex, within [***] after the end of each [***], an update on Company's progress under the Additional Research Plan with respect to the performance of the Additional Research Activities during the relevant [***], including a summary of any results and data generated by or on behalf of Company or its Affiliates under the Additional Research Plan during the relevant [***] (each, an "**Additional Progress Report**").

2.1.9. Transfer of Materials. To facilitate the conduct of activities under the Research Plan or an Additional Research Plan, as applicable, either Party (the "**Transferor Party**") may, at its election, provide Materials to the other Party (the "**Transferee Party**") solely as mutually agreed by the Parties or as set forth in the Research Plan or any Additional Research Plan. All such Materials (a) will remain the sole property of the Transferor Party, (b) will be used only in the exercise if the Transferee Party's rights or fulfillment of the Transferee Party's obligations under this Agreement, (c) except as provided in the Research Plan or Additional Research Plan or as otherwise agreed by the Parties, (i) will remain solely under the control of the Transferee Party, (ii) will not be used or delivered by the Transferee Party to or for the benefit of any Third Party, and (iii) will not be used in research or testing involving human subjects, and (d) will be subject to all additional restrictions and obligations that the Transferor Party has identified in a written notice to the Transferee Party as being necessary for the Transferor Party to comply with its obligations to Third Parties with respect to the applicable Material, which notice is provided at or prior to the delivery of such Materials to the Transferee Party. Without limitation to ARTICLE 7, all Materials supplied under this Section 2.1.9 are supplied "as is", with no warranties of fitness for a particular purpose, and must be used with prudence and appropriate caution in any experimental work, as not all of their characteristics may be known. Following the completion of the activities for which the applicable Materials were supplied under this Section 2.1.9 or upon the Transferor Party's earlier request, the Transferee Party will either destroy or return to the Transferor Party, at the Transferor Party's sole discretion, all Materials provided by the Transferor Party that are unused; *provided* that Vertex will have the right to retain and continue to use any Materials provided by Company that Vertex has the right to Exploit under the license granted to Vertex pursuant to Section 4.1.1.

2.1.10. Research Following Research Term. Following the Research Term, Vertex will have the sole and exclusive control over all matters relating to the Research of Licensed Agents and Products. For so long as Vertex is conducting Research activities under this Section 2.1.10, no later than [***] of each [***], Vertex will provide Company with a [***] report regarding the status of Vertex's Research of Licensed Agents and Products; *provided* that Vertex will [***]. Such reports may be combined with any applicable reports under Section 2.2.2 and may be provided to Company in conjunction with meetings and other communications between the representatives of Vertex and Company on the JRC.

2.2. Development.

2.2.1. Generally. Subject to Section 2.6, Vertex will have sole and exclusive control over all matters relating to the Development of Licensed Agents and Products.

2.2.2. Reporting. For so long as Vertex is conducting Development activities with respect to the Licensed Agent or Products, no later than [***] of each [***], Vertex will provide Company with a [***] report regarding the status of Vertex's Development of Licensed Agents and Products; *provided* that Vertex will [***]. Such reports may be combined with any applicable reports under Section 2.1.10 and may be provided to Company in conjunction with meetings and other communications between the representatives of Vertex and Company on the JRC.

2.3. Regulatory Matters.

2.3.1. Responsibilities. Vertex will have the sole and exclusive authority to (a) prepare and file Regulatory Filings and applications for Price Approval, each in its own name (or the name of its designee(s)), for all Licensed Agents and Products in the Field in the Territory; *provided* that Vertex will provide drafts of all portions of INDs or Approval Applications for the Product (including amendments to the foregoing) that are [***] reasonably in advance of Vertex's planned finalization of the applicable IND, Approval Application, or

amendments to the applicable Regulatory Authority for Company's review and comment, and Vertex will consider in good faith Company's comments to any such portions of INDs, Approval Applications, or amendments to the extent they [***] that Company provides to Vertex reasonably in advance of Vertex's planned finalization thereof, and (b) communicate with Regulatory Authorities with respect to the Licensed Agents and Products in the Field in the Territory, both prior to and following Marketing Approval and Price Approval, including all communications and decisions with respect to (i) labeling of Products, and (ii) the negotiation of Price Approvals. Without limiting the foregoing, during the Term, neither Company nor its Affiliates will prepare or file any Regulatory Filings with any Regulatory Authority with respect to any Licensed Agent or Product in the Field in the Territory.

2.3.2. Ownership. Ownership of all right, title and interest in and to all Regulatory Filings, Regulatory Approvals and Price Approvals directed to any Licensed Agent or Product in the Field in each country of the Territory will be held by and in the name of Vertex, its Affiliate, designee or Sublicensee.

2.3.3. Cooperation. Company will, and will cause its Affiliates to, cooperate with Vertex with respect to all regulatory matters relating to any Licensed Agent or Product. Without limiting the foregoing, as requested by Vertex, Company will assist Vertex in preparing Regulatory Filings for Products and make information Controlled by Company or its Affiliates available to Vertex to the extent necessary or useful in connection with such Regulatory Filings. Upon Vertex's reasonable request, Company will support the Development of Licensed Agents and Products by providing Regulatory Authorities with access to, and the right to audit, any data or other Know-How and associated documents that are in Company's possession or Control and are relied on by Vertex in its Regulatory Filings for Licensed Agents and Products. Company will not make any submission to any Regulatory Authority with respect to the Licensed Agents and Products in the Field in the Territory without first obtaining Vertex's prior written consent. Vertex will, and will cause its Affiliates to, reasonably cooperate with Company with respect to all Regulatory Filings proposed by Company to the extent [***].

2.3.4. Right of Reference.

(a) By Company. Company hereby grants Vertex, its Affiliates, Sublicensees and Distributors a "Right of Reference" (including rights of reference or cross-reference as discussed in FDA's regulations (see 21 C.F.R. §§ 312.23(b), 314.3(b), 601.51(a)) and any foreign counterparts to such regulations), to any Regulatory Filings Controlled by Company or its Affiliates that are [***] to Exploit a Licensed Agent or Product in the Field in the Territory solely for the purpose of Exploiting such Licensed Agent or Product in the Field in the Territory. If requested by Vertex, Company will provide a signed statement to this effect (including a statement of right of reference that can be submitted to module 1 of a Regulatory Filing of Vertex).

(b) By Vertex. Vertex hereby grants Company, its Affiliates, Sublicensees and Distributors a "Right of Reference" (including rights of reference or cross-reference as discussed in FDA's regulations (see 21 C.F.R. §§ 312.23(b), 314.3(b), 601.51(a)) and any foreign counterparts to such regulations), to any Regulatory Filings Controlled by Vertex or its Affiliates that are [***] to Exploit any [***] in the Field in the Territory solely for the purpose of Exploiting such [***] in the Field in the Territory. If requested by Company, Vertex will provide a signed statement to this effect (including a statement of right of reference that can be submitted to module 1 of a Regulatory Filing of Company).

2.4. <u>Manufacturing</u>.

2.4.1. Research Activities. Prior to the Manufacturing Transfer Date and except as set forth in the Research Plan or any Additional Research Plan, Company will have the sole responsibility to Manufacture the Licensed Agents and Products used by each Party to complete the Research Activities allocated to it under such Research Plan and for Company to complete Additional Research Activities allocated to Company under any Additional Research Plan and at Vertex's cost and expense in accordance with the Research Budget or Additional Research Budget, as applicable, or as otherwise provided under this Agreement. The Research Plan will set forth the total quantities of Licensed Agents and Products expected to be used by each Party to complete the Research Activities allocated to it under such Research Plan, any Additional Research Plan will set forth the total quantities of Licensed Agents and Products expected to be used by Company to complete the Additional Research Activities allocated to it under such Additional Research Plan, and the Research Budget or the Additional Research Budget, as applicable, will include the Manufacturing Cost for the quantities of Licensed Agents and Products set forth in the applicable Research Plan or Additional Research Plan.

2.4.2. Development Activities. Prior to the Manufacturing Transfer Date, Company will have the sole responsibility to Manufacture and supply to Vertex quantities of ENTR-701 reasonably requested by Vertex for Development activities at Vertex's cost and expense. If Vertex determines that such supply will be needed prior to the Manufacturing Transfer Date, then, at Vertex's request, the Parties will negotiate and enter into a clinical supply agreement (the "**Supply Agreement**") and a quality agreement regarding such clinical supply on commercially reasonable terms.

2.4.3. Termination of Manufacturing Obligation. Vertex will use Commercially Reasonable Efforts to establish its capabilities to manufacture ENTR-701 prior to the [***] of the Effective Date. If the Manufacturing Transfer Date has not occurred prior to the [***] of the Effective Date, then Company's obligation to Manufacture and supply to Vertex quantities of ENTR-701 will immediately terminate upon such date unless otherwise stated in the Supply Agreement or agreed by the Parties in writing; *provided*, *however*, that if the Manufacturing Transfer Date has not occurred prior to the [***] of the Effective Date despite Vertex's use of Commercially Reasonable Efforts to effectuate such Manufacturing technology transfer, then Company will not unreasonably withhold, condition, or delay its consent to continue its Manufacturing obligation as set forth in Section 2.4.1 or Section 2.4.2 until the Manufacturing Transfer Date, and Vertex will pay for such Manufacturing either (a) at the Manufacturing Cost, if such failure to achieve the Manufacturing Transfer Date by the [***] of the Effective Date is [***] or (b) at the Manufacturing Cost *plus* [***]% if such failure to achieve the Manufacturing Transfer Date by the [***] of the Effective Date is [***] ((a) and (b)), subject to [***] and this Agreement.

2.4.4. Following Manufacturing Technology Transfer. Following the Manufacturing Transfer Date and except as set forth in the Research Plan or any Additional Research Plan, Vertex will have sole and exclusive control over all matters related to the Manufacture and supply of Licensed Agents and Products for Exploitation in the Field in the Territory.

2.4.5. Manufacturing Costs. Company will provide all Licensed Agents and Products under this Section 2.4 at the Manufacturing Cost (with such Manufacturing Costs for Licensed Agents and Products to be used in performing Research Activities and Additional Research Activities to be included in the applicable Research Budget or Additional Research Budget) or as otherwise provided in Section 2.4.3. If requested by Vertex, the Parties will discuss Company's Manufacturing Costs for all Licensed Agents and Products Manufactured by Company as provided hereunder and [***]. If the Parties agree that [***], Company will use Commercially Reasonable Efforts to [***] and keep Vertex reasonably informed on the progress thereof.

2.5. Commercialization.

2.5.1. General. Subject to Section 2.6, Vertex will have sole and exclusive control over all matters relating to the Commercialization of Products in the Field in the Territory.

2.5.2. Branding. Vertex will have sole and exclusive control over all matters relating to the selection of all trademarks used in connection with the Commercialization of any Product in the Field in the Territory and Vertex or its designee(s) will own all of such trademarks. Company will not use nor seek to register, anywhere in the Territory, any trademark that is confusingly similar to any trademark used by or on behalf of Vertex, its Affiliates or Sublicensees in connection with any Product.

2.6. Vertex Diligence. Vertex (acting directly or through one or more Affiliates or Sublicensees) will use Commercially Reasonable Efforts to [***].

2.7. Applicable Laws. Vertex will, and will require its Affiliates and Sublicensees to, comply in all material respects with Applicable Law in its and their Research, Development, Manufacture and Commercialization of Licensed Agents and Products, including, where required, GMP, GCP and GLP.

2.8. Safety Data Exchange.

2.8.1. [***]. Upon either Party's request, the Parties will establish processes and procedures for sharing information regarding [***], as needed to support each Party's regulatory responsibilities and to comply with applicable regulatory pharmacovigilance requirements, including [***]. Any such procedures will not be construed to restrict either Party's ability to take any action that it deems to be appropriate or required of it under the applicable regulatory requirements, if permitted by Applicable Law. Without limiting the foregoing, (a) Company will promptly disclose to Vertex in writing any information in Company's possession or control regarding the occurrence of any Adverse Event related to [***], and (b) Vertex will promptly disclose to the Company in writing any information in Vertex's possession or control regarding the occurrence of any Adverse Event related to [***].

2.8.2. Safety Data. Upon Vertex's request, the Parties will negotiate and enter into a separate safety data exchange agreement (a "**Safety Data Exchange Agreement**"). The Safety Data Exchange Agreement will set forth guidelines and procedures for the receipt, investigation, recording, review, communication, reporting and exchange between the Parties of Adverse Event reports and Other Safety Information, that, for purposes of information exchange between the Parties, will include Adverse Events and serious Adverse Events, and any other information concerning or impacting the safety of any Product or Licensed Agent. Without limiting the foregoing, upon Vertex's request, the Parties will meet to establish a safety oversight working group comprised of members of both Parties, which, except as otherwise provided in the Safety Data Exchange Agreement, will discuss and establish processes and procedures for sharing information needed to support each Party's regulatory responsibilities and to comply with applicable regulatory pharmacovigilance requirements. Any such procedures will not be construed to restrict either Party's ability to take any action that it deems to be appropriate or required of it under the applicable regulatory requirements, if permitted by Applicable Law. Without limiting the foregoing, (a) Company will promptly disclose to Vertex in writing any information in Company's possession regarding the occurrence of any Adverse Event or any Other Safety Information, in each case, that [***] and (b) Vertex will promptly disclose to Company in writing any information in Vertex's possession regarding the occurrence of any Adverse Event or other Safety Information, in each case ((a) and (b)), that [***]. In addition, Vertex will (a) maintain a unified worldwide Adverse Event database for Products, and be

responsible for reporting Adverse Events and serious Adverse Events to the applicable Regulatory Authorities and (b) be responsible for all signal detection and risk management activities with respect to Products and will develop and approve the contents of all safety communications to Regulatory Authorities, including expedited non-clinical and clinical safety reports and aggregate reports to health authorities, institutional review boards and ethics committees.

ARTICLE 3.
GOVERNANCE

3.1. Joint Research Committee.

3.1.1. Formation. Within [***] after the Effective Date, the Parties will establish a joint steering committee (the "**JRC**") to oversee and coordinate Research Activities during the Research Term. The JRC will be composed of [***] representatives from each Party or such other equal number of representatives from each Party as the JRC may from time to time agree. Each Party's representatives on the JRC will be employees of such Party or its Affiliate of the seniority and experience appropriate in light of the functions, responsibilities and authority of the JRC. In addition, each Party may invite a reasonable number of additional representatives to participate in discussions and meetings of the JRC in a non-voting capacity; *provided, however*, that any such additional representatives that are not employees of such Party will be subject to the prior written consent of the other Party, which consent may be provided by its Alliance Manager, such consent not to be unreasonably withheld, conditioned, or delayed. Each Party's representatives on the JRC and all other individuals participating in discussions and meetings of the JRC on behalf of a Party will be subject to confidentiality and non-use obligations with respect to information disclosed at such meeting that are no less restrictive than the provisions of ARTICLE 10 except with respect to the duration of such obligations which will be commercially reasonable. Each Party may replace its representatives on the JRC at any time by providing notice in writing to the other Party. [***] will designate the chairperson of the JRC. The chairperson of the JRC will be responsible for setting the agenda for meetings of the JRC with input from the other members, and for conducting the meetings of the JRC. The JRC will conduct its responsibilities hereunder in good faith and with reasonable care and diligence.

3.1.2. Responsibilities. The JRC will:

(a) provide a forum for the Parties to discuss the progress of the Research Activities and address issues and share information relating thereto;

(b) review, consider for approval, and if so determined, approve, each amendment to the Research Plan, including the Research Budget;

(c) review all material Research Activities undertaken by or on behalf of the Parties under the Research Plan, including the exchange and review of data and information generated pursuant to the Research Plan;

(d) oversee and coordinate the transfer of Licensed Technology to Vertex; and

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

3.1.3. Meetings; Minutes.

(a) The JRC will meet in person or by teleconference at least [***] on such dates and at such times and places as agreed to by the members of the JRC; *provided* that at least one such meeting per [***] will be in person unless the Parties agree otherwise. Each Party will be responsible for its own expenses relating to attendance at, or participation in, JRC meetings.

(b) The Alliance Managers will provide the members of the JRC with draft written minutes for approval from each meeting within [***] after each such meeting. The responsibility for preparing the minutes will alternate between the Alliance Managers on a meeting-by-meeting basis. If the minutes of any meeting of the JRC are not approved by the JRC (with each Party's representatives on the JRC collectively having one vote and without regard to the decision-making procedure set forth in Section 3.1.4) within [***] after the meeting, the objecting Party will append a notice of objection with the specific details of the objection to the proposed minutes.

3.1.4. Decision-Making. Each Party's representatives on the JRC will collectively have one vote on all matters within the scope of the JRC's responsibilities. The JRC members will use reasonable efforts to reach agreement on all JRC matters. If the JRC is unable to reach agreement with respect to a particular matter for which it is responsible within [***] after the matter is first presented to the JRC, the matter will be referred to the Executive Officers, who will use reasonable efforts to reach agreement on such matter. If such Executive Officers are unable to reach agreement with respect to a particular matter within [***] after the matter is first referred to such Executive Officers, [***] will have the right to make the final decision with respect to such matter; *provided* that [***]. Subject to the foregoing, [***].

3.1.5. Discontinuation of the JRC. The JRC's authority will continue to exist until the first to occur of (a) the Parties mutually agreeing to disband the JRC and (b) the completion of the earlier of the Research Program or the Research Term. Following any termination of the JRC, any communications designated to occur at the JRC will occur between the Parties.

3.2. IP Committee. Within [***] days after the Effective Date, the Parties will form an intellectual property committee (the "**IP Committee**"), composed of [***] representatives from each Party that are employees of such Party or its Affiliates having relevant expertise, to coordinate the Prosecution and Maintenance and enforcement of Company Agreement Patents, Licensed Patents and Joint Agreement Patents. The IP Committee will meet in person or by means of telephone or video conference at least [***] each [***] during the Term or as the IP Committee may otherwise agree. Each Party may replace its representatives on the IP Committee at any time by providing notice in writing to the other Party. The IP Committee will have no decision-making authority but will act as a forum for discussion between the Parties with respect to matters relating to the ownership, prosecution and enforcement of Patents pursuant to this Agreement. In addition, each Party may invite a reasonable number of additional subject matter experts or relevant personnel of such Party to participate in discussions and meetings of the IP Committee; *provided, however*, that any such additional subject matter experts or relevant personnel that are not employees of such Party will be subject to the prior written consent of the other Party, which consent may be provided by its Alliance Manager, such consent not to be unreasonably withheld, conditioned, or delayed. Each Party's representatives on the IP Committee and all other individuals attending or participating in discussions and meetings of the IP Committee on behalf of a Party will be bound under written confidentiality and non-use obligations with respect to information disclosed at such meeting that are no less restrictive than the provisions of ARTICLE 10 except with respect to the duration of such obligations which will be commercially reasonable.

3.3. Other Committees. The JRC may, by mutual agreement, form such other committees or working groups as may be necessary or desirable to facilitate activities under this Agreement and delegate certain responsibilities of the JRC to such committees or working groups. Any dispute arising from such committees or working groups will be escalated to the JRC for resolution.

3.4. Alliance Managers.

3.4.1. 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 will notify the other of its Alliance Manager within [***] of the Effective Date. Each Party may replace its Alliance Manager at any time upon notice to the other Party.

3.4.2. Specific Responsibilities. Unless the Parties otherwise agree, the Alliance Managers will attend meetings of the JRC but may not be members of the JRC. The Alliance Managers will serve as the primary contact point between the Parties for the purpose of providing each Party with information regarding the other Parties' activities pursuant to this Agreement and will have the following responsibilities:

(a) schedule meetings of the JRC and circulate draft written minutes as provided in Section 3.1.3(b);

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

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

(d) perform such other functions as requested by the JRC.

ARTICLE 4.
LICENSE GRANTS; EXCLUSIVITY

4.1. License Grant to Vertex.

4.1.1. License. Subject to the terms of this Agreement, effective upon the Effective Date, Company will grant and hereby grants to Vertex and its Affiliates an exclusive, royalty-bearing license, including the right to grant Sublicenses through [***] tiers in accordance with Section 4.1.2, under Company's and its Affiliates' interest in the Licensed Technology to Exploit the Licensed Agents and Products in the Field in the Territory.

4.1.2. Sublicensing. Vertex and its Affiliates may grant Sublicenses of any rights granted to Vertex and its Affiliates by Company under this Agreement through [***] tiers of Sublicenses to one or more Third Parties. Each such Sublicense will be subject to a written agreement that is consistent with the terms of this Agreement. Vertex will remain responsible for each such Third Party's compliance with the applicable terms of this Agreement. No later than [***] following the date upon which each Sublicense becomes effective, Vertex will provide Company with a true and complete copy of each Sublicense (including the identity of the Sublicensee and, if applicable, the region or field in which such rights have been sublicensed), subject to [***].

4.1.3. Limitations. Notwithstanding the license granted to Vertex pursuant to Section 4.1.1 and without limiting Section 4.4 or Section 4.5, Company will retain

rights under the Licensed Technology for the purpose of [***]. Notwithstanding anything to the contrary in this Agreement, Company does not and will not be obligated to grant any licenses or other rights to Vertex with respect to Other Products contained in any Product that is a Combination Product.

4.2. License Grant to Company. Subject to the terms and conditions of this Agreement, effective upon the Effective Date, Vertex will grant and hereby grants to Company and its Affiliates a non-exclusive license in the Territory, with no right to grant sublicenses except to permitted Subcontractors, under (a) any Know-How Controlled by Vertex or its Affiliates and actually provided to Company hereunder, and (b) any Patents Controlled by Vertex or its Affiliates necessary or useful to perform the Research Activities or Additional Research Activities, if applicable, or to Manufacture the Licensed Agents and Products, in each case ((a) and (b)), (y) during the Research Term, solely to perform any Research Activities allocated to Company under the Research Plan or any Additional Research Activities allocated to Company under an Additional Research Plan, if applicable, and (z) prior to the Manufacturing Transfer Date, solely to manufacture Licensed Agents and Products (i) expected to be used by each Party to complete the Research Activities allocated to it under such Research Plan and for Company to complete Additional Research Activities allocated to Company under an Additional Research Plan, if applicable, and (ii) to perform other Research and Development activities as expressly contemplated under this Agreement or the Supply Agreement, if applicable or agreed by the Parties.

4.3. Technology Transfer.

4.3.1. Initial Transfer. Promptly following the Effective Date, Company will transfer to Vertex a copy of all Licensed Know-How [***] for Vertex to perform its Research Activities under the Research Plan, including any documentation (whether held in paper or electronic format and including copies of standard operating procedures or technical specifications), materials and other embodiments of Licensed Know-How.

4.3.2. Additional Transfer. Following the initial transfer described in Section 4.3.1, Company will provide updates to Vertex [***] per [***] regarding any newly acquired or generated Licensed Know-How, including information concerning any Products or Licensed Agents, and improved procedures for synthesis or manufacture of Licensed Agents or Product. As reasonably requested by Vertex, Company will promptly provide Vertex with any specific information included in the Licensed Technology that is necessary or useful for Vertex to Exploit the Licensed Compounds or Products. Company will provide such information to Vertex within [***] after Vertex's request.

4.3.3. Transfer of Manufacturing Know-How and Materials. Without limiting Company's other obligations under this Section 4.3, promptly following Vertex's request, Company will, or will cause any relevant Affiliate or Third Party (including any contract manufacturing organization engaged by Company to Manufacture any Licensed Agent or Product) to, transfer to Vertex (a) all Licensed Know-How that is [***] to enable the Manufacture of each Licensed Agent or Product, and not previously transferred to Vertex under this Agreement, by providing copies or samples of relevant documentation (whether held in paper or electronic format and including copies of standard operating procedures or technical specifications), materials and other embodiments of such Licensed Know-How, and by using reasonable efforts to make available its, or the applicable Affiliate's or Third Party's, qualified technical personnel on a reasonable basis to consult with Vertex with respect to such Licensed Know-How and (b) at Vertex's request, any Materials used by Company or its Affiliates or Third Party subcontractors in the Manufacture of such Licensed Agent or Product, excluding any commercially available, off-the-shelf Materials, in each case of (a) and (b), at the sole cost of Vertex.

4.3.4. Assistance by Company Personnel; Access to Records. To assist with the transfer of Licensed Know-How under this Section 4.3 and Vertex's exploitation thereof in accordance with the terms of this Agreement, Company will make its personnel reasonably available to Vertex during normal business hours to transfer such Licensed Know-How to Vertex and respond to Vertex's inquiries with respect thereto and Vertex will be responsible for all FTE Costs and Out-of-Pocket Costs, if applicable. In addition, following the Effective Date, Vertex will have a right, upon reasonable prior notice, to access, review and copy records, including laboratory notebooks and raw data, of Company's and its Affiliates' and Subcontractors' activities under the Research Plan and Additional Research Plan.

4.3.5. Manufacturing Subcontractors. Schedule 4.3.5 identifies the Subcontractors that Company has currently engaged in the Manufacture of the Licensed Agents and Products. At Vertex's request, Company will use Commercially Reasonable Efforts to assist Vertex in establishing a business relationship with such vendors or contractors. In addition, Company will use Commercially Reasonable Efforts to [***].

4.4. No Implied Licenses. Except as expressly provided in this Agreement, neither 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.

4.5. Exclusivity Covenants. Subject to Section 4.6 and Section 4.7, during the Term, except in the performance of its obligations or exercise of its rights under this Agreement, neither Company nor any of its Affiliates will work independently or for or with, or grant any license or similar right to, any Third Party with respect to the [***].

4.6. Acquisition of Distracting Product. Notwithstanding the provisions of Section 4.5, if Company or any of its Affiliates acquires rights to research, develop, manufacture or commercialize a product in the [***] as the result of a merger, acquisition or combination with or of a Third Party other than a Change of Control where Company is the acquired entity (each, an "**Acquisition Transaction**") and, on the date of the closing of such Acquisition Transaction, such product is being researched, developed, manufactured or commercialized and such activities would, but for the provisions of this Section 4.6, constitute a breach of Section 4.5 (such product, a "**Distracting Product**"), Company or such Affiliate will, within [***] after the closing of such Acquisition Transaction notify Vertex in writing of such acquisition and either:

(a) request that such Distracting Product be included in this Agreement on terms to be negotiated, in which case, the Parties will discuss the matter in good faith for a period of no less than [***] (or such longer period as may be agreed by the Parties) and, if unable to reach agreement on the terms on which such Distracting Product would be included hereunder within such period, Company will elect to take the action specified in either clause (b) or (c) below; *provided* that the time periods specified in such clauses will be tolled for so long as the Parties are engaged in discussion under this clause (a);

(b) notify Vertex in writing that Company or its Affiliate will Divest its rights to such Distracting Product, in which case, within [***] after the closing of the Acquisition Transaction, Company or its Affiliate will Divest such Distracting Product; or

(c) notify Vertex in writing that it is ceasing all such research, development, manufacturing and commercialization activities with respect to the Distracting Product, in which case, within [***] after Vertex's receipt of such notice, Company and its Affiliates will cease all such activities.

During the discussion period under clause (a), prior to the time of divestiture pursuant to clause (b), or prior to the termination of activities pursuant to clause (c), as applicable, Company and its

Affiliates will use Commercially Reasonable Efforts to [***], including using Commercially Reasonable Efforts to ensure that [***].

4.7. **Change of Control**. If there is a Change of Control involving Company (where Company is the acquired entity), the obligations of Section 4.5 will not apply to (x) any program of the relevant acquirer or its Affiliates that exists prior to the closing of such Change of Control or that arises thereafter [***], or to (y) any products Developed or Commercialized under such program; *provided* that (a) Company and the acquirer and its Affiliates existing immediately prior to the effective date of such Change of Control [***], (b) the acquirer and its Affiliates existing immediately prior to the effective date of such Change of Control do not [***].

4.8. **HSR Filings**.

4.8.1. **Antitrust Filings**. Each of Vertex and Company will, within [***] following the Execution Date (or such later time as may be agreed to in writing by the Parties), unless the Parties together determine that no HSR Filing is required for the activities and licenses contemplated under this Agreement, file (a) any HSR Filing required with respect to the transactions contemplated hereby with the United States Federal Trade Commission ("**FTC**") and the Antitrust Division of the United States Department of Justice ("**DOJ**"), and (b) any other Antitrust Filings required with respect to the transactions contemplated hereby with the applicable Governmental Authority. The Parties will cooperate with one another to the extent necessary in preparation of any such Antitrust Filings. Each Party will be responsible for its own costs and expenses (other than filing fees, which Vertex will pay) associated with any Antitrust Filing. With respect to the HSR Filing and other Antitrust Filings made pursuant to this Section 4.8.1, each of Vertex and Company will, 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 the FTC, the DOJ or any other 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.

4.8.2. **Antitrust Clearance**. In furtherance of obtaining clearance for an Antitrust Filing filed pursuant to this Section 4.8, Company and Vertex will use their respective reasonable best 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 such clearance from the FTC, the DOJ or any other Governmental Authority, neither Party nor its Affiliates will be required to (a) sell, divest (including through 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 such Party or any of its Affiliates (or consent to any of the foregoing actions); (b) take any action, agree to take any action, or consent to the taking of any action other than the transactions contemplated by this Agreement, including any such action that would limit a Party's freedom of action or the conduct of any business, asset, product line or property of such Party or its Affiliates or any joint venture in which such Party or its Affiliates hold an equity interest; or (c) 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) or (b) above.

4.8.3. Rights and Obligations. Other than the provisions of this Section 4.8, Section 7.1, Section 7.2, Section 7.3, Section 9.2.1, ARTICLE 10, Section 11.5, and Section 11.11, and all definitions necessary to give effect to the foregoing provisions, each of which will each become effective on the Execution Date, the rights and obligations of the Parties under this Agreement will not become effective until the Effective Date.

ARTICLE 5.
FINANCIAL PROVISIONS

5.1. Up-Front Fee. Within [***] following the Effective Date, Vertex will pay Company a one-time up-front fee of $223,681,352, which fee will be non-refundable, non-creditable and not subject to set-off. The Parties hereby acknowledge that part of such up-front fee is reimbursement of past expenses of Company. Vertex will be entitled to credit any amounts owed under Section 6.1 of the Sublicense Agreement against the foregoing; *provided*, *however*, unless the Sublicense Agreement has been assigned to OSIF, Vertex will make a single payment to Company of the amount specified this Section 5.1, which will satisfy Vertex's obligations under both this Section 5.1 and Section 6.1 of the Sublicense Agreement.

5.2. Equity Investment. The Parties acknowledge that simultaneously with the execution of this Agreement, Company and Vertex have executed a Stock Purchase Agreement pursuant to which Vertex will, on the Effective Date, purchase $26,318,648 of Company common stock, $0.0001 par value per share, in accordance with the terms of such Stock Purchase Agreement, which investment is separate from the payment of the of the upfront fee described in Section 5.1.

5.3. Milestone Payments.

5.3.1. Development & Regulatory Milestones. Vertex will pay Company the milestone payments set forth in this Section 5.3.1 in accordance with the procedure set forth in Section 5.3.3 upon the first achievement of the relevant milestone event by Vertex or any of its Affiliates or Sublicensees, which payments will be non-refundable, non-creditable and not subject to set-off. Each milestone payment set forth below is payable only once, regardless of the number of Products that achieve the relevant milestone event or the number of times a Product achieves the relevant milestone event. Vertex will be entitled to credit any milestone payment owed under Section 6.2.1 of the Sublicense Agreement (whether such milestone payment is owed to Company or, if the Sublicense Agreement is assigned to OSIF, to OSIF) against corresponding milestone payments paid under this Section 5.3.1; *provided*, *however*, that unless the Sublicense Agreement has been assigned to OSIF, Vertex will make a single payment to Company of a milestone payment specified in this Section 5.3.1, which will satisfy Vertex's obligations with respect to the applicable milestone under this Section 5.3.1 and with respect to the corresponding milestone under Section 6.2.1 of the Sublicense Agreement.

	Milestone Event	Milestone Payment
1	[***]	[***]
2	[***]	$[***]
3	[***]	$[***]
4	[***]	$[***]
5	[***]	$[***]

5.3.2. Commercial Milestones. Vertex will pay Company the milestone payments set forth in this Section 5.3.2 in accordance with the procedure set forth in

Section 5.3.3 upon the first achievement of the relevant milestone event by Vertex or its Affiliates or any Sublicensees, which payments will be non-refundable, non-creditable and not subject to set-off. Each milestone payment set forth below, is payable only once regardless of the number of Products that achieve the relevant milestone event or the number of times Product(s) achieve such milestone event. Vertex will be entitled to credit any milestone payment owed under Section 6.2.2 of the Sublicense Agreement (whether such milestone payment is owed to Company or, if the Sublicense Agreement is assigned to OSIF, to OSIF) against corresponding milestone payments paid under this Section 5.3.2; *provided*, *however*, that unless the Sublicense Agreement has been assigned to OSIF, Vertex will make a single payment to Company of a milestone payment specified in this Section 5.3.2, which will satisfy Vertex's obligations with respect to the applicable milestone under this Section 5.3.2 and with respect to the corresponding milestone under Section 6.2.2 of the Sublicense Agreement.

	Milestone Event	Milestone Payment
6	First time Annual Net Sales of all Products exceed $[***]	$[***]
7	First time Annual Net Sales of all Products exceed $[***]	$[***]

5.3.3. Notice; Payment; Skipped Milestones. Vertex will provide Company with written notice upon the achievement of each of the milestone events set forth in Section 5.3.1 and Section 5.3.2, such written notice to be provided (a) with respect to any milestone event under Section 5.3.1, within [***] after such achievement and (b) with respect to any milestone event under Section 5.3.2, on or prior to the date of delivery of the royalty report under Section 5.4.7 for the [***] in which such milestone event is first achieved. Following receipt of such written notice, Company will promptly invoice Vertex for the applicable milestone and Vertex will make the appropriate milestone payment within [***] after receipt of such invoice. Each milestone payment corresponding with the milestones numbered [***] as set forth in Section 5.3.1 are intended to be successive; if a Product is not required to undergo the event associated with any such milestone event, such skipped milestone will be deemed to have been achieved upon the achievement by such Product of the next successive milestone event. Payment for any such skipped milestone that is owed in accordance with the provisions of the foregoing sentence with respect to a given Product will be due concurrently with the payment for the next successive milestone event by such Product, it being agreed that if a Product is not required to undergo the milestone numbered [***] the corresponding payment will be made upon the first to occur of the milestones numbered [***]. For the avoidance of doubt, the occurrence of milestone number [***] will not trigger payment of milestone number [***]. For clarity, each milestone payment corresponding with the milestones numbered [***] as set forth in Section 5.3.2 are intended to be additive such that if both milestones numbered [***] are achieved in the same Calendar Year, Vertex will pay to Company a payment of $[***] (subject to any applicable credits for payments owed to Company or, if the Sublicense Agreement is assigned to OSIF, to OSIF under the Sublicense Agreement).

5.4. Royalties.

5.4.1. Royalty Rates. Subject to Sections 5.4.2, 5.4.3, 5.4.4 and 5.4.5, on a Product-by-Product basis, Vertex will pay Company non-refundable, non-creditable royalties based on the aggregate Net Sales of all Products sold by Vertex, its Affiliates or Sublicensees in the Field in the Territory during a Calendar Year at the rates set forth in the table below. The obligation to pay royalties will be imposed only once with respect to the same unit of a Product.

Annual Net Sales (in Dollars) for all Products in the Territory	Royalty Rates as a Percentage (%) of Net Sales
Portion of Annual Net Sales up to and including $[***]	[***]%
Portion of Annual Net Sales that exceeds $[***] up to and including $[***]	[***]%
Portion of Annual Net Sales that exceeds $[***]	[***]%

5.4.2. Royalty Term. Vertex will pay royalties to Company under this Section 5.4 on a Product-by-Product and a country-by-country basis during the Royalty Term for the applicable Product in the applicable country. Upon the expiration of the Royalty Term for a given Product in a given country, the license granted to Vertex under Section 4.1.1 will become fully-paid, perpetual and irrevocable with respect to such Product in such country.

5.4.3. Reduction for Lack of Patent Coverage and Regulatory Exclusivity. Subject to Section 5.4.6, if during any period within the applicable Royalty Term for a country, (a) no Valid Claim of a Licensed Patent exists that Covers such Product in such country, and (b) all applicable regulatory exclusivity periods, including data exclusivity periods, have expired in such country with respect to such Product, Net Sales of such Product in such country will be reduced by [***]% for purposes of calculating the royalty owed under Section 5.4.1 for the remainder of the Royalty Term.

5.4.4. Reduction for Competition. Subject to Section 5.4.6, if during any [***] during the Royalty Term for a Product in a given country, (a) a Competitive Product with respect to such Product is sold during such [***] in such country and (b) Net Sales for such Product in such country is less than [***]% of the average Net Sales for such Product in such country during the [***] consecutive [***] immediately preceding the [***] during which any such Competitive Product is first sold in such country, then Net Sales of such Product in such country (after any applicable reduction pursuant to Section 5.4.3) will be reduced by [***]% for purposes of calculating the royalty owed under Section 5.4.1 for the remainder of the Royalty Term; *provided*, *however*, the royalty reduction in this Section 5.4.4 will no longer apply in any country, or in any [***] in a country, as applicable, where there are no Competitive Products for such Product marketed or sold in such country and the Net Sales of such Product sold by Vertex or its Affiliates or Sublicensees in such country during such [***] is greater than [***]% of the average Net Sales of such Product during the [***] consecutive [***] immediately prior to the [***] during which any such Competitive Product is first sold in such country.

5.4.5. Third Party Licenses. Subject to Section 5.4.6, following the JRC's (or the Parties' if the JRC has disbanded) discussion of Vertex's intent to enter into an agreement to license or acquire rights to Selected Third Party Intellectual Property, and if Vertex enters into such agreement, Vertex may deduct from the royalties payable to Company under this Section 5.4 [***]% of any Selected Third Party Intellectual Property Costs paid by Vertex, its Affiliates or Sublicensees.

5.4.6. Aggregate Limitation on Deduction. Notwithstanding the foregoing, in no event will the deductions set forth in Section 5.4.3 through Section 5.4.5 reduce the royalties payable to Company with respect to a particular [***] in a given country to less than [***]% of the royalties that would otherwise be due pursuant to Section 5.4.1; *provided*, that [***]. In the event the Sublicense Agreement is assigned to OSIF, Vertex will, consistent with Section 5.5, have the right to offset the full royalty payment made to OSIF under Section 6.3 of the Sublicense Agreement without regard to the limits on reductions set forth in this Section

5.4.6, and such limits or reductions will be applied to the royalty payments owed hereunder after the offset of such full royalty payments made to OSIF.

5.4.7. Royalty Reports. Following the first sale of a Product giving rise to Net Sales and continuing for the remainder of the Royalty Term for such Product, within [***] after the end of each [***], Vertex will deliver a report to Company specifying on a Product-by-Product and country-by-country basis: (a) Net Sales in the relevant [***]; (b) to the extent such Net Sales include sales not denoted in US Dollars, a summary of the then-current exchange rate methodology(ies) used for the calculation of Net Sales in accordance with Section 5.9.2, and (c) royalties payable on such Net Sales, *provided* that Vertex will provide a good faith written estimate of such report under this Section 5.8 to Company within [***] after the end of each [***]. Unless the Sublicense Agreement has been assigned to OSIF, then the royalty report submitted by Vertex under this Section 5.4.7 will satisfy Vertex's obligations under both this Section 5.4.7 and Section 6.3.7 of the Sublicense Agreement. All royalty payments due under this Section 5.4 for each [***] will be due and payable within [***] after the end of each [***]. [***].

5.5. Payments to OSIF. In the event the Sublicense Agreement is assigned to OSIF, (a) Vertex will be entitled to offset all payments made to OSIF with respect to the OSIF Patents and OSIF Know-How (each as defined in the Sublicense Agreement, including any amendments thereto made prior to such assignment to OSIF, but excluding any payments that Vertex has agreed to make under Section 7.1.1 of the Sublicense Agreement) against payments made to Company under this Agreement, and (b) in no event will the total payments made by Vertex to both Company and OSIF under this Agreement and the Sublicense Agreement exceed the amounts that would be due to Company under this Agreement if such Sublicense Agreement had not been assigned to OSIF.

5.6. Company In-License Agreements. Certain of the Licensed Technology Controlled by Company as of the Execution Date was in-licensed or acquired by Company under the agreements with Third Party licensors or sellers listed on Schedule 5.6 (such agreements, the "**Company In-License Agreements**"). All licenses and other rights granted to Vertex under this Agreement (including any sublicense rights) are subject to the rights and obligations of Company under the Company In-License Agreements. Vertex acknowledges and agrees that it will comply with all the obligations under the Company In-License Agreements to the extent applicable to Vertex as a sublicensee thereunder; *provided* that [***]. Any payment obligations arising under the Company In-License Agreements as a result of the Research, Development, Manufacture and Commercialization of a Product by or on behalf of Vertex under this Agreement will be paid solely by Company unless such payment obligations are resulted from the breach of such Company In-License Agreements by Vertex.

5.7. New Company Agreements.

5.7.1. Company may during the Term, enter into one or more agreements to acquire or in-license rights to additional intellectual property that, if solely owned by Company, without any encumbrance or restriction on licensing, would constitute Licensed Technology; *provided, however*, that in the event Company enters into, after the Execution Date, any agreement with any Third Party (the "**Grantor**") regarding the acquisition or license of rights to such additional intellectual property (such agreements, the "**Proposed New Company Agreements**"), then (a) such Proposed New Company Agreement will not [***], and (b) Company will use Commercially Reasonable Efforts to (i) ensure such Proposed New Company Agreement is [***] or (ii) [***]. Company will use reasonable efforts to include in any such Proposed New Company Agreement that is an in-license [***]. Company will provide Vertex with a substantially final draft of such Proposed New Company Agreement, unredacted solely to the extent that such draft relates to a Product or Licensed Agent, sufficiently in advance of

execution so as to afford Vertex a meaningful opportunity to review such draft. Vertex may provide comments to such draft, and Company will [***] prior to execution of the Proposed New Company Agreement.

5.7.2. Promptly following execution of a Proposed New Company Agreement, in the event that such Proposed New Company Agreement is licensable or sublicensable to Vertex hereunder in accordance with the terms set forth therein, Company will provide to Vertex a copy of such Proposed New Company Agreement (which may be redacted to exclude provisions thereof that would not be applicable to Vertex as a licensee or sublicensee) with a summary of the terms of such agreement that would be applicable to Vertex as a licensee or sublicensee (as the case may be) thereunder (a "**Licensee**") and any milestone and royalty payments that would be owed to such Grantor arising out of Vertex's practice of the intellectual property subject to the applicable Proposed New Company Agreement. Company will discuss in good faith with Vertex to determine whether Vertex will take a license or sublicense (as the case may be) under all or a portion of the intellectual property rights that are the subject of such Proposed New Company Agreement. Following written notice by Vertex that it desires to have such intellectual property rights included in the license granted under this Agreement and be subject to the terms of such Proposed New Company Agreement that are applicable to a Licensee thereunder, such intellectual property rights described in such notice will automatically be deemed included in the Licensed Technology (any such Proposed New Company Agreement with respect to intellectual property rights that are included in the Licensed Technology pursuant to this sentence, a "**New Company Agreement**"). Any payment obligations arising under the New Company Agreements as a result of the license or sublicense granted to Vertex or the Research, Development, Manufacture or Commercialization of a Product in the Field by or on behalf of Vertex or any of its Affiliates or Sublicensees, after application of all available reductions to and deductions from such payment obligations under the applicable New Company Agreement (but, for the avoidance of doubt, excluding any such payment obligations of Company with respect to licensing or sublicensing income (as the case may be) received by Company), will be paid by Company and reimbursed by Vertex in accordance with this Section 5.7.2 and such amounts reimbursed by Vertex will be treated as Selected Third Party Intellectual Property Costs paid by Vertex pursuant to Section 5.4.5. Except as set forth in the immediately preceding sentence, Company will be responsible for all other payment obligations under such agreements (including any such payment obligations with respect to licensing or sublicensing income (as the case may be) received by Company). Company will provide Vertex with a reasonably detailed invoice for any payments made by Company under a New Company Agreement that are reimbursable by Vertex pursuant to this Section 5.7.2 within [***] of the end of each [***] in which any such payments were made by Company, and Vertex will pay the undisputed portion of such invoices within [***] of receipt thereof. All rights granted to Vertex under such New Company Agreement will be subject to the terms and conditions of such New Company Agreement and Vertex will comply with all terms of such New Company Agreement applicable to Vertex, its Affiliates or Sublicensees thereunder. For clarity, Vertex and its Affiliates will be obligated to reimburse a given amount owed under a New Company Agreement one time only. Notwithstanding the foregoing, Vertex may, in its sole discretion, notify Company that it elects to terminate its license or sublicense with respect to any New Company Agreement with [***] prior written notice, whereupon such termination, such New Company Agreement, as applicable, will be deemed not to be a New Company Agreement, as applicable, under this Agreement and the intellectual property rights licensed or sublicensed to Vertex thereunder will no longer constitute Licensed Technology, in which case, Vertex's reimbursement obligations under this Section 5.7.2 will terminate with respect to such New Company Agreement. Except as otherwise provided in this Agreement, as between the Parties, Company will be responsible for all payments in connection with any New Company Agreement unless such payment obligations are resulted from the material breach of such New Company Agreement by Vertex.

5.7.3. Notwithstanding anything to the contrary herein, Company's obligations under this Section 5.7 with respect to a Proposed New Company Agreement will not apply to the extent such Proposed New Company Agreement relates to Patents or Know-How that, pursuant to Section 1.46, Company and its Affiliates are deemed to not Control following a Change of Control.

5.8. Funding.

5.8.1. Cost Reimbursement. Vertex will reimburse Company for (a) its FTE Costs, Out-of-Pocket Costs, and Manufacturing Costs actually incurred by Company or its Affiliates for Research Activities performed in accordance with Research Plan and Research Budget; *provided* that (i) Vertex will not reimburse Company for any FTE Costs, Out-of-Pocket Costs, or Manufacturing Costs incurred during any [***] in the conduct of Research Activities in excess of [***]% of the relevant Research Budget for such [***] and (ii) Company will be solely responsible for all such excess expenses above [***]% of the Research Budget incurred during such [***], unless (A) the cause of the excess expenditure is [***] or (B) otherwise agreed in writing by Vertex (including pursuant to a revised Research Budget), and (b) Manufacturing Costs actually incurred by Company for any ENTR-701 Manufactured and supplied to Vertex for its Development activities pursuant to the Supply Agreement. Vertex will be responsible for its costs and expenses incurred in the performance of Research Activities.

5.8.2. Additional Research Costs. Vertex will reimburse Company for its FTE Costs and Out-of-Pocket Costs actually incurred by Company or its Affiliates for Additional Research Activities performed in accordance with Additional Research Plan and Additional Research Budget; *provided* that (a) Vertex will not reimburse Company for any FTE Costs or Out-of-Pocket Costs incurred during any [***] in the conduct of Additional Research Activities in excess of [***]% of the relevant Additional Research Budget for such [***] and (b) Company will be solely responsible for all such excess expenses above [***]% of the Additional Research Budget incurred during such [***], unless (A) the cause of the excess expenditure is [***] or (B) otherwise agreed in writing by Vertex (including pursuant to a revised Additional Research Budget).

5.8.3. Payments. Any payments to be made to Company by Vertex pursuant to this Section 5.8 will be made [***] in arrears pursuant to invoices submitted by Company to Vertex within [***] following the end of the applicable [***] for which such costs have been incurred; *provided* that Company will provide a good faith written estimate of any costs for which reimbursement is due under this Section 5.8 within [***] after each [***]. Each such invoice will be accompanied by reasonable supporting documentation evidencing the expenses incurred for Research Activities or Additional Research Activities, including Manufacturing activities, (such activities to be itemized) during such [***]. Undisputed payments will be due within [***] after Vertex receives such an invoice from Company. The Parties agree to discuss in good faith to resolve any payment disputes within [***] of such dispute.

5.9. Payment Terms.

5.9.1. Currency; Payment Method. All payments under this Agreement are expressed in U.S. Dollars and will be paid in U.S. Dollars, in immediately available funds by wire transfer or Automated Clearing House (ACH) payment to an account designated by Company (which account Company may update from time to time in writing).

5.9.2. Exchange; Interest. 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, such amounts will be

converted to their U.S. Dollar equivalent using Vertex's then-current standard procedures and methodology, including its then-current standard exchange rate methodology for the translation of foreign currency expenses into U.S. Dollars or, in the case of Sublicensees, such similar methodology, consistently applied. Calculation of Net Sales will exclude hedging and foreign exchange gain or loss realized through a hedging program. Interest will be payable by Vertex on any amounts payable to Company under this Agreement which are not paid by the date they become due. All interest will accrue (both before and after any judgment) at an annual rate equal to [***] percentage points above the United States effective Federal Funds Rate, on the date such payment first became due (but in no event in excess of the maximum rate permissible by Applicable Law).

5.10. **Withholding Tax**. Where any sum due to be paid to Company hereunder is subject to any withholding or similar tax as required by Applicable Law, Vertex will pay such withholding or similar tax to the appropriate Governmental Authority and deduct the amount paid from the amount then due to Company. Vertex will in a timely manner transmit to Company an official tax certificate or other evidence of such withholding sufficient to enable Company to claim such payment of taxes. The Parties will cooperate with one another and use reasonable efforts to reduce or eliminate tax withholding or similar obligations in respect of royalties, milestone payments, and other payments made by Vertex to Company under this Agreement. Company will provide Vertex any tax forms that may be reasonably necessary in order for Vertex not to withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty. Each Party will provide the other with reasonable assistance to enable the recovery, as permitted by Applicable Laws, of withholding taxes, value added taxes, or similar obligations resulting from payments made under this Agreement, such recovery to be for the benefit of the Party bearing such withholding tax or value added tax. Notwithstanding anything in this Agreement to the contrary, if any assignment, or sublicense or a similar transfer of rights or obligations under this Agreement (including through merger or acquisition) by Vertex leads to the imposition of withholding tax liability on any amounts payable under this Agreement that would not have been imposed in the absence of such action or in an increase in such liability above the liability that would have been imposed in the absence of such action, then the sum payable by Vertex (in respect of which such deduction or withholding is required to be made) will be increased to the extent necessary to ensure that Company receives a sum equal to the sum which it would have received had no such action occurred.

5.11. **Records; Audits**. Vertex and its Affiliates will, and will cause their respective Sublicensees to, keep and maintain accurate and complete records regarding Net Sales during the [***]. Company and its Affiliates will, and will require their respective Subcontractors to, keep accurate and complete records regarding all FTE Costs and Out-of-Pocket Costs incurred in connection with the performance of Research Activities and Additional Research Activities in sufficient detail to confirm the accuracy of any payments required under this Agreement, covering the [***]. Upon [***] prior written notice from the other Party (the "**Auditing Party**"), the Party required to maintain such records (as applicable, 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 and Sublicensees as may be reasonably necessary to verify the royalty reports submitted by Vertex in accordance with Section 5.4.6 or the FTE Costs and Out-of-Pocket Costs reported by Company in accordance with Section 5.8.1 and Section 5.8.2, as applicable. An examination by the Auditing Party under this Section 5.11 will occur not more than [***] and will be limited to the pertinent books and records for any [***] ending not more than [***] 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 Parties a written report disclosing whether the reports submitted by Vertex or the FTE Costs and Out-of-Pocket Costs submitted by Company, as applicable, 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 resulted in an underpayment or overpayment, the Party owing the underpaid or overpaid amount will promptly pay such amount to the other Party. The costs and fees of any audit conducted by the Auditing Party under this Section 5.11 will be borne by the Auditing Party, unless such audit reveals an underpayment of amounts owed to or an overpayment of amounts owed by the Auditing Party of more than [***] percent of the amount that was owed by the Audited Party or owed to the Audited Party, as applicable, with respect to the relevant period, in which case, the Audited Party will reimburse the Auditing Party for the reasonable expense incurred by the Auditing Party in connection with the audit.

ARTICLE 6.
INTELLECTUAL PROPERTY

6.1. **Ownership of Agreement Technology**. For purposes of determining ownership under this Section 6.1, inventorship will be determined in accordance with United States patent laws (regardless of where the applicable activities occurred).

6.1.1. **Company Agreement Technology**. As between the Parties, Company will be the sole owner of [***] ((a) and (b), collectively, the "**Company Agreement Know-How**") and any Patents that claim Company Agreement Know-How ("**Company Agreement Patents**" and together with the Company Agreement Know-How, the "**Company Agreement Technology**"), and will retain all of its rights thereto, subject to any rights or licenses expressly granted by Company to Vertex under this Agreement. Vertex will promptly disclose to Company in writing, and will cause its Affiliates to so disclose, the discovery, development, invention or creation of any Company Core Technology Improvements, whether discovered, developed, invented or created solely or jointly by Vertex or its Affiliates or Third Parties acting on its or their behalf. Company will promptly disclose to Vertex in writing, and will cause its Affiliates to so disclose, the discovery, development, invention or creation of any other Company Agreement Know-How or Company Agreement Patent within the Licensed Technology. Vertex hereby assigns to Company, Vertex's rights, title, and interests in and to the Company Core Technology Improvements and all intellectual property rights (including Patents) therein. Vertex will take (and cause its Affiliates and Sublicensees, and their respective employees, agents, and contractors to take) such further actions reasonably requested by Company to evidence such assignment and to assist Company in obtaining Patents and other intellectual property protection for such Company Core Technology Improvements and all intellectual property rights therein, including executing further assignments, consents, releases, and other commercially reasonable documentation and providing good faith testimony by affidavit, declaration, in-person, or other proper means in support of any effort by Company to establish, perfect, defend, or enforce its rights in any Company Core Technology Improvements through prosecution of governmental filings, regulatory proceedings, litigation, and other means. Vertex will obligate its Affiliates, Sublicensees, and Subcontractors to assign all Company Core Technology Improvements to Vertex (or directly to Company) so that Vertex can comply with its obligations under this Section 6.1.1, and Vertex will promptly obtain any such assignment.

6.1.2. **Vertex Agreement Technology**. As between the Parties, Vertex will be the sole owner of [***] ((a) and (b), collectively, the "**Vertex Agreement Know-How**") and any Patents that claim Vertex Agreement Know-How ("**Vertex Agreement Patents**" and together with the Vertex Agreement Know-How, the "**Vertex Agreement Technology**"), and will retain all of its rights thereto, subject to any rights or licenses expressly granted by Vertex to Company under this Agreement. Company will promptly disclose to Vertex in writing, and will

cause its Affiliates to so disclose, the discovery, development, invention or creation of any Vertex Core Technology Improvements, whether discovered, developed, invented or created solely or jointly by Company or its Affiliates or Third Parties acting on its or their behalf. Company hereby assigns to Vertex, Company's rights, title, and interests in and to the Vertex Core Technology Improvements and all intellectual property rights (including Patents) therein. Company will take (and cause its Affiliates, and their respective employees, agents, and contractors to take) such further actions reasonably requested by Vertex to evidence such assignment and to assist Vertex in obtaining Patents and other intellectual property protection for such Vertex Core Technology Improvements and all intellectual property rights therein, including executing further assignments, consents, releases, and other commercially reasonable documentation and providing good faith testimony by affidavit, declaration, in-person, or other proper means in support of any effort by Vertex to establish, perfect, defend, or enforce its rights in any Vertex Core Technology Improvements through prosecution of governmental filings, regulatory proceedings, litigation, and other means. Company will obligate its Affiliates and Subcontractors to assign all Vertex Core Technology Improvements to Company (or directly to Vertex) so that Company can comply with its obligations under this Section 6.1.2, and Company will promptly obtain any such assignment.

6.1.3. Joint Agreement Technology. Any Know-How (other than [***]) that is discovered, developed, invented or created jointly by (a) Vertex, its Affiliates or Third Parties acting on its or their behalf and (b) Company, its Affiliates or Third Parties acting on its or their behalf, in each case, in the performance of activities under this Agreement (including in any meeting of the JRC) (such Know-How, "**Joint Agreement Know-How**"), and any Patents that claim such Joint Agreement Know-How ("**Joint Agreement Patents**," and together with the Joint Agreement Know-How, the "**Joint Agreement Technology**"), will be owned jointly by Vertex and Company on an equal and undivided basis, including all rights thereto, subject to any rights or licenses expressly granted by one Party to the other Party under this Agreement. Except as expressly provided in this Agreement, neither Party will have any obligation to account to the other for profits with respect to, or to obtain any consent of the other Party to license or exploit, Joint Agreement Technology by reason of joint ownership thereof, and each Party hereby waives any right it may have under the laws of any jurisdiction to require any such consent or accounting.

6.2. <u>Prosecution and Maintenance of Patents</u>.

6.2.1. Company Agreement Patents. As between the Parties, Company will have the sole right, at Company's expense, to control the Prosecution and Maintenance of the Patents within the Company Agreement Patents that are not Licensed Patents.

6.2.2. Vertex Agreement Patents. As between the Parties, Vertex will have the sole right, at Vertex's expense, to control the Prosecution and Maintenance of the Vertex Agreement Patents.

6.2.3. Licensed Platform Patents. As between the Parties, [***] will have the first right (but not the obligation) to Prosecute and Maintain the Licensed Platform Patents at [***]'s own expense using patent counsel that is reasonably acceptable to [***]. [***] agrees to keep [***] reasonably informed with respect to the Prosecution and Maintenance of such Licensed Platform Patents and consult in good faith with [***] regarding such matters. If [***] intends to abandon any such Licensed Platform Patent that [***] is responsible for Prosecuting and Maintaining in a particular country, then [***] will notify [***] of such intention at least [***] before such Patent will become abandoned. Following such notice, [***] may elect, upon written notice to [***], to control the Prosecution and Maintenance thereof at its own expense with counsel of its own choice. Upon such election, [***] will cooperate and assist in transitioning the Prosecution and Maintenance of such Patent to [***].

6.2.4. Licensed Product-Specific Patents. As between the Parties, [***] will have the first right (but not the obligation) to Prosecute and Maintain the Licensed Product-Specific Patents at [***]'s own expense. [***] agrees to keep [***] reasonably informed with respect to the Prosecution and Maintenance of Licensed Product-Specific Patents (including providing copies of any office actions or office action responses or other correspondence that [***] provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings of such Licensed Product-Specific Patents), to consult in good faith with [***] regarding such matters, and to [***] with respect to such matters. If [***] intends to abandon any such Licensed Product-Specific Patent that [***] is responsible for Prosecuting and Maintaining in a particular country, then [***] will notify [***] of such intention at least [***] before such Patent will become abandoned. Following such notice, [***] may elect, upon written notice to [***], to control the Prosecution and Maintenance thereof at its own expense with counsel of its own choice. Upon such election, [***] will cooperate and assist in transitioning the Prosecution and Maintenance of such Licensed Product-Specific Patent to [***]. Promptly following the Effective Date, the Parties will aim to agree on, and will thereafter comply with, a Patent filing strategy that allows for [***].

6.2.5. Other Joint Patents. Upon identification of any Joint Agreement Patent that is not a Licensed Patent (such Patents, the "**Other Joint Patents**"), the Parties will discuss in good faith and determine which Party will be primarily responsible for the Prosecution and Maintenance of such Other Joint Patent. The Party primarily responsible for such Prosecution and Maintenance of a particular Other Joint Patent (the "**Lead Prosecuting Party**") will conduct such Prosecution and Maintenance, at its expense, using counsel reasonably acceptable to the other Party. The Lead Prosecuting Party will keep the other Party reasonably informed with respect to such Prosecution and Maintenance and consult in good faith with such other Party regarding such matters. If the Lead Prosecuting Party decides to abandon an Other Joint Patent that is not a Licensed Patent, it will provide the other Party with notice at least [***] prior to the date such abandonment would become effective. Following such notice, the other Party may elect, upon written notice to the Lead Prosecuting Party, to control the Prosecution and Maintenance of such Patent at its own expense. Upon such election, the Lead Prosecuting Party will cooperate and assist in transitioning the Prosecution and Maintenance of such Patent to the other Party, and the other Party agrees thereafter to keep the Lead Prosecuting Party reasonably informed with respect to such Prosecution and Maintenance and consult in good faith with the Lead Prosecuting Party regarding such matters.

6.2.6. Cooperation. Vertex and Company will obtain the cooperation of their respective employees or obligated Third Parties that are inventors in the Prosecution and Maintenance directed to any inventions that may arise hereunder. The Parties agree to work together in good faith to [***].

6.2.7. IP Committee. During the Term, each Party will keep the other Party informed through the IP Committee (or to the other Party, if the IP Committee is disbanded) as to material developments with respect to the Prosecution and Maintenance of Company Agreement Patents, Licensed Patents and Joint Agreement Patents for which such Party has responsibility for Prosecution and Maintenance pursuant to this Section 6.2, including by providing copies of any office actions or office action responses or other correspondence that such Party provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings within [***] after such receiving or filing such documents, and by providing the other Party the timely opportunity to have reasonable input into the strategic aspects of such Prosecution and Maintenance.

6.3. Defense of Claims Brought by Third Parties. If any Third Party brings a claim or otherwise asserts that a Product or Licensed Agent infringes such Third Party's Patent

or misappropriates such Third Party's Know-How (each, a "**Third-Party Infringement Claim**"), the Party first having notice of the claim or assertion will promptly notify the other Party in writing. Subject to Section 8.1, [***] will have the sole right to undertake and control the defense or settlement of any Third-Party Infringement Claim using counsel of its choice, at its expense. Subject to Section 8.1, if [***] is named as a defendant in any such Third Party Infringement Claim, [***] will have the right to participate in such defense and settlement with its own counsel, at its expense. Subject to Section 8.1, [***] will not enter into any settlement of any Third-Party Infringement Claim that is instituted or threatened to be instituted against [***] without [***]'s prior written consent, which will not be unreasonably withheld, conditioned or delayed; *provided* that such consent will not be required if [***]. As requested by [***], [***] will provide reasonable cooperation and assistance to [***] in connection with [***]'s control of the defense or settlement of a Third-Party Infringement Claim. Such cooperation and assistance will include executing all necessary and proper documents and taking such actions as will be appropriate to allow [***] to control the defense and settlement of such Third-Party Infringement Claim. Subject to Section 8.1, [***] will reimburse [***] for the reasonable FTE Costs and Out-of-Pocket Costs incurred by [***] in providing such assistance and cooperation; *provided* that [***] will have no obligation to reimburse [***] for any such FTE Costs and Out-of-Pocket Costs incurred if Company exercises its right to participate in the defense and settlement of a Third-Party Infringement Claim with its own counsel. [***] will keep [***] reasonably informed of the progress of any Third Party Infringement Claim. To the extent reasonable, both Parties will cooperate in good faith to [***].

6.4. Enforcement of Patents Against Competitive Infringement.

6.4.1. Duty to Notify of Competitive Infringement. If either Party learns of an infringement, unauthorized use, misappropriation, threatened infringement, or a request for a compulsory license by a Third Party with respect to any Licensed Technology by reason of the making, using, offering to sell, selling, importing or other exploitation of a compound or product in the [***] (a "**Competitive Infringement**"), such Party will promptly notify the other Party in writing and will provide such other Party with available information regarding such Competitive Infringement.

6.4.2. Enforcement.

(a) [***] will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding under any Licensed Product-Specific Patent with respect to any Competitive Infringement by counsel of its own choice, at its own expense. If [***] fails to initiate such a Proceeding within [***] after written notice of such Competitive Infringement is first provided by a Party under Section 6.4.1, or [***] if such Proceeding is an ANDA litigation, other than with respect to a request for a compulsory license, [***] will have the right to initiate and control a Proceeding with respect to such Competitive Infringement by counsel of its own choice, at its own expense and [***] will have the right, at its own expense, to be represented in any such action by counsel of its own choice; *provided* that, if [***] notifies Company during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***], then [***] will not have the right to initiate and control any Proceeding with respect to such Competitive Infringement (other than as provided in Section 6.4.2(b)).

(b) [***] will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding under any Licensed Platform Patent with respect to any Competitive Infringement by counsel of its own choice, at its own expense. If [***] fails to initiate such a Proceeding within [***] after written notice of such Competitive Infringement is first provided by a Party under Section 6.4.1, or [***] if such Proceeding is an ANDA litigation, other than with respect to a request for a compulsory license, [***] will have the right to initiate and control a Proceeding with respect to such Competitive Infringement by counsel of its own

choice, at its own expense; *provided* that if (i) [***] notifies Vertex during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***] will not have the right to initiate, prosecute and control any Proceeding under the Licensed Platform Patents with respect to such Competitive Infringement.

(c) The Lead Prosecuting Party will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding under any Other Joint Patent with respect to any Competitive Infringement by counsel of its own choice, at its own expense. If the Lead Prosecuting Party fails to initiate such a Proceeding within [***] after written notice of such Competitive Infringement is first provided by the other Party under Section 6.4.1, or [***] if such Proceeding is an ANDA litigation, other than with respect to a request for a compulsory license, the other Party will have the right to initiate and control a Proceeding with respect to such Competitive Infringement by counsel of its own choice, at its own expense; *provided* that if (x) (i) [***] is the Lead Prosecuting Party and it notifies [***] during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***] will not have the right to initiate, prosecute and control any Proceeding under the Other Joint Patents with respect to such Competitive Infringement or (y) if [***] is the Lead Prosecuting Party and it notifies [***] during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***] will not have the right to initiate and control any Proceeding with respect to such Competitive Infringement.

(d) The Party prosecuting and controlling any such Proceeding will (i) keep the other Party reasonably apprised of the progress of such Proceeding, (ii) reasonably consider the other Party's comments with respect to the conduct of such Proceeding and (iii) not enter into a settlement, consent judgment or other voluntary final disposition of a Proceeding that [***] without the other Party's prior written consent, not to be unreasonably withheld, conditioned, or delayed; *provided* that [***].

6.4.3. Joinder.

(a) If a Party initiates a Proceeding in accordance with this Section 6.4, the other Party agrees to be joined as a party plaintiff where necessary and to give the first Party reasonable assistance and authority to file and prosecute the Proceeding. Subject to Section 6.4.4, the costs and expenses of each Party incurred pursuant to this Section 6.4.3(a) will be borne by the Party initiating such Proceeding.

(b) If one Party initiates a Proceeding in accordance with this Section 6.4, the other Party may join such Proceeding as a party plaintiff where necessary for such other Party to seek lost profits with respect to such infringement.

6.4.4. Share of Recoveries. Any damages or other monetary awards recovered with respect to a Proceeding brought pursuant to this Section 6.4 will be shared as follows:

(a) the amount of such recovery will first be applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such Proceeding (which amounts will be allocated *pro rata* if insufficient to cover the totality of such expenses); then

(b) any remaining proceeds constituting direct or actual damages for acts of infringement will be paid to, or retained by, [***]; *provided* that such amounts will be [***]; and

(c) any remaining proceeds constituting [***] will be allocated between the Parties as follows: the Party initiating the Proceeding will retain [***]% of such proceeds and the other Party will receive [***]% of such proceeds.

6.4.5. Settlement. Notwithstanding anything to the contrary under this ARTICLE 6, neither Party may enter a settlement, consent judgment or other voluntary final disposition of a suit under this ARTICLE 6 that disclaims, limits the scope of, admits the invalidity or unenforceability of, or grants a license, covenant not to sue or similar immunity under a Patent Controlled by the other Party or its Affiliates without first obtaining the written consent of the Party that Controls the relevant Patent; *provided* that the foregoing restriction on granting a license will not apply with respect to any Sublicense granted by Vertex.

6.5. Other Infringement.

6.5.1. Joint Agreement Patents. With respect to the infringement of a Joint Agreement Patent that is not a Competitive Infringement, neither Party will enforce any Joint Agreement Patent unless mutually agreed by the Parties; *provided* that the Parties will cooperate in good faith to bring suit together against such infringing party or the Parties may decide to permit one Party to solely bring suit. Any damages or other monetary awards recovered with respect to a Proceeding brought pursuant to this Section 6.5.1 will be shared as follows: (a) the amount of such recovery will first be applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such Proceeding (which amounts will be allocated *pro rata* if insufficient to cover the totality of such expenses); then (b) any remaining proceeds will be allocated as follows: (i) if the Parties jointly initiate a Proceeding pursuant to this Section 6.5.1, [***]; and (ii) if only one Party initiates the Proceeding pursuant to this Section 6.5.1, such Party will retain [***]% of such proceeds and the other Party will receive [***]% of such proceeds.

6.5.2. Patents Solely Owned by Company. Company will retain all rights to pursue (a) an infringement of any Patent solely owned by Company that is not a Competitive Infringement and (b) an infringement of any Patent solely owned by Company that is not included in the Licensed Technology, and, in each case of (a) and (b), Company will retain all recoveries with respect thereto.

6.5.3. Patents Solely Owned by Vertex. Vertex will retain all rights to pursue an infringement of any Patent solely owned by Vertex and Vertex will retain all recoveries with respect thereto.

6.6. Patent Listing. [***] will have the sole right, but not the obligation, to submit to all applicable Regulatory Authorities patent information pertaining to each applicable Product pursuant to 21 U.S.C. § 355(b)(1)(G), any similar statutory or regulatory requirement enacted in the future regarding biologic products, or any similar statutory or regulatory requirement in any non-U.S. country or other regulatory jurisdiction.

6.7. Common Ownership Legislation. Notwithstanding anything to the contrary in this ARTICLE 6, neither Party will have the right to make an election under the Common Ownership Legislation when exercising its rights under this ARTICLE 6 without the prior written consent of the other Party, which will not be unreasonably withheld, conditioned or delayed. With respect to any such permitted election, the Parties will use reasonable efforts to cooperate and coordinate their activities with respect to any submissions, filings or other activities in support thereof. The Parties acknowledge and agree that this Agreement is a "joint research agreement" as defined in the Common Ownership Legislation. Notwithstanding the foregoing, the other Party's consent under this Section 6.7 will not be required in connection with an obviousness-type double patenting rejection in any patent application claiming a Licensed Agent, Product, or uses thereof.

6.8. **Patent Term Extension**. [***] will have the sole right, at its sole cost, to obtain patent term restoration in any country in the Territory under 35 U.S.C. § 156 or any statute or regulation equivalent or similar thereto, where applicable to a Product and where such patent term restoration arises from, or is calculated in reference to, the Development of a Product or Licensed Agent, including with respect to any [***], except as provided below with respect to [***]. [***] will determine which relevant patents will be extended (including by filing supplementary protection certificates and any other extensions that are now or in the future become available); *provided, however*, that any decision to [***] will require the prior written approval of [***], which may be withheld in [***]'s sole discretion. [***] will cooperate, at [***]'s cost, as reasonably requested by [***], in connection with the foregoing (including by providing appropriate information and executing appropriate documents). For clarity, [***] will have the sole right to obtain patent term restoration in any country in the Territory for any [***] where such patent term restoration arises from, or is calculated in reference to, [***].

6.9. **Recording**. If Vertex deems it necessary or desirable to register or record this Agreement or evidence of this Agreement with any patent office or other appropriate Governmental Authority in one or more jurisdictions in the Territory, Company will reasonably cooperate to execute and deliver to Vertex any documents accurately reflecting or evidencing this Agreement that are necessary or desirable, in Vertex's reasonable judgment, to complete such registration or recordation. Vertex will reimburse Company for all reasonable Out-of-Pocket Costs, including attorneys' fees, incurred by Company in complying with the provisions of this Section 6.9.

6.10. **Unitary Patent System**. The Party Prosecuting and Maintaining a Patent in Europe pursuant to Section 6.2 will have the exclusive right to opt-in or opt-out of the Europe Unitary Patent System for such Patent. For clarity, "to opt-in or opt-out" refers to both the right to have or have not a European patent application or an issued European patent registered to have unitary effect within the meaning of Regulation (EU) No 1257/2012 of December 17, 2012 as well as the Agreement on a Unified Patent Court as of February 19, 2013; and to the right to opt-in or opt-out from the exclusive competence of the Unified Patent Court in accordance with Article 83(3) of that Agreement on a Unified Patent Court. Without limiting the generality of the foregoing, unless a Party or its Affiliate has expressly opted in to the Europe Unitary Patent System with respect to a given Patent, the other Party will not initiate any action with respect to such Patent under the Europe Unitary Patent System without such Party's prior written approval, such approval to be granted or withheld in such Party's sole discretion.

6.11. **Trademarks**. As between the Parties, all trademarks and trade dress rights used in connection with the Commercialization of the Products in the Field in the Territory will be owned exclusively by Vertex.

6.12. **Bankruptcy**.

6.12.1. All rights and licenses now or hereafter granted by Company to Vertex under or pursuant to this Agreement, including, for the avoidance of doubt, the licenses granted to Vertex pursuant to Section 4.1, are, for all purposes of 11 U.S.C. § 365(n), licenses of rights to "intellectual property" as defined in the U.S. Bankruptcy Code. Upon the occurrence of any Insolvency Event with respect to Company, Company 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. Without limiting the generality of the foregoing, the Parties intend and agree that any sale of Company's assets under Section 363 of the Bankruptcy Code will be subject to Vertex's rights under Section 365(n), that Vertex cannot be compelled to accept a money satisfaction of its interests in the intellectual property licensed pursuant to this Agreement, and that any such sale therefore may not be made to a purchaser "free and clear" of Vertex's rights under this Agreement and Section 365(n) without the express, contemporaneous

consent of Vertex. Further, each Party agrees and acknowledges that all payments by Vertex to Company hereunder, other than the up-front fee pursuant to Section 5.1, royalty payments pursuant to Section 5.4, and the milestone payments pursuant to Section 5.3.1 and Section 5.3.2, do not constitute royalties within the meaning of Section 365(n) of the Bankruptcy Code or relate to licenses of intellectual property hereunder. Company will, during the 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 Technology and all information related to the Licensed Technology. If (a) a case under the U.S. Bankruptcy Code is commenced by or against Company, (b) this Agreement is rejected as provided in the U.S. Bankruptcy Code, and (c) Vertex elects to retain its rights hereunder as provided in Section 365(n) of the U.S. Bankruptcy Code, Company (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) will:

(a) provide Vertex with copies of all such intellectual property (including all embodiments thereof) held by Company; and

(b) 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.

Nothing herein will be deemed a waiver by Vertex of any claims it may have against Company resulting from rejection of the license or failure to perform its obligations hereunder.

ARTICLE 7.
REPRESENTATIONS AND WARRANTIES

7.1. **Representations and Warranties of Vertex**. Vertex hereby represents and warrants to Company, as of the Execution Date and the Effective Date, that:

7.1.1. it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization;

7.1.2. it (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;

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

7.1.4. the execution, delivery and performance of this Agreement by Vertex will not constitute a default under or conflict with any agreement, instrument, obligation 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;

7.1.5. except with respect to any required Antitrust Filings, it 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;

7.1.6. the representations and warranties of Vertex in this Agreement, and the information, documents and materials furnished to Company in connection with its period of diligence prior to the Execution Date or the Effective Date, as applicable, do not, taken as a whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading; and

7.1.7. Vertex is solvent and has the ability to pay and perform all of its obligations due as of the Effective Date, including any such payment obligations under this Agreement.

7.2. Representations and Warranties of Company. Company hereby represents and warrants to Vertex, as of the Execution Date and the Effective Date, that, except as set forth in the corresponding section of Schedule 7.2.8, which schedule may be supplemented or updated within [***] following the Antitrust Clearance Date (*provided* that any such supplement or update may only contain information arising after the Execution Date):

7.2.1. it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization;

7.2.2. it (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;

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

7.2.4. the execution, delivery and performance of this Agreement by Company will not constitute a default under or conflict with any agreement, instrument, obligation 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;

7.2.5. except with respect to any required Antitrust Filings, it 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;

7.2.6. Company Controls all Patents and Know-How owned by or licensed to Company or its Affiliates (excluding Patents and Know-How licensed to Company or its Affiliates by OSIF under the OSIF Agreement) that are necessary or useful to Exploit Licensed Agents and Products in the Field;

7.2.7. Company is the sole and exclusive owner or exclusive licensee of the Licensed Technology, all of which is free and clear of any liens, charges and encumbrances (other than any license granted by Company or its Affiliates to any Third Party that do not conflict with or affect the scope of the licenses granted under this Agreement), and, as of the Execution Date and the Effective Date, neither any license granted by Company or its Affiliates to any Third Party, nor any agreement between any Third Party and Company or its Affiliates,

conflicts with the licenses or other rights granted to Vertex hereunder and Company is entitled to grant all rights and licenses (or sublicenses, as the case may be) it purports to grant to Vertex under this Agreement;

7.2.8. Company has disclosed to Vertex in Schedule 7.2.8 all Licensed Patents that, to its knowledge, are existing as of the Execution Date and the Effective Date, and such disclosure indicates whether each such Patent is owned by Company or licensed by Company from a Third Party and if so licensed, identifies the licensor or sublicensor from which the Patent is licensed and Company has provided Vertex with a true and complete copy of each such license agreement;

7.2.9. to its knowledge, the Licensed Patents, are subsisting and are, or, upon issuance, will be, valid and enforceable patents and no Third Party has challenged the scope validity or enforceability of such Patents (including by way of example through the institution or written threat of institution of interference, nullity or similar invalidity proceedings before the United States Patent and Trademark Office or any analogous foreign Governmental Authority);

7.2.10. to its knowledge, no Third Party is infringing or threatening to infringe any of the Licensed Patents or misappropriating or threatening to misappropriate any Licensed Know-How;

7.2.11. it has complied with Applicable Law, including any disclosure requirements of the United States Patent and Trademark Office or any analogous foreign Governmental Authority, in connection with the Prosecution and Maintenance of the Licensed Patents and has timely paid all filing and renewal fees payable with respect to any such Patents for which it controls Prosecution and Maintenance;

7.2.12. it has obtained assignments from the inventors of all inventorship rights relating to the Licensed Patents, and, to its knowledge, all such assignments of inventorship rights relating to such Patents are valid and enforceable;

7.2.13. except for the Company In-License Agreements, there is no agreement between Company or any of its Affiliates and any Third Party pursuant to which Company or its Affiliate has acquired Control of any of the Licensed Technology. Company has provided true and complete copies of all Company In-License Agreements, including all amendments or modifications thereto, to Vertex. All Company In-License Agreements are in full force and effect. Neither Company nor its Affiliates nor, to its knowledge, the Third Party licensor in any Company In-License Agreement is in material breach of, or in default with respect to a material obligation under, any Company In-License Agreement, and neither such party has claimed or has grounds upon which to claim that the other party is in material breach of, or in default with respect to a material obligation under, any Company In-License Agreement;

7.2.14. Company and its Affiliates have taken commercially reasonable measures consistent with industry practices to protect the secrecy, confidentiality and value of all Licensed Know-How that constitutes trade secrets under Applicable Law (including requiring all employees, consultants and independent contractors to execute binding and enforceable agreements requiring all such employees, consultants and independent contractors to maintain the confidentiality of such Licensed Know-How) and, to Company's knowledge, such Licensed Know-How has not been used, disclosed to or discovered by any Third Party except pursuant to such confidentiality agreements and there has not been a breach by any party to such confidentiality agreements;

7.2.15. no Licensed Technology is subject to any funding agreement with any government or governmental agency;

7.2.16. to its knowledge, and except as disclosed to Vertex prior to the Effective Date, the Exploitation by Company or Vertex (or their respective Affiliates or Sublicensees) of ENTR-701 does not and will not infringe any issued Patent of any Third Party or, if and when issued, any claim within any Patent application of any Third Party;

7.2.17. the conception, development, and reduction to practice of the Licensed Technology have not constituted or involved the misappropriation of any Know-How of any Third Party, and the practice of the Licensed Know-How in the Exploitation by Company or Vertex (or their respective Affiliates or Sublicensees) of a Licensed Agent or Product as contemplated by this Agreement does not and will not constitute a misappropriation of any Know-How of any Third Party;

7.2.18. Company is not aware of any scientific or technical facts or circumstances that would reasonably be expected to materially adversely affect the scientific, therapeutic, or commercial potential of the Licensed Agent or Products, including any such facts or circumstances that would reasonably be expected to materially adversely affect the acceptance, or the subsequent approval, by any Regulatory Authority of any filing, application or request for any Marketing Approval;

7.2.19. there are no judgments or settlements against or owed by Company or its Affiliates or, to its knowledge, pending or threatened claims or litigation, in either case relating to the Licensed Technology;

7.2.20. there is no action, claim, demand, suit, proceeding, arbitration, grievance, citation, summons, subpoena, inquiry or investigation of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending, or, to its knowledge, threatened against Company, any of its Affiliates or, to its knowledge, any Third Party, in each case in connection with the Licensed Technology, the Licensed Agents, the Products, or otherwise relating to the transactions contemplated by this Agreement;

7.2.21. Company has not employed (and, to its knowledge, has not used a contractor or consultant that has employed) any Person debarred by the FDA (or subject to a similar sanction of EMA or foreign equivalent), or any Person that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA or foreign equivalent), in any capacity in connection with this Agreement;

7.2.22. with respect to any Licensed Technology, Licensed Agent or Product or activities to be performed by Company in connection with this Agreement, Company has not taken any action directly or indirectly to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and has not accepted any such unlawful payment;

7.2.23. to its knowledge, except to the extent permissible under United States law, neither Company nor any of its Affiliates has, on its own behalf or in acting on behalf of any other Person, directly or indirectly engaged in any transaction, or has otherwise dealt with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated by this Agreement; and

7.2.24. the representations and warranties of Company in this Agreement, and the information, documents and materials furnished to Vertex in connection with its period of diligence prior to the Execution Date or the Effective Date, as applicable, do not, taken as a whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact

necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading.

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

7.3.1. Vertex will, and will require its Affiliates, Sublicensees and Subcontractors to, comply with Applicable Law and accepted pharmaceutical industry business practices in conducting its activities hereunder, including (a) to the extent applicable to Vertex or its Affiliates or Subcontractor, the FD&C Act, the Anti-Kickback Statute (42 U.S.C. 1320a-7b), Civil Monetary Penalty Statute (42 U.S.C. 1320a-7a), the False Claims Act (31 U.S.C. 3729 et seq.), comparable state statutes, the regulations promulgated under all such statutes and the regulations issued by the FDA, consistent with the 'Compliance Program Guidance for Pharmaceutical Manufacturers' published by the Office of Inspector General, U.S. Department of Health and Human Services, (b) the applicable laws and regulations of the countries where it operates, including anti-bribery and anti-corruption laws, accounting and record keeping laws and laws relating to interactions with healthcare professionals or healthcare providers and Government Officials and (c) where appropriate GMP, GCP and GLP (or similar standards);

7.3.2. Vertex will not engage directly or indirectly, 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;

7.3.3. Vertex will inform Company 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 Vertex, any of its Affiliates or any such Person performing services hereunder or thereunder;

7.3.4. Vertex will be, will cause its Affiliates to be, in compliance with all applicable economics sanctions, import, and export control laws, regulations, and orders;

7.3.5. with respect to any Licensed Technology, Licensed Agent, Product, payments or activities performed by Vertex in connection with this Agreement, Vertex will not take any action to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and will not accept any such unlawful payment;

7.3.6. Vertex will not, and will cause its Affiliates not to, engage with or engage in any transaction, or otherwise deal with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated under this Agreement;

7.3.7. Vertex will be, as between the Parties, solely responsible to ensure Compliance by it and its Affiliates; and

7.3.8. Vertex will not, during the term of this Agreement, grant any rights in the Know-How and Patents Controlled by Vertex or its Affiliates that conflict or are inconsistent with the rights granted to Company under this Agreement or that would otherwise prevent Company from exercising its rights or performing its obligations under this Agreement.

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

7.4.1. Company will, and will require its Affiliates and Subcontractors to, comply with Applicable Law and accepted pharmaceutical industry business practices in conducting its activities hereunder, including (a) to the extent applicable to Company or its Affiliates or Subcontractor, the FD&C Act, the Anti-Kickback Statute (42 U.S.C. 1320a-7b), Civil Monetary Penalty Statute (42 U.S.C. 1320a-7a), the False Claims Act (31 U.S.C. 3729 et seq.), comparable state statutes, the regulations promulgated under all such statutes and the regulations issued by the FDA, consistent with the 'Compliance Program Guidance for Pharmaceutical Manufacturers' published by the Office of Inspector General, U.S. Department of Health and Human Services, (b) the applicable laws and regulations of the countries where it operates, including anti-bribery and anti-corruption laws, accounting and record keeping laws and laws relating to interactions with healthcare professionals or healthcare providers and Government Officials and (c) where appropriate GMP, GCP and GLP (or similar standards);

7.4.2. Company will maintain and not breach, and will cause its Affiliates to maintain and not breach, any Company In-License Agreements and New Company Agreements;

7.4.3. Company will promptly notify Vertex in writing of any material breach by Company or its Affiliate or a Third Party of any Company In-License Agreements or New Company Agreements, and will promptly notify Vertex in writing if Company or its Affiliate sends or receives a notice of material breach of any Company In-License Agreements or New Company Agreements, and in the event of a breach by Company or its Affiliate, will permit Vertex to cure such breach on Company's or its Affiliate's behalf upon Vertex's request;

7.4.4. Company will not, and will cause its Affiliates not to, amend, modify or terminate any Company In-License Agreement or New Company Agreement in a manner that would adversely affect Vertex's rights hereunder without first obtaining Vertex's written consent, which consent may be withheld in Vertex's sole discretion;

7.4.5. neither Company nor any of its Affiliates will effect any corporate restructuring or enter into any new agreement or otherwise obligate itself to any Third Party or Affiliate, or amend an existing agreement with a Third Party or Affiliate, in each case, in a manner that restricts, limits, or encumbers the rights granted to Vertex under this Agreement or the obligations of Company or its Affiliates under this Agreement;

7.4.6. Company will not, and will cause its Affiliates not to (a) license, sell, assign or otherwise transfer to any Person any Licensed Technology (or agree to do any of the foregoing), (b) negotiate with, offer to, or grant any license to any Person, or (c) incur or permit to exist, with respect to any Licensed Technology, any lien, encumbrance, charge, security interest, mortgage, liability, grant of license to Third Parties or other restriction (including in connection with any indebtedness), in each case ((a) through (c)), that would conflict with, limit, impair or restrict the rights and licenses granted to Vertex hereunder or would cause any Licensed Technology to cease to be Controlled by Company;

7.4.7. all employees and Subcontractors of Company performing Research Activities or Additional Research Activities hereunder on behalf of Company will be obligated to assign all right, title and interest in and to any inventions developed by them, whether or not patentable, to Company as the sole owner thereof;

7.4.8. Company will not engage directly or indirectly, 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;

7.4.9. Company will inform Vertex in writing promptly if it or any Person engaged by Company 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 Company's knowledge, is threatened, relating to the debarment or conviction of Company, any of its Affiliates or any such Person performing services hereunder or thereunder;

7.4.10. Company will be, and will cause its Affiliates to be, in compliance with all applicable economics sanctions, import, and export control laws, regulations, and orders;

7.4.11. with respect to any Licensed Technology, Licensed Agent, Product, payments or activities performed by Company in connection with this Agreement, Company will not take any action to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and will not accept any such unlawful payment;

7.4.12. Company will not, and will cause its Affiliates not to, engage with or engage in any transaction, or otherwise deal with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated under this Agreement; and

7.4.13. Company will be, as between the Parties, solely responsible to ensure Compliance by it and its Affiliates.

7.5. 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 COMPANY UNDERSTAND THAT EACH PRODUCT IS THE SUBJECT OF ONGOING RESEARCH AND DEVELOPMENT AND THAT NEITHER PARTY CAN ASSURE THE SAFETY, USEFULNESS OR COMMERCIAL OR TECHNICAL VIABILITY OF ANY PRODUCT.

ARTICLE 8.
INDEMNIFICATION; INSURANCE; LIMITATIONS

8.1. Indemnification.

8.1.1. Indemnification by Vertex. Subject to Section 8.1.3, Vertex will indemnify Company, its Affiliates, and its and its Affiliates' employees, officers and directors (each, a "**Company Indemnified Party**") from and against any liability, loss, damage or expense (including reasonable attorneys' fees and expenses) (collectively, "**Liability**") that the Company Indemnified Party may incur or otherwise be required to pay to one or more Third Parties in connection with any Third Party suit, investigation, claim or demand resulting from or arising out of:

(a) the Exploitation of any Licensed Agent or Product by, on behalf of, or under the authority of, Vertex;

(b) the breach by Vertex of any of its representations, warranties or covenants set forth in this Agreement; or

(c) the gross negligence or willful misconduct of Vertex or any Vertex Indemnified Party;

and except, in each case ((a)–(c)), to the extent such claim results from or arises out of an event described in clause (a) through (b) of Section 8.1.2, as to such claim each Party will indemnify the other to the extent of their respective liability.

8.1.2. Indemnification by Company. Subject to Section 8.1.3, Company will indemnify Vertex, its Affiliates and its and its Affiliates' employees, officers and directors, Sublicensees and Distributors (each, a "**Vertex Indemnified Party**") from and against any Liability that the Vertex Indemnified Party may incur or otherwise be required to pay to one or more Third Parties in connection with any Third Party suit, investigation, claim or demand resulting from or arising out of:

(a) the breach by Company of any of its representations, warranties or covenants set forth in this Agreement; or

(b) the gross negligence or willful misconduct of Company or any Company Indemnified Party;

and except, in each case ((a)–(b)), to the extent such claim results from or arises out of an event described in clause (a) through (c) of Section 8.1.1, as to such claim each Party will indemnify the other to the extent of their respective liability.

8.1.3. Procedure. Each Party will notify the other Party in writing if it becomes aware of a claim for which such Party may seek indemnification hereunder. If any Proceeding is instituted against a Party (or another Company Indemnified Party in the case of Company or another Vertex Indemnified Party in the case of Vertex) with respect to which indemnity may be sought pursuant to Section 8.1.1 or 8.1.2, as applicable, such Party (the "**Indemnified Party**") will give prompt written notice of the indemnity claim to the other Party (the "**Indemnifying Party**") and provide the Indemnifying Party with a copy of any complaint, summons or other written notice that the Company Indemnified Party or Vertex Indemnified Party, as applicable, receives in connection with any such claim. An Indemnified Party's failure to deliver such written notice will relieve the Indemnifying Party of liability to the Company Indemnified Party or Vertex Indemnified Party under Section 8.1.1 or 8.1.2, as applicable, 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 Company Indemnified Party or Vertex Indemnified Party, as applicable, will permit the Indemnifying Party to control any litigation relating to such claim and the disposition of such claim by negotiated settlement or otherwise (subject to this Section 8.1) and any failure to contest such obligation 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 prior written consent of the Company Indemnified Party or Vertex Indemnified Party, as applicable, which will not be unreasonably withheld, conditioned or delayed; *provided* that such consent will not be required with respect to any settlement involving only the payment of monetary awards for which the Indemnifying Party will be fully responsible. The Indemnified Party will cooperate with the Indemnifying Party in the Indemnifying Party's defense of any claim for which indemnity is sought under this Agreement, at the Indemnifying Party's cost and expense.

8.2. **Insurance**. Throughout the Term and for [***] thereafter, each Party will respectively, at its cost, obtain and maintain the insurance coverage listed below, each naming the other Party and its Indemnified Parties as additional insureds, from insurance carriers licensed to do business under the laws of the country, state, commonwealth, province or territory in which such Party's obligations are provided, with insurers that carry a rating of at least an A-VII or better from A.M. Best. Each Party will furnish to the other Party evidence of such insurance upon request. Notwithstanding the foregoing, Vertex may self-insure to the extent that it self-insures for its other activities.

Insurance Type	Minimum Limits	Minimum Coverage	Respectively Must Be Maintained By
Network Security and Privacy Liability	$[***] per claim/ $[***] annual aggregate	Coverage for all acts, errors, omissions, negligence, network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure of data, disclosure of HIPAA / GDPR protected health information, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties	[***].
Workers Compensation	Statutory	Statutory	Both Parties as of the Effective Date
Commercial General Liability	$[***] per occurrence/ $[***] annual aggregate	Coverage arising from premises, operations, personal injury, advertising injury, bodily injury and property damage, including contractual liability	Both Parties as of the Effective Date
Clinical Trial / Products Liability insurance	$[***] per occurrence/ $[***] annual aggregate	Covering all participants screened or treated as part of the relevant study and all claims relating to personal injury suffered as a result of participation in the study and/or the study screening process and not containing any exclusions that would preclude claims by participating study participants	Both Parties commencing prior to first Clinical Trial of a Product
Umbrella Liability	$[***] per occurrence and $[***] annual aggregate	Coverage provides excess, follow-form coverage above all liability limits required herein	Both Parties as of the Effective Date

8.3. Limitation of Consequential Damages. EXCEPT FOR (A) CLAIMS OF A THIRD PARTY THAT ARE SUBJECT TO INDEMNIFICATION UNDER THIS ARTICLE 8, (B) CLAIMS ARISING OUT OF A PARTY'S WILLFUL MISCONDUCT OR INTENTIONAL BREACH OF THIS AGREEMENT OR (C) ANY BREACH BY A PARTY OF SECTION 4.5, SECTION 4.6 OR SECTION 4.7 OR ARTICLE 10, 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, 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 9.
TERM; TERMINATION

9.1. Term; Expiration. Except with respect to the rights and obligations set forth in Section 4.8.3, which will become effective on the Execution Date, this Agreement is effective as of the Effective Date and, unless earlier terminated pursuant to the other provisions of this ARTICLE 9, will expire, in its entirety, upon the expiration of the last to expire Royalty Term under this Agreement with respect to all Products in all countries (such period, the "**Term**"):

9.2. Termination of the Agreement.

9.2.1. Termination for Failure to Obtain HSR Clearance. If the Effective Date has not occurred within 10 months after the Execution Date, then either Party may terminate this Agreement on written notice to the other Party; *provided* that a Party in breach of its obligations under Section 4.8 may not terminate this Agreement pursuant to this Section 9.2.1. In such event, neither Party will have any further obligations under this Agreement, except for such Party's obligations of non-disclosure pursuant to ARTICLE 10, which will survive for the period set forth therein.

9.2.2. Vertex's Termination for Convenience. Vertex may terminate this Agreement (either in its entirety or on a Product-by-Product basis), for convenience by providing written notice of its intent to terminate to Company, in which case, such termination will be effective [***] after Company's receipt of such written notice; *except* that if any termination under this Section 9.2.2 applies to a Product for which Vertex has received Marketing Approval, such termination will be effective [***] after Company's receipt of such written notice.

9.2.3. Termination for Material Breach.

(a) Vertex's Right to Terminate. If Vertex believes that Company is in material breach of this Agreement, Vertex may deliver written notice of such material breach to Company. If the breach is curable, Company will have [***] following its receipt of such written notice to cure such breach. If Company fails to cure such breach within such [***] period or the breach is not subject to cure (a "**Company Breach Event**"), (i) Vertex may terminate this Agreement by providing written notice to Company, in which case, this Agreement will terminate on the date on which Company receives such written notice or (ii) Vertex may elect to exercise the alternate remedy provisions set forth in Section 9.3; *provided, however*, that if (A) the relevant breach is curable, but not reasonably curable within [***], and (B) Company is making a *bona fide* effort to cure such breach, Vertex's right to

terminate this Agreement or elect to exercise the alternate remedy provisions set forth in Section 9.3 on account of such breach will be suspended for so long as Company is continuing to make such *bona fide* effort to cure such breach (up to a maximum of [***] after receipt of the applicable written notice above) and if such breach is successfully cured within the foregoing [***] period, Vertex will no longer have the right to terminate this Agreement or elect to exercise the alternate remedy provisions set forth in Section 9.3 on account of such breach.

(b) Company's Right to Terminate. If Company believes that Vertex is in material breach of this Agreement, Company may deliver written notice of such material breach to Vertex. If the breach is curable, Vertex will have [***] following its receipt of such written 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 [***] following its receipt of such written notice). If Vertex fails to cure such breach within the [***] or [***] period, as applicable, or the breach is not subject to cure, Company may terminate this Agreement by providing written notice to Vertex, in which case, this Agreement will terminate on the date on which Vertex receives such written notice; *provided, however*, that if (i) the relevant breach (A) does not involve Vertex's failure to make a payment when due and (B) is curable, but not reasonably curable within [***], and (ii) Vertex is making a *bona fide* effort to cure such breach, Company's right to terminate this Agreement on account of such breach will be suspended for so long as Vertex is continuing to make such *bona fide* effort to cure such breach (up to a maximum of [***] after receipt of the applicable written notice above) and if such breach is successfully cured within the foregoing [***] period, Company will no longer have the right to terminate this Agreement on account of such breach.

9.2.4. Disputes Regarding Material Breach. Notwithstanding the foregoing, if the Breaching Party in Section 9.2.3 disputes in good faith the existence, materiality, or failure to cure of any breach, and provides written 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 Section 9.2.3, or the right to exercise the alternative remedy provisions of Section 9.3, as applicable, unless and until the relevant dispute has been resolved in accordance with Section 11.12. During the pendency of such dispute, the relevant cure period will be tolled, all the terms of this Agreement will remain in effect and the Parties will continue to perform all of their respective obligations hereunder.

9.2.5. Termination for Insolvency. If either Party makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over all or substantially all of its property, files a petition under any bankruptcy or insolvency act or code, including the U.S. Bankruptcy Code, or has any such petition filed against it that is not discharged within [***] after the filing thereof (each, an "**Insolvency Event**"), the other Party may terminate this Agreement in its entirety by providing written notice of its intent to terminate this Agreement to such Party, in which case, this Agreement will terminate on the date on which such Party receives such written notice.

9.3. Alternative Remedies to Termination. If Vertex has the right to terminate this Agreement pursuant to Section 9.2.3(a), in addition to any other remedies available to Vertex in law or equity, in lieu of terminating this Agreement, Vertex may elect, upon written notice to Company, to reduce the milestone payments under Section 5.3 by [***]% and royalty payments under Section 5.4 by [***]% (after giving effect to all other applicable deductions and credits available under such Section 5.4). Company stipulates and agrees that such reductions would be a reasonable remedy in such circumstance and not a penalty. For clarity, if Vertex exercises the alternative remedy set forth above in this Section 9.3, such remedy will be Vertex's sole remedy for such breach.

9.4. **Patent Challenge**. Company has the right to terminate this Agreement upon written notice to Vertex in the event that Vertex or any of its Affiliates or Sublicensees directly or indirectly challenges in a legal or administrative proceeding the patentability, enforceability, or validity of any Licensed Patent (a "**Patent Challenge**"). In the event of such a Patent Challenge, Company will provide written notice of such Patent Challenge to Vertex, and if Vertex (a) with respect to a patent challenge brought by Vertex or an Affiliate of Vertex, fails to withdraw such Patent Challenge within [***] after such receipt of such notice or (b) with respect to a Patent Challenge brought by a Sublicensee, fails to cause the Sublicensee to withdraw such Patent Challenge within [***] after such receipt of such notice or to terminate the applicable sublicense agreement for such Sublicensee within [***] after receipt of such notice, then, in either case of (a) or (b), Company may terminate this Agreement by providing written notice of such termination to Vertex. As used herein, a Patent Challenge includes: (i) filing an action under 28 U.S.C. §§ 2201-2202 seeking a declaration of invalidity or unenforceability of any such Patent; (ii) filing, or joining in, a petition under 35 U.S.C. § 311 to institute *inter partes* review of any such Patent; (iii) filing, or joining in, a petition under 35 U.S.C. § 321 to institute post-grant review of any such Patent or any portion thereof; (iv) filing or commencing any opposition, nullity, or similar proceedings challenging the validity of any such Patent in any country or region; or (v) any foreign equivalent of clauses (i), (ii), (iii) or (iv), including under Applicable Law. Notwithstanding the foregoing, Company will not have the right to terminate this Agreement under this Section 9.4 (x) with respect to any Patent Challenge in which Vertex or its Affiliate or Sublicensee has been compelled to participate in such Patent Challenges by a court or patent office or (y) if a Patent Challenge is necessary or reasonably required to assert a cross claim or a counterclaim or to respond to a court request or order or administrative law request or order, including asserting any defense or counterclaim in, or otherwise responding to, any Patent infringement suit filed by Company or any of its Affiliates, licensors, licensees or sublicensees against Vertex or any of its Affiliates or Sublicensees. In addition, Company will not have the right to terminate this Agreement pursuant to this Section 9.4 if any Affiliate that first becomes an Affiliate of Vertex pursuant to a Change of Control of Vertex after the Effective Date was undertaking activities in connection with a Patent Challenge prior to such Affiliate first becoming an Affiliate of Vertex.

9.5. **Termination for Cessation of Development or Commercialization**. Without prejudice to any other remedies available to it at law or in equity (including for any breach of the terms hereof), if (i) Vertex does not conduct, or cause to be conducted, any Research, Development or Commercialization activities (which Research, Development or Commercialization activities will include planning for such activities, contracting for such activities, performing activities to address or resolve clinical holds imposed by Regulatory Authorities, pending supply interruptions, or other circumstances of events outside the reasonable control of Vertex, its Affiliates or its Sublicensees), or otherwise ceases or abandons all Research, Development or Commercialization activities, in each case with respect to all Licensed Agents and Products for a period of [***] at any time during the Term, then Company will have the right to terminate this Agreement in its entirety with [***] written notice to Vertex, unless within such [***] period Vertex provides to Company reasonably suitable documentation evidencing that Vertex has resumed material Research, Development and Commercialization activities with respect to any Licensed Agents or Products; *provided* that such [***] period will be tolled during the pendency of any *bona fide* dispute between the Parties as to whether such cessation has occurred. Any such disputes will be resolved through the dispute resolution procedures set forth in Section 11.12.

9.6. **Consequences of Expiration or Termination of the Agreement**.

9.6.1. **In General**. If this Agreement expires or is terminated in whole or in part with respect to one or more Products by a Party pursuant to this ARTICLE 9, the

following terms will apply to this Agreement, either in its entirety or with respect to the Product that is the subject of such termination, as the case may be:

(a) each Party will take all action required under Section 10.3 if requested by the other Party;

(b) 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 prior to such expiration or termination;

(c) upon termination of this Agreement that occurs prior to the completion of the Research Plan or any Additional Research Plan, Company will provide Vertex with (a) a good faith estimate of its reasonable wind-down costs and expenses for activities set forth in such Research Plan or any Additional Research Plan and any costs and expenses that are non-cancellable and incurred in accordance with the Research Budget or Additional Research Budget, and (b) a final invoice with respect to such costs and expenses within [***] following the effective date of termination, and Vertex will pay such invoice provided by Company pursuant to clause (b) within [***] following Vertex's receipt thereof;

(d) such expiration or termination will not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement; and

(e) the following provisions of this Agreement will survive the expiration or termination of this Agreement: ARTICLE 1, Section 4.4, Sections 5.9 through 5.11 (inclusive, solely to the extent applicable and with respect to any amounts due prior to expiration or termination), Section 6.1, Section 6.5 (with respect to proceedings to the extent relating to events occurring prior to the effective date of termination), Section 7.5, ARTICLE 8 (with respect to Section 8.2, for the time period set forth therein), this Section 9.4, Sections 10.1 through 10.5 (inclusive, for the time period set forth therein), and ARTICLE 11 (but not including Section 11.2).

9.6.2. Early Termination. If this Agreement is terminated in its entirety or in part by a Party pursuant to Sections 9.2.2, 9.2.3, 9.2.5, 9.5 or 9.5, the following terms will apply with respect to any Product that is the subject of such termination (*i.e.*, all Products worldwide in the case of termination of this Agreement in its entirety or the applicable Product in the Territory in the case of termination of this Agreement for a particular Product, as the case may be):

(a) except as set forth in Section 9.6.2.(e), the applicable licenses granted by Company to Vertex with respect to such Product(s) in the Territory under this Agreement will terminate;

(b) except as set forth in this Section 9.6, Vertex will have no further rights and Company will have no further obligations with respect to such Product(s) in the Territory;

(c) if terminated with respect to a particular Product or Products, the definition of Product will be automatically amended to exclude the relevant Product or Products;

(d) any permitted Sublicense of Vertex will, at the applicable Sublicensee's option, survive such termination on the condition that the relevant Sublicensee is not in material breach of any of its obligations under such Sublicense. In order to effect this

provision, at the request of the Sublicensee, Company will enter into a direct license with the Sublicensee on terms that are substantially the same terms as the applicable terms of this Agreement; *provided* that Company will not be required to undertake obligations in addition to those required by this Agreement, and Company's rights under such direct license will be consistent with its rights under this Agreement, taking into account the scope of the license granted under such direct license;

(e) if there are any on-going Development or Commercialization activities being conducted by or on behalf of Vertex, the Parties will negotiate in good faith and adopt a plan to wind-down such activities in an orderly fashion or, at Company's election, Vertex will promptly transition such activities from Vertex to Company or its designee, with due regard for patient safety and the rights of any subjects that are participants in any clinical studies of the terminated Product, and take any actions it deems reasonably necessary or appropriate to avoid any human health or safety problems and in compliance with all Applicable Laws;

(f) except with respect to any termination by Vertex under Section 9.2.3(a), Vertex (A) will, and hereby does, assign, and will cause its Affiliates and any Sublicensee that does not elect to become a direct licensee of Company to assign, effective as of the effective date of termination, to Company all of its rights, title, and interests in and to all Regulatory Filings, Regulatory Approvals and other material documentation, in each case, (1) as in existence as of such date; (2) to the extent allowed under Applicable Law; and (3) to the extent pertaining to the Licensed Agents or Products, as such Licensed Agents or Products exists at such time ("**Regulatory Materials**"), and (B) will, and will cause its Affiliates to, take all reasonable steps necessary to transfer ownership of all such Regulatory Materials to Company, including submitting to each applicable Regulatory Authority a letter or other necessary documentation (with a copy to Company) notifying such Regulatory Authority of the transfer of such ownership of each Regulatory Approval within the Regulatory Materials, and will reasonably cooperate with Company to make the benefits of such Regulatory Materials available to Company or its designee(s); *provided* that, to the extent assignment pursuant to the preceding clause (A) is delayed or is not permitted by the applicable Regulatory Authority, Vertex will, and hereby does, grant, and will cause its Affiliates and any Sublicensee that does not elect to become a direct licensee of Company to grant, effective as of the effective date of termination, to Company a non-exclusive and irrevocable right of access and right of reference to such Regulatory Materials solely to Exploit Licensed Agents and Products;

(g) except with respect to any termination by Vertex under Section 9.2.3(a) and unless Company requests otherwise, effective upon such termination, Vertex hereby grants to Company (i) an exclusive, royalty-bearing, irrevocable, perpetual, license, which Company may sublicense through [***] tiers, under all Vertex Agreement Technology Controlled by Vertex or its Affiliates to Exploit Licensed Agents and Products in the Field in the Territory and (ii) a non-exclusive, royalty-bearing, irrevocable, perpetual, license, which Company may sublicense through [***] tiers, under all other Patents and Know-How Controlled by Vertex or its Affiliates that is necessary and has actually been used prior to such termination to Exploit Licensed Agents and Products in the Field in the Territory; *provided* that if the grant of such license to Company with respect to any Know-How or Patent included in the Vertex Agreement Technology or Company's exercise of such license would trigger a royalty or other payment to a Third Party or would require compliance with any provision of any license between Vertex and a Third Party, Vertex will so notify Company in writing and such Know-How or Patent will only be included in the foregoing license if, following receipt of such notice, Company agrees in writing to reimburse Vertex for all such payments to such Third Party and comply with any such provision; and *provided*, *further*, that such license will not grant Company any rights with respect to any active ingredient in a Product that is not a Licensed Agent;

(h) solely in the event of termination by Vertex under Section 9.2.2 or 9.2.5, Company will pay to Vertex or its designated Affiliate the following royalty rates on Net Sales by Company, its Affiliates and, its and their (sub)licensees:

(i) In consideration for the license granted under the Vertex Agreement Technology in accordance with Section 9.6.2(g)(i), the royalty rates set forth in the following table:

Effective Date of Termination	Annual Net Sales (in Dollars) for all Products in the Territory	Royalty Rates as a Percentage (%) of Net Sales
[***]	Portion of Annual Net Sales up to and including $[***]	[***]%
	Portion of Annual Net Sales that exceeds $[***] up to and including $[***]	[***]%
	Portion of Annual Net Sales that exceeds $[***]	[***]%
[***]	Portion of Annual Net Sales up to and including $[***]	[***]%
	Portion of Annual Net Sales that exceeds $[***] up to and including $1,000,000,000	[***]%
	Portion of Annual Net Sales that exceeds $[***]	[***]%

(ii) In consideration for the license granted under other Patents and Know-How in accordance with Section 9.6.2(g)(ii), the Parties will negotiate economics at the time notice is given for such termination; *provided* that if the Parties are not able to resolve any dispute regarding such economics within [***] of the start of such negotiations, then such dispute will be escalated to the Executive Officers in accordance with Section 11.12.1 and, *provided*, *further*, that if the Executive Officers are unable to resolve such dispute within [***] (or such other period of time as mutually agreed by the Executive Officers), then such dispute will be resolved in accordance with Schedule 1.19.

The terms of Sections 1.117, 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.6, 5.9, 5.10 and 5.11 will apply with respect to Company's payment of such royalty under this Section 9.6.2(h), *mutatis mutandis*. Notwithstanding the foregoing, the royalties set forth in this Section 9.6.2(h) will not apply if Company elects not to receive the license set forth in Section 9.6.2(g);

(i) except with respect to any termination by Vertex under Section 9.2.3(a), effective upon such termination, Company will have the right, but not the obligation, to purchase all of Vertex and its Affiliates' remaining inventory of Licensed Agents and Products held as of the effective date of termination of this Agreement at a price equal to Vertex's Manufacturing Cost;

(j) except with respect to any termination by Vertex under Section 9.2.3(a), effective upon such termination, Vertex hereby assigns to Company all of Vertex's worldwide right, title and interest in and to any trademarks that is specific to and exclusively used for any Product (it being understood that the foregoing will not include any trademarks that contain the corporate or business name(s) or logo(s) of Vertex or any of its Affiliates or Sublicensees); and

(k) except with respect to any termination by Vertex under Section 9.2.3(a), upon Company's request, Vertex agrees to discuss in good faith and reasonably cooperate with Company with respect to the assignment and transfer to Company of Vertex's right, title and interest in and to any agreements between Vertex or any of its Affiliates and Third Parties that relate exclusively to the Development, Manufacture or Commercialization of any Licensed Agents or Products (including any Third Party licenses or sublicenses).

ARTICLE 10.
CONFIDENTIALITY

10.1. **Confidentiality**. During the Term and for [***] thereafter, each Party (the "**Receiving Party**") receiving any Confidential Information of the other Party (the "**Disclosing Party**") hereunder will: (a) keep the Disclosing Party's Confidential Information confidential; (b) not publish, or allow to be published, and will not otherwise disclose, or permit the disclosure of, the Disclosing Party's Confidential Information; and (c) not use, or permit to be used, the Disclosing Party's Confidential Information for any purpose, except, in each case, to the extent expressly permitted under this Agreement (including, for clarity, to exercise any of its rights and perform any of its obligations) or otherwise agreed in writing. Without limiting the generality of the foregoing, to the extent that either Party provides the other Party any Confidential Information owned by any Third Party, the Receiving Party will handle such Confidential Information in accordance with the terms of this ARTICLE 10 applicable to a Receiving Party.

10.2. **Authorized Disclosure**. Notwithstanding Section 10.1, each Party may disclose the other Party's Confidential Information to the extent such disclosure is reasonably necessary to:

(a) following discussion between the Parties of such disclosure through the IP Committee, file or prosecute patent applications as contemplated by this Agreement;

(b) subject to the remainder of this Section 10.2, prosecute or defend litigation;

(c) exercise its rights and perform its obligations hereunder; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein (except with respect to the duration of such terms which will be commercially reasonable under the circumstances);

(d) subject to the remainder of this Section 10.2, its advisors (including financial advisors, attorneys and accountants), actual or potential acquisition partners, financing sources, investors, underwriters or sub(licensees) on a need to know basis; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein (except with respect to the duration of such terms which will be commercially reasonable under the circumstances) which may include professional ethical obligations;

(e) subject to the remainder of this Section 10.2, comply with Applicable Law; or

(f) include such Confidential Information in Regulatory Filings.

In addition to the foregoing, each Party may disclose the other Party's Confidential Information to Third Parties (other than an actual or potential competitor of such Party) in connection with its obligations under this Agreement; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein.

If a Party deems it reasonably necessary to disclose Confidential Information belonging to the other Party pursuant to Sections 10.2(b) or 10.2(e), the disclosing Party will, to the extent possible, give reasonable advance notice of such disclosure to the other Party and take reasonable measures to ensure confidential treatment of such information.

10.3. Expiration or Termination of this Agreement. Following the expiration or termination of this Agreement, if requested by the Disclosing Party, the Receiving Party will return or destroy, at the Receiving Party's election, all data, files, records and other materials containing or comprising the Disclosing Party's Confidential Information, except to the extent such Confidential Information is necessary or useful to conduct surviving obligations or exercise surviving rights. Notwithstanding the foregoing, (a) the Receiving Party will be permitted to retain one copy of such data, files, records, and other materials for archival and legal compliance purposes and (b) the Receiving Party will not be required to delete or destroy any electronic back-up tapes or other electronic back-up files that have been created solely by the Receiving Party's or its Affiliate's automatic or routine archiving and back-up procedures, to the extent created and retained in a manner consistent with its or their standard archiving and back-up procedures.

10.4. Applicable Law; SEC Filings and Other Disclosures. Either Party may disclose the terms of this Agreement or activities performed hereunder 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, to the extent such disclosure includes terms or information that have not previously been so disclosed, such Party will provide the other Party a reasonable opportunity to review such disclosure and reasonably consider the other Party's comments regarding confidential treatment sought for such disclosure.

10.5. [***]

10.6. Public Announcements; Publications.

10.6.1. Announcements. On a date to be determined by Vertex, the Parties will jointly issue a press release regarding the signing of this Agreement in a mutually agreed form. Except (a) as set forth in the preceding sentence or (b) as set forth in Section 10.4, neither Party will make any public announcement regarding this Agreement or activities hereunder without the prior written approval of the other Party. For clarity, either Party may make subsequent public announcement, including in corporate presentations and corporate websites, regarding this Agreement or activities hereunder that has already been approved by the other Party without the need to obtain additional written approval of the other Party provided that such subsequent public announcement remains correct at such time. Notwithstanding the foregoing, subject to Section 10.6.2, Vertex may make scientific publications or public announcements concerning its Research, Development, Manufacturing or Commercialization activities with respect to any Licensed Agent or Product under this Agreement without Company's prior written approval.

10.6.2. Publications. During the Term, each Party will submit to the other Party for review any proposed academic, scientific and medical publication or academic, scientific and medical public presentation that, in the case of a Vertex publication or

presentation, contains Company's Confidential Information or is related to any Licensed Agent or Product or to any activities conducted pursuant to this Agreement, or, in the case of a Company publication or presentation, contains Vertex's Confidential Information or is related to the structure or function of any EEV that is the same as the EEV in any Licensed Agent or related to any activities conducted pursuant to this Agreement ([***]). For clarity, either Party may make a subsequent publication or presentation that has already been approved by the other Party without the need to obtain additional written approval of the other Party, and if portions of a publication or presentation have already been approved and portions have not, only those portions that have not been approved previously will need to be submitted for review. The non-publishing Party will review such publication or presentation to determine whether any portion of the proposed publication or presentation contains its Confidential Information. The publishing Party will submit written copies of such proposed publication or presentation to the non-publishing Party no later than [***] before submission for publication or presentation (or [***] in advance in the case of an abstract). The non-publishing Party will provide its comments with respect to such publications and presentations within [***] after its receipt of such written copy (or [***] in the case of an abstract). If requested by the non-publishing Party, the publishing Party will redact the non-publishing Party's Confidential Information from any such proposed publication or presentation. In addition, Company will consider in good faith comments from Vertex to its proposed publications and presentations. The publishing Party will comply with standard academic practice regarding authorship of scientific publications and recognition of contribution of other parties in any publication. Except as set forth in this Section 10.6.2, Company will not publish, present or make any publication with respect to the Licensed Agents, Products or Licensed Technology specifically and solely related to the Licensed Agents or Products other than any publication pursuant to each third party agreements set forth on Schedule 10.6.2 (each, a "**Third Party Publication**") without Vertex's prior written approval, provided that Vertex will have the same review and comment rights under this Section 10.6.2 *mutatis mutandis* with respect to the Third Party Publications.

10.7. Vertex Information Rights. If Vertex determines in good faith that Company is an entity that is subject to financial consolidation with Vertex for the purposes of its quarterly and annual financial statements (or otherwise requires such information in order to comply with GAAP), Company will make available to Vertex:

(a) as soon as practicable, but in any event within [***] after the end of each [***] (i) an unaudited balance sheet as of the end of such [***], (ii) unaudited statements of income and cash flows for such [***], (iii) an unaudited statement of stockholders' equity for such period, and (iv) a detailed trial balance as of the end of such [***], all prepared in accordance with GAAP (except that such financial statements may (x) be subject to year-end audit adjustments and (y) not contain all notes thereto that may be required in accordance with GAAP) and thereafter will promptly provide such other information as Vertex may reasonably request;

(b) as soon as practicable, but in any event within [***] after the end of each [***] (i) an audited balance sheet as of the end of such [***], (ii) audited statements of income and cash flows for such [***], (iii) an audited statement of stockholders' equity for such [***] and (iv) a detailed trial balance as of the end of such [***], together with related footnotes all prepared in accordance with GAAP and audited and certified by a nationally recognized independent public accounting firm; and

(c) any other information or agreements requested by Vertex and reasonably necessary for the purposes of its quarterly and annual financial statements.

10.8. Transfer or Sale of Royalty Rights. In connection with the sale, assignment, transfer or pledge as a security of all or any part of the Rights, Company may

disclose on an ongoing basis to any Third Party that has (or proposes to have) an interest (whether direct or indirect) in the Rights (each, a "**Recipient**"), and to such Recipient's affiliates, auditors, bankers, co-investors, employees, insurance providers, investors, lenders, sublicensees or trustees (collectively "**Representatives**"), any or all of the following: (a) a Vertex-approved (such approval not be unreasonably withheld, conditioned or delayed) redacted copy of this Agreement and the Sublicense Agreement, including a redacted version of any amendments supplements and other modifications hereto, and a Vertex-approved (such approval not be unreasonably withheld, conditioned or delayed) redacted copy of any other agreement between Company and Vertex relating to the Rights and (b) (i) royalty reports provided by Vertex under Section 5.4.7 and (ii) notices, reports and correspondence provided under ARTICLE 6 hereof and ARTICLE 7 of the Sublicense Agreement and other notices, reports and correspondence relating to or involving this Agreement that could reasonably be expected to affect the Rights, in each case ((i) and (ii)), following Vertex's prior approval on a case-by-case basis, which approval will not be unreasonably withheld, conditioned or delayed (collectively, the "**Royalty Information**"); *provided, however*, that each such Recipient will agree, on behalf of itself and its Representatives, to keep such Royalty Information confidential on terms no less restrictive than those set forth in this Agreement pursuant to a non-disclosure agreement between Company (or an Affiliate of Company) and such Recipient that includes Vertex as a Third Party beneficiary to such non-disclosure agreement.

ARTICLE 11.
MISCELLANEOUS

11.1. **Assignment**. This Agreement will not be assignable by either Party to any Third Party without the written consent of the non-assigning Party. Notwithstanding the foregoing, either Party may assign this Agreement or its rights and obligations under this Agreement, without the written consent of the other Party, to an Affiliate or to a Third Party that acquires all or substantially all of the business or assets of such Party to which this Agreement relates (whether by merger, reorganization, acquisition, sale or otherwise), and agrees in writing to be bound by the terms of this Agreement; *provided* that such Affiliate or Third Party maintains the rights and abilities to perform the obligations of the assigning Party under this Agreement. The Parties agree that this Agreement and the Sublicense Agreement will always be assigned together to the same assignee; *provided*, *however*, that upon termination of the OSIF Agreement, the Sublicense Agreement may be assigned to OSIF pursuant to Section 8.6(a) of the OSIF Agreement. 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 11.1 will be void. Notwithstanding anything to the contrary in this Agreement and subject to prior written notice by Company to Vertex, Company may sell, assign or otherwise transfer or pledge as a security all or any part of its rights to receive royalties and other related payments under this Agreement (collectively, "**Rights**") without the prior consent of Vertex, and any permitted assignee, pledgee or other transferee of such Rights may likewise sell, assign or otherwise transfer or pledge as a security all or any part of such assignee, pledgee or other transferee's Rights without the prior written consent of Vertex, and Company or such assignee, pledgee or other transferee may disclose Royalty Information in accordance with Section 10.8 as if such permitted assignee, pledgee or other transferee were Company.

11.2. **Change of Control of Company**.

11.2.1. **Notification**. Company will notify Vertex in writing promptly (and in any event within [***]) following the execution of a definitive agreement by Company, its Affiliates or its equity holders that could reasonably be expected to result in a Change of Control of Company.

11.2.2. Effects of Change of Control of Company. If during the Term Company undergoes a Change of Control in accordance with Section 4.7, upon the effective date of such Change of Control (a) Vertex's obligation to provide Company with Research reports in accordance with Section 2.1.10 and Development reports in accordance with Section 2.2.2 will terminate; and (b) Vertex will have the option to terminate Company's participation in the JRC and decisions that would have been made by the JRC but for such termination will be made solely by Vertex.

11.3. 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 written notice of the Force Majeure to the other Party. Such excuse will continue for so long as the condition constituting a Force Majeure continues, on the condition that the nonperforming Party continues to use Commercially Reasonable Efforts to resume performance of its obligations under this Agreement.

11.4. 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, no presumption will exist or be implied against the Party that drafted such terms and provisions.

11.5. Notices. All written notices which are required or permitted hereunder will be in writing and sufficient if delivered personally or sent by nationally-recognized overnight courier, or through email to the applicable email address, addressed as follows:

If to Vertex:

Vertex Pharmaceuticals Incorporated
Attn: Business Development
50 Northern Avenue
Boston, Massachusetts 02210
Email: [***]

with a copy to:

Vertex Pharmaceuticals Incorporated
Attn: Corporate Legal
50 Northern Avenue
Boston, Massachusetts 02210
Email: [***] &
[***]

and:

Ropes & Gray LLP
Attn: [***]
Prudential Tower
800 Boylston Street
Boston, Massachusetts 02199
Email: [***]

If to Company:

Entrada Therapeutics, Inc.
Attn: Chief Operating Officer

6 Tide Street
Boston, Massachusetts 02210
Email: [***]

with a copy to:

Entrada Therapeutics, Inc.
Attn: Legal Notice
6 Tide Street
Boston, Massachusetts 02210
Email: [***] &
[***]

and:

Goodwin Procter LLP
Attn: [***]
601 Marshall Street
Redwood City, CA 94063
Email: [***]

or to such other address as the Party to whom written notice is to be given may have furnished to the other Party in writing in accordance herewith. In addition, each Party will deliver a courtesy copy to the other Party's Alliance Manager concurrently with such notice. Any such written notice will be deemed to have been given and received by the other Party: (a) when delivered if personally delivered; or (b) on receipt if sent by overnight courier or email.

11.6. **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 and Company.

11.7. **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 Party 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.

11.8. **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.

11.9. **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.

11.10. **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 Company 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.

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

11.12. **Dispute Resolution**. Subject to Section 11.12.4 regarding the resolution of certain Patent and Know-How-related disputes and Section 9.6.2(h)(ii) regarding post-termination royalty rates for economics related to certain intellectual property, if a dispute arises between the Parties in connection with or relating to this Agreement or any document or instrument delivered in connection herewith (a "**Dispute**"), it will be resolved pursuant to Sections 11.12.1, 11.12.2, and 11.12.3.

11.12.1. **Escalation to Executive Officers**. Either Party may refer any Dispute to the Executive Officers of the Parties, who will confer in good faith on the resolution of the issue, by delivering written notice to the other Party.

11.12.2. **Mediation**. If the Executive Officers are unable to agree on the resolution of any such Dispute within [***] (or such other period of time as mutually agreed by the Executive Officers) after such Dispute was first referred to them, then within [***] after the end of such [***] period or such other mutually-agreed period of time, either Party may serve notice to the other Party referring the matter to confidential mediation administered by the American Arbitration Association ("**AAA**") under its Mediation Procedures (subject to this Section 11.12.2). Such mediation will begin within [***] following the service of such mediation notice.

If the Parties are unable to agree on a mediator within [***] after service of the mediation notice, a mediator will be appointed by the AAA. The mediation session will last for at least [***] before any Party has the option to withdraw from the process. The Parties may agree to continue the mediation process beyond [***], until there is a settlement agreement, or one Party or the mediator states that there is no reason to continue. The Parties agree to have their respective principals participate in the mediation process, including being present throughout the mediation session(s). Any period of limitations that would otherwise expire between the reference of the Disputes to the Executive Officers of the Parties and the conclusion of the mediation will be extended until [***] after the conclusion of mediation.

If the Dispute is not resolved through mediation, then either Party may by written notice to the other Party, elect to initiate an arbitration proceeding pursuant to the procedures set forth in Section 11.12.3 for purposes of having the matter settled (the "**Arbitration Notice**").

11.12.3. **Arbitration**. A Party may elect to resolve any Dispute pursuant to arbitration only after the Parties have escalated the Dispute to the Executive Officers pursuant to Section 11.12.1 and attempted to mediate the Dispute pursuant to Section 11.12.2, which process will be a condition precedent to arbitration. The Parties will follow the following procedures to resolve such Dispute under arbitration:

(a) Binding Arbitration. Within [***] following a Party's receipt of the Arbitration Notice, the Parties will submit such Dispute to, and such Dispute will be finally resolved by, binding arbitration in accordance with the Commercial Arbitration Rules (the "**Rules**") of the AAA by an arbitral tribunal composed of [***] impartial arbitrators bound by

The Code of Ethics for Arbitrators in Commercial Disputes, all of whom will have relevant experience in the pharmaceutical industry (and the field of pharmaceutical development, commercialization or any other relevant area, as applicable), [***] appointed by each of the Parties within [***] after the Arbitration Notice, and the [***] who will chair the arbitral tribunal appointed by the Party-appointed arbitrators within [***] after the appointment of the [***] arbitrator, or, failing agreement by the Party-appointed arbitrators, by the AAA in accordance with the Rules. If, at the time of the arbitration, the Parties agree in writing to submit the Dispute to a single arbitrator, said single arbitrator will (i) have relevant experience in the pharmaceutical industry (and the field of pharmaceutical development, commercialization or any other relevant area, as applicable) and (ii) be appointed by agreement of the Parties within [***] after the Arbitration Notice, or, failing such agreement, by the AAA in accordance with the Rules. In no case will any arbitrator have participated in a prior mediation involving either Party unless explicitly agreed to by the Parties. Unless otherwise agreed by the Parties hereto, all such arbitration proceedings will be held in Boston, MA, U.S.A. All arbitration proceedings will be conducted in the English language. The Dispute will not be subject to the Commercial Arbitration Rules' Expedited Procedures, regardless of the amount in controversy, unless otherwise agreed by the Parties in writing.

(b) Limited Discovery. Documentary discovery may be conducted at the discretion of the arbitrator(s); *provided* that any such discovery will (i) be limited to documents directly relating to the Dispute, (ii) be conducted pursuant to document discovery procedures as set forth under the laws of the International Bar Association Rules of Evidence, and (iii) be conducted subject to the schedule stipulated by the Parties, or in the absence of stipulation, the schedule ordered by the arbitrator(s). At the request of a Party, the arbitrator(s) may at their discretion order the deposition of witnesses. Depositions will be limited to a maximum of [***] depositions per Party, each of a maximum of [***] hours duration, unless the arbitrator(s) otherwise determine. Notwithstanding any provision of this Section 11.12.3 to the contrary, all discovery must be completed within [***] after the appointment of the arbitrator(s).

(a) Awards and Fees. The arbitrator(s) have the authority to make awards of declaratory relief and monetary damages, but they may not award damages excluded under Section 8.3, and will not under any circumstances have the authority or power to grant (i) equitable relief or (ii) orders for specific performance. The allocation of expenses of the arbitration, including reasonable attorney's fees, will be determined by the arbitrator(s), or, in the absence of such determination, each Party will pay its own expenses, including attorney's fees.

(b) Rulings. All arbitration proceedings must be completed within [***] after the Arbitration Notice. The Parties hereby agree that, subject to the provisions of this Section 11.12.3, the arbitrator(s) has authority to issue rulings and orders regarding all procedural and evidentiary matters that the arbitrator(s) deem reasonable and necessary with or without petition therefor by the Parties as well as the final award. The final award will be issued no more than [***] after the final submissions of the Parties, or as soon thereafter as practicable. All rulings by the arbitrator(s) will be final and binding on the Parties. The arbitrator(s) will issue a reasoned decision that accompanies the final award.

(c) Enforcement of Rulings by Courts of Competent Jurisdiction. Any ruling issued by the arbitrator(s) pursuant to Section 11.12.3(b) may be enforced, to the extent that such ruling complies with the provisions of Section 11.12.3(a), in any court having jurisdiction over any of the Parties or any of their respective assets.

(d) Confidentiality. All activities undertaken by the arbitrator(s) or the Parties pursuant to this Section 11.12.3 will be conducted subject to obligations of confidentiality no less restrictive than those set forth in ARTICLE 10. Further, the Parties

acknowledge and agree that their respective conduct during the course of the arbitration, their respective statements and all information exchanged in connection with the arbitration, and the conduct of the arbitration and any information produced thereunder is Confidential Information under this Agreement and subject to the provisions of ARTICLE 10.

11.12.4. Patent and Know-How Disputes. Notwithstanding the foregoing in this Section 11.12, if a dispute arises between the Parties under this Agreement with respect to the interpretation, scope, validity, enforceability, applicability or term of any Patent or inventorship or ownership of any Know-How, then such dispute will not be resolved pursuant to Sections 11.12.1, 11.12.2 and 11.12.3, but instead may be brought by either Party in the federal courts of Massachusetts, in each case, (a) unless the Parties agree in writing to submit such claim to arbitration pursuant to Sections 11.12.1, 11.12.2 and 11.12.3 or (b) except to the extent federal jurisdiction cannot be maintained, in which case such claim will be submitted to arbitration pursuant to Sections 11.12.1, 11.12.2 and 11.12.3.

11.12.5. Equitable Relief. Notwithstanding the foregoing in this Section 11.12, nothing contained in this Agreement will in any way limit or preclude a Party from, at any time, seeking or obtaining equitable relief hereunder, whether preliminary or permanent, including a temporary or permanent restraining order, preliminary or permanent injunction, specific performance or any other form of equitable relief, from any United States court of competent jurisdiction if necessary to protect the interests of such Party. Each Party agrees that its unauthorized release of the other Party's Confidential Information or its breach of Sections 4.5, 4.6, or 4.7 of this Agreement will cause irreparable damage to other Party for which recovery of damages would be inadequate, and that such other Party will be entitled to seek timely injunctive relief with respect to such breach, without the need to show irreparable harm or the inadequacy of monetary damages as a remedy, and without the requirement of having to post bond or other security, as well as any further relief that may be granted by a court of competent jurisdiction.

11.13. Entire Agreement. This Agreement constitutes and contains the complete, final and exclusive understanding and agreement of the Parties and cancels and supersedes all prior negotiations, correspondence, understandings and agreements, whether oral or written, between the Parties respecting the subject matter hereof, including the CDA, which is hereby superseded and replaced in its entirety as of the Execution Date.

11.14. Independent Contractors. Both Parties are independent contractors under this Agreement. Nothing contained herein will be deemed to create an employment, agency, joint venture or partnership relationship between the Parties 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.

11.15. Transparency Laws. Company agrees that Vertex may publicly disclose any information related to (a) any payment or transfer of value made to Company by Vertex hereunder, or (b) any payment or transfer of value made by Company to any Third Party or Affiliate in connection with this Agreement, in each case (a)-(b), to the extent reasonably required by Transparency Laws and by any means, including reporting through any government platform or system, Vertex's and its Affiliates' websites or any other platform or system. Company will promptly (and in any event within [***]) provide Vertex with any such information as reasonably requested by Vertex to enable compliance with Transparency Laws.

11.16. 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) 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 or instant messaging), (i) 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, (j) any action or occurrence deemed to be effective as of a particular date will be deemed to be effective as of 11:59 PM ET on such date and (k) the term "or" will be interpreted in the inclusive sense commonly associated with the term "and/or."

11.17. **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.

11.18. **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.

11.19. **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 digital transmission (*e.g.*, .pdf), each of which will be binding when received by the applicable Party. The Parties may execute this Agreement by electronically transmitted signature and such electronically transmitted signature will be as effective as an original executed signature page.

[Signature Page Follows]

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

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Reshma Kewalramani

Name: Reshma Kewalramani

Title: Chief Executive Officer and President

ENTRADA THERAPEUTICS, INC.

By: /s/ Dipal Doshi

Name: Dipal Doshi

Title: President and Chief Executive Officer

Schedule 1.19
Baseball Arbitration Procedures

[***]

Schedule 1.102

Licensed Agent

[***]

Schedule 2.1.1

Research Plan

[***]

Schedule 4.3.5
Third Party Vendors or Contractors

[***]

Schedule 5.6

Company In-License Agreements

[***]

Schedule 7.2

Disclosure Schedule

[***]

Schedule 10.6.2
Third Party Publications

[***]

Exhibit 10.17

CERTAIN CONFIDENTIAL INFORMATION, MARKED BY [***] HAS BEEN EXCLUDED FROM THIS EXHIBIT BECAUSE IT IS BOTH NOT MATERIAL AND IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

SUBLICENSE AGREEMENT

BETWEEN

VERTEX PHARMACEUTICALS INCORPORATED

AND

ENTRADA THERAPEUTICS, INC.

December 7, 2022

SUBLICENSE AGREEMENT

This Sublicense Agreement (this "**Agreement**") is entered into as of December 7, 2022 (the "**Execution Date**") by and between Vertex Pharmaceuticals Incorporated, a corporation organized under the laws of The Commonwealth of Massachusetts ("**Vertex**"), and Entrada Therapeutics, Inc., a corporation organized under the laws of the State of Delaware ("**Company**"). Vertex and Company each may be referred to herein individually as a "**Party**" or collectively as the "**Parties**."

RECITALS

WHEREAS, Company is party to that certain Exclusive License Agreement (the "**OSIF Agreement**"), dated December 14, 2018, by and between Company and the Ohio State Innovation Foundation ("**OSIF**"), pursuant to which OSIF granted to Company an exclusive license under certain intellectual property to practice certain products;

WHEREAS, Vertex is a biopharmaceutical company that possesses expertise in developing and commercializing human therapeutics;

WHEREAS, simultaneously with entering into this Agreement, Company and Vertex are entering into a Strategic Collaboration and License Agreement (the "**Collaboration Agreement**"), pursuant to which Company would perform certain research activities and grant to Vertex an exclusive license to exploit novel products for the treatment or prevention of DM1, using Company's proprietary EEV delivery peptides on the terms and conditions set forth therein;

WHEREAS, Vertex and Company desire to enter into this Agreement, pursuant to which Company would grant to Vertex an exclusive sublicense under the OSIF Agreement to exploit novel products for the treatment or prevention of DM1; and

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 following meanings:

1.1. "**AAA**" has the meaning set forth in Section 12.12.2.

1.2. "**Affiliate**" means, as of any point in time and for so long as such relationship continues to exist with respect to any Person, any other Person that controls, is controlled by or is under common control with such Person. A Person will be regarded as in control of another Person if it (a) owns or controls, directly or indirectly, more than 50% of the equity securities of the subject Person entitled to vote in the election of directors (or, in the case of a Person that is not a corporation, for the election of the corresponding managing authority), or (b) possesses, directly or indirectly, the power to direct or cause the direction of the management or policies of such Person (whether through ownership of securities or other ownership interests, by contract or otherwise).

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

1.4. "**Annual Net Sales**" means, with respect to a Product, the aggregate Net Sales of the Product sold by Vertex, its Affiliates or Sublicensees in the Field in the Territory during a Calendar Year and only during the Royalty Term for such Product(s) in the applicable country.

1.5. "**Applicable Law**" means all applicable laws, statutes, rules, regulations and other pronouncements having the effect of law of any federal, national, multinational, state, provincial, county, city or other political subdivision, agency or other body, domestic or foreign, including any applicable rules, regulations, guidelines, or other requirements of the Regulatory Authorities that may be in effect from time to time.

1.6. "**Approval Application**" means a BLA, NDA or similar application or submission for a Product filed with a Regulatory Authority in a country or group of countries to obtain marketing approval for a biological or pharmaceutical product in that country or group of countries.

1.7. "**Arbitration Notice**" has the meaning set forth in Section 12.12.2.

1.8. "**Baseball Arbitration**" means the arbitration process set forth in Schedule 1.8.

1.9. "**Baseball Expert**" has the meaning set forth in Schedule 1.8.

1.10. "**BLA**" means a Biologics License Application that is submitted to the FDA for marketing approval for a Product pursuant to 21 C.F.R. § 601.2.

1.11. "**Breaching Party**" means the Party that the other Party believes is in material breach of this Agreement.

1.12. "**Business Day**" means a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in Boston, Massachusetts are authorized or obligated to close.

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

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

1.15. "**CDA**" has the meaning set forth in Section 1.29.

1.16. "**Change of Control**" means, with respect to a Party, (a) a merger or consolidation of such Party with a Third Party that results in the voting securities of such Party outstanding immediately prior thereto, or any securities into which such voting securities have been converted or exchanged, ceasing to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately after such merger or consolidation, (b) a transaction or series of related transactions in which a Third Party, together with its Affiliates, becomes the beneficial owner of more than 50% of the combined voting power of the outstanding securities of such Party, or (c) the sale or other transfer to a Third Party of all or substantially all of such Party's business or assets to which the subject matter of this Agreement relates.

1.17. "**Clinical Trial**" means a study in humans that is required to be conducted in accordance with GCP and is designed to generate data in support of an Approval Application.

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

1.19. "**Combination Product**" has the meaning set forth in Section 1.78.

1.20. "**Commercialize**" or "**Commercializing**" means to (a) market, promote, distribute, offer for sale, sell, have sold, import, export or otherwise commercialize a Product, (b) conduct activities, other than Research, Development and Manufacturing, in preparation for the foregoing activities, including obtaining Price Approval or (c) conduct post-Marketing Approval studies (including Clinical Trials). When used as a noun, "Commercialization" means any activities involved in Commercializing.

1.21. "**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. **[***]**.

1.22. "**Common Ownership Legislation**" means the legislation on conditions for patentability and novelty, as codified at 35 U.S.C. § 102(c) (Common Ownership Under Joint Research Agreements).

1.23. "**Company**" has the meaning set forth in the Preamble.

1.24. "**Company Breach Event**" has the meaning set forth in Section 10.2.3(a).

1.25. "**Company Indemnified Party**" has the meaning set forth in Section 9.1.

1.26. "**Competitive Infringement**" has the meaning set forth in Section 7.3.1.

1.27. "**Competitive Product**" means, with respect to a particular Product in a particular country, a product on the market in such country commercialized by any Third Party that is not a Sublicensee and that is not otherwise authorized to sell such product by, and did not purchase such product in a chain of distribution that included, any of Vertex or its Affiliates or Sublicensees, that **[***]**.

1.28. "**Compliance**" means, with respect to a Party, the adherence by such Party and its Affiliates to Applicable Law and such Party's Party Specific Regulations, in each case with respect to the activities to be conducted under this Agreement.

1.29. "**Confidential Information**" means, with respect to each Party, all Know-How or other information, including proprietary information (whether or not patentable) regarding or embodying such Party's technology, agents, products, business information or objectives, that is communicated in any way or form by or on behalf of the Disclosing Party to the Receiving Party or its permitted recipients, pursuant to this Agreement or that certain Mutual Confidentiality Agreement between Vertex and Company dated [***], and that certain Confidentiality Agreement between Vertex and Company dated [***] (together, the "**CDA**"), whether or not such Know-How or other information is identified as confidential at the time of disclosure. The terms of this Agreement will be considered Confidential Information of both Parties, with both Parties deemed to be the Receiving Party of such Confidential Information. [***]. Notwithstanding any provision of this Section 1.29 to the contrary, Confidential Information does not include any Know-How or information that: (a) was already known by the Receiving Party (other than under an obligation of confidentiality) at the time of disclosure by or on behalf of the Disclosing Party; (b) was generally available to the public or part of the public domain at the time of its disclosure to the Receiving Party; (c) became generally available to the public or part of the public domain after its disclosure to the Receiving Party, other than through any act or omission of the Receiving Party in breach of its obligations under this Agreement; (d) is

disclosed to the Receiving Party (other than under an obligation of confidentiality) by a Third Party who has no obligation to the Disclosing Party not to disclose such information to the Receiving Party; or (e) is independently discovered or developed by or on behalf of the Receiving Party without the use of any Confidential Information belonging to the Disclosing Party. Confidential Information disclosed to the Receiving Party hereunder will not be deemed to fall within the foregoing exceptions merely because broader or related information falls within such exceptions, nor will combinations of elements or principles be considered to fall within the foregoing exceptions merely because individual elements of such combinations fall within such exceptions.

1.30. "**Control**" or "**Controlled**" means, with respect to a Party and to any Know-How, Patent or Materials, possession on the Effective Date or at any time during the Term of the ability by such Party or its Affiliate (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, Patent or Materials. [***].

1.31. "**Cover**," "**Covering**" or "**Covers**" means, with respect to a compound, product or other technology and a Patent, that, in the absence of a license granted under, or ownership of, such Patent, the making, using, keeping, selling, offering for sale or importation of such compound, product or other technology would infringe such Patent or, as to a pending claim included in such Patent, the making, using, keeping, selling, offering for sale or importation of such compound, product or other technology would infringe such Patent if such pending claim were to issue in an issued patent without modification.

1.32. "**Development**" means, with respect to a Licensed Agent or Product, all clinical and non-clinical research and development activities conducted after filing of an IND for such Licensed Agent or 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 (other than post-Marketing Approval Clinical Trials), regulatory affairs, pharmacovigilance, Clinical Trial regulatory activities and obtaining and maintaining Marketing Approval. When used as a verb, "Develop" or "Developing" means to engage in Development.

1.33. "**Disclosing Party**" has the meaning set forth in Section 11.1.

1.34. "**Dispute**" has the meaning set forth in Section 12.12.

1.35. "**Distributor**" means a Third Party to whom Vertex or its Affiliates or Sublicensees grant a right to sell or distribute a Product, that purchases its requirements for such Product from Vertex or its Affiliates or Sublicensees and does not otherwise make any royalty or other payments to Vertex or its Affiliates or Sublicensees with respect to Vertex's, its Affiliates' or its Sublicensees' intellectual property rights or Products, including any payments that are calculated on the basis of a percentage of, or profit share on, such Third Party's sale of Products.

1.36. "**DM1**" means myotonic dystrophy type 1.

1.37. "**DMPK**" means myotonic dystrophy protein kinase.

1.38. "**EEV**" means an endosomal escape vehicle.

1.39. "**EEV-PMO**" means an EEV-linked phosphorodiamidate morpholino oligomer.

1.40. "**Effective Date**" means the Effective Date of the Collaboration Agreement.

1.41. "**EMA**" means the European Medicines Agency and any successor entity thereto.

1.42. "**ENTR-701**" has the meaning set forth in Section 1.71.

1.43. "**Europe**" means (a) the economic, scientific and political organization of member states of the European Union as it may be constituted from time to time, which as of the Effective Date consists of Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and that certain portion of Cyprus included in such organization (the "**European Union**"), (b) the United Kingdom of Great Britain and Northern Ireland, (c) any member country of the European Economic Area that is not otherwise a member of the European Union, and (d) any country not otherwise included in clauses (a), (b) or (c) that [***]. For clarity, "Europe" will at all times be deemed to include each of [***].

1.44. **"European Commission"** means the European Commission or any successor entity that is responsible for granting marketing approvals authorizing the sale of pharmaceuticals in Europe.

1.45. "**European Union**" has the meaning set forth in Section 1.43.

1.46. "**Execution Date**" has the meaning set forth in the Preamble.

1.47. "**Executive Officers**" means the [***] of Company, as of the Execution Date, [***], or such [***] designee, and the [***] of Vertex, as of the Execution Date, [***], or such [***] designee, or any other executive designated by a Party in writing who has the authority to resolve the applicable matter referred to the Executive Officers in accordance with this Agreement.

1.48. "**Exploit**" means, with respect to a Licensed Agent or Product, to Research, Develop, Manufacture, have Manufactured, use, keep, sell, offer for sale, import, export, Commercialize and otherwise exploit such Licensed Agent or Product.

1.49. "**FDA**" means the United States Food and Drug Administration and any successor entity thereto.

1.50. "**FD&C Act**" means the United States Federal Food, Drug, and Cosmetic Act, as amended, and the rules and regulations promulgated thereunder.

1.51. "**Field**" means [***].

1.52. "**First Commercial Sale**" means, with respect to a Product in any country in the Territory, [***].

1.53. "**Force Majeure**" means a condition, the occurrence and continuation of which is beyond the reasonable control of a Party, including an act of God, governmental acts or restrictions, war, civil commotion, labor strike or lock-out, epidemic or pandemic, flood, failure or default of public utilities or common carriers, and destruction of production facilities or materials by fire, earthquake, storm or like catastrophe.

1.54. "**GAAP**" means United States generally accepted accounting principles, consistently applied.

1.55. "**GCP**" means good clinical practices, which are the then-current standards for Clinical Trials for pharmaceuticals, as set forth in the FD&C Act or other Applicable Law, and such standards of good clinical practice as are required by the Regulatory Authorities of Europe and other organizations and governmental authorities in countries for which the applicable Licensed Agent or Product is intended to be Developed, to the extent such standards are not less stringent than United States standards.

1.56. "**GLP**" means the then-current good laboratory practice standards promulgated or endorsed by the FDA as defined in 21 C.F.R. Part 58, or comparable regulatory standards in jurisdictions outside of the United States, to the extent such standards are not less stringent than United States standards.

1.57. "**GMP**" means the then-current Good Manufacturing Practices as specified in the United States Code of Federal Regulations, ICH Guideline Q7A, or equivalent laws, rules or regulations of an applicable Regulatory Authority at the time of manufacture, to the extent such standards are not less stringent than United States standards.

1.58. "**Government Official**" means (a) any elected or appointed government official (e.g., a member of a ministry of health), (b) any employee or person acting for or on behalf of a government official, Governmental Authority, or other enterprise performing a governmental function, (c) any political party, candidate for public office, officer, employee, or person acting for or on behalf of a political party or candidate for public office, and (d) any employee or person acting for or on behalf of a public international organization (e.g., the United Nations). For clarity, healthcare professionals or healthcare providers employed by government-owned hospitals will be considered Government Officials.

1.59. "**Governmental Authority**" means any court, agency, department, authority or other instrumentality of any national, state, county, city or other political subdivision.

1.60. [***].

1.61. "**IND**" means any Investigational New Drug application filed with the FDA pursuant to Part 312 of Title 21 of the U.S. Code of Federal Regulations or a similar application or submission for a Product filed with a Regulatory Authority in a country or group of countries.

1.62. "**Indemnified Party**" has the meaning set forth in Section 9.1.3.

1.63. "**Indemnifying Party**" has the meaning set forth in Section 9.1.3.

1.64. "**Initiation**" or "**Initiate**" means, with respect to any Clinical Trial, first dosing in such Clinical Trial of the first human subject with the disease or condition for which the Product in such Clinical Trial is intended.

1.65. "**Insolvency Event**" has the meaning set forth in Section 10.2.5.

1.66. "**IP Committee**" has the meaning set forth in ARTICLE 4.

1.67. "**JAMS**" has the meaning set forth in Schedule 1.8.

1.68. "**JRC**" means the joint research committee formed by the Parties pursuant to the Collaboration Agreement.

1.69. "**Know-How**" means data, results, protocols, chemical structures, chemical sequences, materials, inventions, know-how, formulas, trade secrets, techniques, methods,

processes, procedures and developments, and other scientific, technical or manufacturing information, whether or not patentable; *provided* that Know-How does not include Patents.

1.70. "**Liability**" has the meaning set forth in Section 9.1.1.

1.71. "**Licensed Agents**" means: (a) that compound known as ENTR-701 with the chemical structure set forth on Schedule 1.71 ("**ENTR-701**"), [***].

1.72. [***].

1.73. "**Major Market Country**" means any one of the following countries: [***].

1.74. "**Manufacture**" or "**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 Licensed Agent or Product.

1.75. "**Marketing Approval**" means, with respect to a Product in a particular jurisdiction, all approvals (including regular or accelerated approval of a BLA or NDA), licenses, registrations or authorizations necessary for the Commercialization of such Product in such jurisdiction, including, with respect to the United States, approval of an Approval Application for such Product by the FDA and with respect to Europe, approval of an Approval Application for such Product by the European Commission or the applicable Regulatory Authority in any particular country in Europe.

1.76. "**Materials**" means chemical compounds, biological materials, including Clinical Trial samples, cell lines, EEVs, lipids, assays, viruses and vectors, and other materials.

1.77. "**NDA**" means a new drug application that is submitted to the FDA for marketing approval for a Product, pursuant to 21 C.F.R. § 314.3.

1.78. "**Net Sales**" means the [***] for Products sold by Vertex (including sales generated from named patient programs and excluding sales deferred for GAAP accounting purposes until such sales are recognized), its Affiliates or Sublicensees (the "**Selling Party**") to Third Parties (including Distributors), less the following deductions from such [***] amounts:

(a) **[***]**;

(b) **[***]**;

(c) **[***]**;

(d) **[***]**;

(e) **[***]**;

(f) **[***]**.

Only items that are deducted from the Selling Party's [***] of Product(s), as included in the Selling Party's published financial statements and that are in accordance with GAAP, applied on a consistent basis, will be deducted from such [***] for purposes of the calculation of Net Sales; *provided* that amounts written off by the Selling Party by reason of uncollectible debt pursuant to clause (a) or amounts of compulsory payments deducted pursuant to clause (f) above, respectively, may be deducted from Net Sales in accordance with clause (a) or clause (f) above,

respectively, regardless of whether such amounts are classified as deduction from gross sales in the Selling Party's published financial statements.

A qualifying amount may be deducted only once regardless of the number of the preceding categories that describes 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 and payment of any royalties due will be reported with a subsequent quarterly report. Sales between or among Vertex, its Affiliates and Sublicensees will be excluded from the computation of Net Sales if such sales are not intended for end use, but Net Sales will include the subsequent final sales to Third Parties by Vertex or any such Affiliates or Sublicensees. A Product will not be deemed to be sold if the Product is provided free of charge to a Third Party in reasonable quantities as a sample consistent with industry standard promotional and sample practices. For clarity, Net Sales include sales such as so-called "treatment IND sales," "named patient sales," and "compassionate use sales," even if such sales occur prior to receipt of Marketing Approval.

If a sale, transfer or other disposition with respect to a Product involves consideration other than cash or is not at arm's length, the Net Sales from such sale, transfer or other disposition will be calculated based on the average Net Sales price of the Product in arm's length sales for cash in the relevant country during the same Calendar Quarter as such sale, transfer or other disposition or, in the absence of such sales, based on the fair market value of the Product as mutually determined by the Parties.

Solely for purposes of calculating Net Sales, [***] ("**Other Product**") (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) (such combination product, a "**Combination Product**"), Net Sales of such Combination Product for the purpose of determining the payments due to Company pursuant to this Agreement will be calculated by [***]. If the [***] selling price of a [***] in such country [***] can be determined but the gross selling price of the Other Product in such country cannot be determined, Net Sales in such country for purposes of determining royalty payments will be calculated by [***]. If such separate sales are not made in a country, Net Sales will be calculated by [***].

1.79. "**Non-Breaching Party**" means the Party that believes the other Party is in material breach of this Agreement.

1.80. "**Ongoing Study**" means [***].

1.81. "**OSIF**" has the meaning set forth in the Recitals.

1.82. "**OSIF Agreement**" has the meaning set forth in the Recitals.

1.83. "**OSIF Know-How**" means any Know-How licensed to Company pursuant to the OSIF Agreement, in each case that is necessary or useful to Research, Develop, Manufacture or Commercialize Licensed Agents or Products in the Field.

1.84. "**OSIF Patents**" means any Patents licensed to Company pursuant to the OSIF Agreement as set forth on Schedule 1.84, in each case that that claim or disclose any OSIF Know-How or otherwise Cover the Licensed Agents or Products in the Field.

1.85. "**OSIF Platform Patent**" means [***].

1.86. "**OSIF Product-Specific Patent**" means [***].

1.87. "**OSIF Technology**" means the OSIF Patents and OSIF Know-How.

1.88. "**Other Product**" has the meaning set forth in Section 1.78.

1.89. "**Out-of-Pocket Costs**" means, with respect to a Party, costs and expenses paid by such Party or its Affiliates to Third Parties (or payable to Third Parties and accrued in accordance with GAAP), other than employees of such Party or its Affiliates.

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

1.91. "**Party Specific Regulations**" means all non-monetary judgments, decrees, orders or similar decisions issued by any Governmental Authority specific to a Party, and all consent decrees, corporate integrity agreements, or other agreements or undertakings of any kind by a Party with any Governmental Authority, in each case as the same may be in effect from time to time and applicable to a Party's activities contemplated by this Agreement.

1.92. "**Patents**" means the rights and interests in and to issued patents and pending patent applications in any country, jurisdiction or region (including inventor's certificates and utility models), including all provisionals, non-provisionals, substitutions, continuations, continuations-in-part, divisionals, renewals and all patents granted thereon, and all reissues, reexaminations, extensions, confirmations, revalidations, registrations and patents of addition thereof, including patent term extensions and supplementary protection certificates, international patent applications filed under the Patent Cooperation Treaty (PCT) and any foreign equivalents to any of the foregoing.

1.93. "**Patent Challenge**" has the meaning set forth in Section 10.4.

1.94. "**Person**" means an individual, sole proprietorship, partnership, limited partnership, limited liability partnership, corporation, limited liability company, business trust, joint stock company, trust, incorporated association, joint venture or similar entity or organization, including a government or political subdivision or department or agency of a government.

1.95. "**Pivotal Clinical Trial**" means, with respect to a Product, a Clinical Trial in humans performed to gain evidence with statistical significance of the efficacy of such Product in a target population, and to obtain expanded evidence of safety for such Product that is needed to evaluate the overall benefit-risk relationship of such Product, to form the basis for filing an Approval Application and obtaining Marketing Approval from a Regulatory Authority for such Product. [***].

1.96. "**Price Approval**" means, in any country where a Governmental Authority authorizes reimbursement for, or approves or determines pricing for, pharmaceutical products, receipt (or, if required to make such authorization, approval or determination effective, publication) of such reimbursement authorization or pricing approval or determination.

1.97. "**Proceeding**" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), prosecution, contest, hearing, inquiry, inquest, audit, examination or investigation that is, has been or may in the future be commenced, brought, conducted or heard at law or in equity or before any Governmental Authority.

1.98. "**Product**" means any product, medical therapy, preparation or substance, comprising or employing a Licensed Agent, in any form or formulation, and whether alone or

together with one or more other therapeutically active ingredients, delivery devices or other components. [***].

1.99. "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" means, with regard to a Patent, the preparing, filing, prosecuting and maintenance of such Patent, as well as handling re-examinations and reissues with respect to such Patent, together with the conduct of interferences, derivation proceedings, the defense of oppositions, post-grant patent proceedings (such as *inter partes* review and post grant review) and other similar proceedings with respect to the particular Patent. For clarification, "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" will not include any other enforcement actions taken with respect to a Patent.

1.100. "**Receiving Party**" has the meaning set forth in Section 11.1.

1.101. "**Regulatory Approval**" means the technical, medical and scientific licenses, registrations, authorizations, clearances, accreditations and approvals (including approvals of Approval Applications, supplements and amendments, pre- and post- approvals, and labeling approvals) of any Regulatory Authority, necessary for the research, development, clinical testing, commercial manufacture, distribution, marketing, promotion, offer for sale, use, import, export or sale of a pharmaceutical product in a regulatory jurisdiction, including Marketing Approval but excluding Price Approval.

1.102. "**Regulatory Authority**" means, with respect to a country in the Territory, any national (*e.g.*, the FDA), supra-national (*e.g.*, the European Commission, the Council of the European Union, or the EMA), regional, state or local regulatory agency, department, bureau, commission, council or other Governmental Authority involved in the granting of Regulatory Approvals or Price Approvals for pharmaceutical products in such country or countries.

1.103. "**Regulatory Filings**" means, collectively: (a) all (i) INDs or other filings needed to initiate clinical testing of any pharmaceutical product, (ii) Approval Applications, establishment license applications and drug master files, (iii) applications for designation as an "Orphan Product(s)" under the Orphan Drug Act, (iv) applications for "Fast Track" status, "Breakthrough Therapy" status or "Regenerative Medicine Advances Therapy Designation"
under Section 506 of the FD&C Act (21 U.S.C. § 356) or (y) for a Special Protocol Assessment under Section 505(b)(4)(B) and (C) of the FD&C Act (21 U.S.C. § 355(b)(4)(B)) and all other similar filings (including counterparts of any of the foregoing in any country or region in the Territory); (b) any applications for Regulatory Approval or Price Approval and other applications, filings, dossiers or similar documents submitted to a Regulatory Authority in any country for the purpose of obtaining Regulatory Approval or Price Approval from that Regulatory Authority; (c) any supplements and amendments to any of the foregoing; and (d) any correspondence with any Regulatory Authority relating to any of the foregoing.

1.104. "**Research**" means conducting research activities to discover, design, optimize, deliver and advance Licensed Agents and Products, including pre-clinical studies and optimization up to the filing of an IND for such Licensed Agent or Product, but excluding Development, Manufacture and Commercialization. When used as a verb, "Researching" means to engage in Research. [***].

1.105. "**Research Activities**" means the activities with respect to the Research of Licensed Agents and Product to be conducted by the Parties under the Collaboration Agreement as set forth in the Research Plan.

1.106. "**Research Plan**" means the research plan for the Research Program, as adopted or amended by the Parties pursuant to the Collaboration Agreement.

1.107. "**Research Program**" means the research program under the Collaboration Agreement to [***].

1.108. "**Residual Knowledge**" means knowledge, techniques, experience and Know-How that are (a) reflected in any Confidential Information owned or Controlled by the Disclosing Party and (b) retained in the unaided memory of any authorized representative of the Receiving Party after having access to such Confidential Information. A Person's memory will be considered to be unaided if the Person has not intentionally memorized the Confidential Information for the purpose of retaining and subsequently using or disclosing it.

1.109. "**Rights**" has the meaning set forth in Section 12.1.

1.110. "**Royalty Term**" means, with respect to a Product in a country, the period commencing on the first sale of such Product giving rise to Net Sales in such country and ending upon the latest of: (a) the expiration of the last Valid Claim of an OSIF Patent that Covers such Product in such country; (b) [***] after the First Commercial Sale of such Product in such country; and (c) expiration of all applicable regulatory exclusivity periods, including data exclusivity, in such country with respect to such Product.

1.111. "**Rules**" has the meaning set forth in Section 12.12.3(a).

1.112. "**Selected Third Party Intellectual Property**" means, with respect to a Licensed Agent or Product, Patents or Know-How owned or controlled by a Third Party (but not then included in OSIF Technology) that [***].

1.113. "**Selected Third Party Intellectual Property Costs**" means Out-of-Pocket Costs, including upfront payments, purchase price, milestones, royalties, license fees, option fees, option exercise fees and other payments paid or payable by Vertex or its Affiliates or Sublicensees to a Third Party that owns or controls Selected Third Party Intellectual Property (or that, prior to the applicable transaction with Vertex or its Affiliates or Sublicensees, owned or controlled Selected Third Party Intellectual Property) to license or acquire such Selected Third Party Intellectual Property; *provided* that, if the applicable Selected Third Party Intellectual Property relates to both a Licensed Agent or Product and one or more other programs of Vertex or its Affiliates or Sublicensees, then any such Out-of-Pocket Costs that are not specific to the Research, Development, Manufacturing or Commercialization of a Licensed Agent or Product (*e.g.*, upfront payments, purchase price, etc.) will be [***].

1.114. "**Selling Party**" has the meaning set forth in Section 1.78.

1.115. "**Sublicense**" means, when used as a verb, directly or indirectly, to sublicense, grant any other right with respect to, or agree not to assert, the rights granted to Vertex hereunder. When used as a noun, "Sublicense" means any agreement to Sublicense.

1.116. "**Sublicensee**" means a Third Party, other than a Distributor or service provider, to whom Vertex (or a Sublicensee or Affiliate) sublicenses any of the rights granted to Vertex hereunder during the Term.

1.117. "**Successful Completion of Ongoing Study**" means Company's completion of its Ongoing Study with final reports [***].

1.118. "**Term**" has the meaning set forth in Section 10.1.

1.119. "**Territory**" means [***].

1.120. "**Third Party**" means any Person other than Vertex, Company or their respective Affiliates.

1.121. "**Third Party Infringement Claim**" has the meaning set forth in Section 7.2.

1.122. "**Transparency Laws**" means any Applicable Law that requires certain companies in the pharmaceutical or healthcare industry to disclose and report information regarding payments made and agreements entered into with healthcare professionals or other individuals and entities carrying out activities in certain countries.

1.123. "**U.S. Bankruptcy Code**" means 11 U.S.C. §§ 101-1532, as amended, and the rules and regulations promulgated thereunder.

1.124. "**United States**" or "**U.S.**" means the United States of America and all of its districts, territories and possessions.

1.125. "**Valid Claim**" means a claim (a) of any issued, unexpired United States or foreign Patent, which has not, in the country of issuance, been donated to the public, disclaimed, or held invalid or unenforceable by a court of competent jurisdiction in an unappealed or unappealable decision, or (b) of any United States or foreign patent application, which has not, in the country in question, been cancelled, withdrawn, or abandoned. Notwithstanding the foregoing, on a country-by-country basis, a patent application pending for more than [***] from the [***] with respect thereto will not be considered to have any Valid Claim for purposes of this Agreement unless and until a patent that meets the criteria set forth in clause (a) above with respect to such application issues.

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

1.127. "**Vertex Indemnified Party**" has the meaning set forth in Section 9.1.2.

ARTICLE 2.
EFFECT OF AGREEMENT

Notwithstanding anything to the contrary in this Agreement, except for the provisions of Section 8.1, Section 8.2, Section 8.3, Section 10.2.1, ARTICLE 11, Section 12.5, and Section 12.11, and all definitions necessary to give effect to the foregoing provisions, each of which will become effective on the Execution Date, the rights and obligations of the Parties under this Agreement will not become effective until the Effective Date.

ARTICLE 3.
RESEARCH, DEVELOPMENT, MANUFACTURING AND COMMERCIALIZATION

3.1. **Research Program.** The Parties acknowledge and agree that the Collaboration Agreement describes the Research Program and the terms and conditions applicable thereto.

3.2. **Development**. Subject to Section 3.4, Vertex will have sole and exclusive control over all matters relating to the Development of Licensed Agents and Products.

3.3. **Commercialization**.

3.3.1. **General**. Subject to Section 3.4, Vertex will have sole and exclusive control over all matters relating to the Commercialization of Products in the Field in the Territory.

3.3.2. **Branding**. Vertex will have sole and exclusive control over all matters relating to the selection of all trademarks used in connection with the Commercialization of any Product in the Field in the Territory and Vertex or its designee(s) will own all of such trademarks. Company will not use nor seek to register, anywhere in the Territory, any trademark that is confusingly similar to any trademark used by or on behalf of Vertex, its Affiliates or Sublicensees in connection with any Product.

3.4. **Vertex Diligence**. Vertex (acting directly or through one or more Affiliates or Sublicensees) will use Commercially Reasonable Efforts to [***].

3.5. **Applicable Laws**. Vertex will, and will require its Affiliates and Sublicensees to, comply in all material respects with Applicable Law in its and their Research, Development, Manufacture and Commercialization of Licensed Agents and Products, including, where required, GMP, GCP and GLP.

ARTICLE 4.
GOVERNANCE

Within [***] days after the Effective Date, the Parties will form an intellectual property committee (the "**IP Committee**"), composed of [***] representatives from each Party that are employees of such Party or its Affiliates having relevant expertise, to coordinate the Prosecution and Maintenance and enforcement of OSIF Patents. The IP Committee will meet in person or by means of telephone or video conference at least [***] each [***] during the Term or as the IP Committee may otherwise agree. Each Party may replace its representatives on the IP Committee at any time by providing notice in writing to the other Party. The IP Committee will have no decision-making authority but will act as a forum for discussion between the Parties with respect to matters relating to the ownership, prosecution and enforcement of Patents pursuant to this Agreement. In addition, each Party may invite a reasonable number of additional subject matter experts or relevant personnel of such Party to participate in discussions and meetings of the IP Committee; *provided, however*, that any such additional subject matter experts or relevant personnel that are not employees of such Party will be subject to prior written consent of the other Party, such consent not to be unreasonably withheld, conditioned, or delayed. Each Party's representatives on the IP Committee and all other individuals attending or participating in discussions and meetings of the IP Committee on behalf of a Party will be bound under written confidentiality and non-use obligations with respect to information disclosed at such meeting that are no less restrictive than the provisions of ARTICLE 11 except with respect to the duration of such obligations which will be commercially reasonable. For clarity, the IP Committee under this Agreement will be the same as the "IP Committee" formed under the Collaboration Agreement, *provided* that this Agreement has not been assigned to OSIF or its successor.

ARTICLE 5.
LICENSE GRANTS; EXCLUSIVITY

5.1. **License Grant to Vertex**.

5.1.1. **License**. Subject to the terms of this Agreement, effective upon the Effective Date, Company will grant and hereby grants to Vertex and its Affiliates an exclusive, royalty-bearing sublicense, including the right to grant Sublicenses through [***] tiers in accordance with Section 5.1.2, under Company's and its Affiliates' interest in the OSIF Technology to Exploit the Licensed Agents and Products in the Field in the Territory.

5.1.2. **Sublicensing**. Vertex and its Affiliates may grant Sublicenses of any rights granted to Vertex and its Affiliates by Company under this Agreement through [***] tiers of Sublicenses to one or more Third Parties. Each such Sublicense will be subject to a written

agreement that is consistent with the terms of this Agreement. Vertex will remain responsible for each such Third Party's compliance with the applicable terms of this Agreement. No later than 30 days following the date upon which each Sublicense becomes effective, Vertex will provide Company with a true and complete copy of each Sublicense (including the identity of the Sublicensee and, if applicable, the region or field in which such rights have been sublicensed), subject to [***].

5.1.3. **Limitations**. Notwithstanding the license granted to Vertex pursuant to Section 5.1.1, Company will retain rights under the OSIF Technology for the purpose of [***]. Notwithstanding anything to the contrary in this Agreement, Company does not and will not be obligated to grant any licenses or other rights to Vertex with respect to Other Products contained in any Product that is a Combination Product.

5.2. **Technology Transfer**. Promptly following the Effective Date, Company will transfer to Vertex a copy of all OSIF Know-How [***] for Vertex to perform its Research Activities under the Research Plan, including any documentation (whether held in paper or electronic format and including copies of standard operating procedures or technical specifications), materials and other embodiments of OSIF Know-How. To assist with the transfer of OSIF Know-How under this Section 5.2 and Vertex's exploitation thereof in accordance with the terms of this Agreement, Company will make its personnel reasonably available to Vertex in accordance with Section 4.3.4 of the Collaboration Agreement.

5.3. **No Implied Licenses**. Except as expressly provided in this Agreement, neither 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.

ARTICLE 6.
FINANCIAL PROVISIONS

6.1. **Up-Front Fee**. Within [***] following the Effective Date, Vertex will pay Company a one-time up-front fee of [***], which fee will be non-refundable, non-creditable and not subject to set-off. The Parties hereby acknowledge that part of such up-front fee is reimbursement of past expenses of Company.

6.2. **Milestone Payments**.

6.2.1. **Development & Regulatory Milestones**. Vertex will pay Company the milestone payments set forth in this Section 6.2.1 in accordance with the procedure set forth in Section 6.2.3 upon the first achievement of the relevant milestone event by Vertex or any of its Affiliates or Sublicensees, which payments will be non-refundable, non-creditable and not subject to set-off. Each milestone payment set forth below is payable only once, regardless of the number of Products that achieve the relevant milestone event or the number of times a Product achieves the relevant milestone event. Unless this Agreement has been assigned to OSIF, Vertex will make a single payment to Company of a milestone payment specified in Section 5.3.1 of the Collaboration Agreement, which will satisfy Vertex's obligations with respect to the applicable milestone under this Section 6.2.1 and with respect to the corresponding milestone under Section 5.3.1 of the Collaboration Agreement.

	Milestone Event	Milestone Payment
1	[***]	[***]
2	[***]	$[***]
3	[***]	$[***]
4	[***]	$[***]
5	[***]	$[***]

6.2.2. **Commercial Milestones**. Vertex will pay Company the milestone payments set forth in this Section 6.2.2 in accordance with the procedure set forth in Section 6.2.3 upon the first achievement of the relevant milestone event by Vertex or its Affiliates or any Sublicensees, which payments will be non-refundable, non-creditable and not subject to set-off. Each milestone payment set forth below, is payable only once regardless of the number of Products that achieve the relevant milestone event or the number of times Product(s) achieve such milestone event. Unless this Agreement has been assigned to OSIF, Vertex will make a single payment to Company of a milestone payment specified in Section 5.3.2 of the Collaboration Agreement, which will satisfy Vertex's obligations with respect to the applicable milestone under this Section 6.2.2 and with respect to the corresponding milestone under Section 5.3.2 of the Collaboration Agreement.

	Milestone Event	Milestone Payment
6	First time Annual Net Sales of all Products exceed $[***]	$[***]
7	First time Annual Net Sales of all Products exceed $[***]	$[***]

6.2.3. **Notice; Payment; Skipped Milestones**. Vertex will provide Company with written notice upon the achievement of each of the milestone events set forth in Section 6.2.1 and Section 6.2.2, such written notice to be provided (a) with respect to any milestone event under Section 6.2.1, within [***] after such achievement and (b) with respect to any milestone event under Section 6.2.2, on or prior to the date of delivery of the royalty report under Section 6.3.7 for the [***] in which such milestone event is first achieved. Following receipt of such written notice, Company will promptly invoice Vertex for the applicable milestone and Vertex will make the appropriate milestone payment within [***] after receipt of such invoice. Each milestone payment corresponding with the milestones numbered [***] as set forth in Section 6.2.1 are intended to be successive; if a Product is not required to undergo the event associated with any such milestone event, such skipped milestone will be deemed to have been achieved upon the achievement by such Product of the next successive milestone event. Payment for any such skipped milestone that is owed in accordance with the provisions of the foregoing sentence with respect to a given Product will be due concurrently with the payment for the next successive milestone event by such Product, it being agreed that if a Product is not required to undergo the milestone numbered [***] the corresponding payment will be made upon the first to occur of the milestones numbered [***]. For the avoidance of doubt, the occurrence of milestone number [***] will not trigger payment of milestone number [***]. For clarity, each milestone payment corresponding with the milestones numbered [***] as set forth in Section 6.2.2 are intended to be additive such that if both milestones numbered [***] are achieved in the same Calendar Year, Vertex will pay to Company a payment of $[***] (which, unless this Agreement is assigned to OSIF, will be included in the amounts payable by Vertex to Company under the Collaboration Agreement).

6.3. Royalties.

6.3.1. **Royalty Rates**. Subject to Sections 6.3.2, 6.3.3, 6.3.4 and 6.3.5, on a Product-by-Product basis, Vertex will pay Company non-refundable, non-creditable royalties based on the aggregate Net Sales of Products sold by Vertex, its Affiliates or Sublicensees in the Field in the Territory during a Calendar Year at the rates set forth in the table below. The obligation to pay royalties will be imposed only once with respect to the same unit of a Product.

Annual Net Sales (in Dollars) for the Products Covered by OSIF Technology in the Territory	**Royalty Rates as a Percentage (%) of Net Sales**
Portion of Annual Net Sales up to and including $[***]	[***]%
Portion of Annual Net Sales that exceeds $[***]	[***]%

6.3.2. **Royalty Term**. Vertex will pay royalties to Company under this Section 6.3 on a Product-by-Product and a country-by-country basis during the Royalty Term for the applicable Product in the applicable country. Upon the expiration of the Royalty Term for a given Product in a given country, the license granted to Vertex under Section 5.1.1 will become fully-paid, perpetual and irrevocable with respect to such Product in such country.

6.3.3. **Reduction for Lack of Patent Coverage and Regulatory Exclusivity**. Subject to Section 6.3.6, if during any period within the applicable Royalty Term for a country, (a) no Valid Claim of an OSIF Patent exists that Covers such Product in such country, and (b) all applicable regulatory exclusivity periods, including data exclusivity periods, have expired in such country with respect to such Product, Net Sales of such Product in such country will be reduced by [***]% for purposes of calculating the royalty owed under Section 6.3.1 for the remainder of the Royalty Term.

6.3.4. **Reduction for Competition**. Subject to Section 6.3.6, if during any [***] during the Royalty Term for a Product in a given country, (a) a Competitive Product with respect to such Product is sold during such [***] in such country and (b) Net Sales for such Product in such country is less than [***]% of the average Net Sales for such Product in such country during the [***] consecutive [***] immediately preceding the [***] during which any such Competitive Product is first sold in such country, then Net Sales of such Product in such country (after any applicable reduction pursuant to Section 6.3.3) will be reduced by [***]% for purposes of calculating the royalty owed under Section 6.3.1 for the remainder of the Royalty Term; *provided, however*, the royalty reduction in this Section 6.3.4 will no longer apply in any country, or in any [***] in a country, as applicable, where there are no Competitive Products for such Product marketed or sold in such country and the Net Sales of such Product sold by Vertex or its Affiliates or Sublicensees in such country during such [***] is greater than [***]% of the average Net Sales of such Product during the [***] consecutive [***] immediately prior to the [***] during which any such Competitive Product is first sold in such country.

6.3.5. **Third Party Licenses**. Subject to Section 6.3.6, following the JRC's (or the Parties' if the JRC has disbanded) discussion of Vertex's intent to enter into an agreement to license or acquire rights to Selected Third Party Intellectual Property, and if Vertex enters into such agreement, Vertex may deduct from the royalties payable to Company under this Section 6.3 [***]% of any Selected Third Party Intellectual Property Costs paid by Vertex, its Affiliates or Sublicensees.

6.3.6. **Aggregate Limitation on Deduction**. Notwithstanding the foregoing, in no event will the deductions set forth in Section 6.3.3 through Section 6.3.5 reduce the royalties

payable to Company with respect to a particular [***] in a given country to less than [***]% of the royalties that would otherwise be due pursuant to Section 6.3.1; *provided*, that [***].

6.3.7. **Royalty Reports**. Following the first sale of a Product giving rise to Net Sales and continuing for the remainder of the Royalty Term for such Product, within [***] after the end of each [***], Vertex will deliver a report to Company specifying on a Product-by-Product and country-by-country basis: (a) Net Sales in the relevant [***]; (b) to the extent such Net Sales include sales not denoted in US Dollars, a summary of the then-current exchange rate methodology(ies) used for the calculation of Net Sales in accordance with Section 6.5.2, and (c) royalties payable on such Net Sales, *provided* that Vertex will provide a good faith written estimate of such report under this Section 6.3.7 to Company within [***] after the end of each [***]. Unless this Agreement has been assigned to OSIF, then the royalty report submitted by Vertex under Section 5.4.7 of the Collaboration Agreement will satisfy Vertex's obligations under both this Section 6.3.7 and Section 5.4.7 of the Collaboration Agreement. All royalty payments due under this Section 6.3 for each [***] will be due and payable within [***] after the end of each [***].

6.4. **OSIF Agreement**. Vertex acknowledges that the OSIF Technology has been in-licensed by Company under the OSIF Agreement. All licenses and other rights granted to Vertex under this Agreement (including any sublicense rights) are subject to the rights and obligations of Company under the OSIF Agreement. Vertex acknowledges and agrees that it will comply with all the obligations under the OSIF Agreement to the extent applicable to Vertex as a sublicensee thereunder; *provided* that, [***]. Subject to Section 7.1.1, any payment obligations arising under the OSIF Agreement as a result of the Research, Development, Manufacture and Commercialization of a Product by or on behalf of Vertex under this Agreement will be paid solely by Company unless such payment obligations are resulted from the breach of the OSIF Agreement by Vertex.

6.5. **Payment Terms**.

6.5.1. **Currency; Payment Method**. All payments under this Agreement are expressed in U.S. Dollars and will be paid in U.S. Dollars, in immediately available funds by wire transfer or Automated Clearing House (ACH) payment to an account designated by Company (which account Company may update from time to time in writing).

6.5.2. **Exchange; Interest**. 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, such amounts will be converted to their U.S. Dollar equivalent using Vertex's then-current standard procedures and methodology, including its then-current standard exchange rate methodology for the translation of foreign currency expenses into U.S. Dollars or, in the case of Sublicensees, such similar methodology, consistently applied. Calculation of Net Sales will exclude hedging and foreign exchange gain or loss realized through a hedging program. Interest will be payable by Vertex on any amounts payable to Company under this Agreement which are not paid by the date they become due. All interest will accrue (both before and after any judgment) at an annual rate equal to [***] percentage points above the United States effective Federal Funds Rate, on the date such payment first became due (but in no event in excess of the maximum rate permissible by Applicable Law).

6.6. **Withholding Tax**. Where any sum due to be paid to Company hereunder is subject to any withholding or similar tax as required by Applicable Law, Vertex will pay such withholding or similar tax to the appropriate Governmental Authority and deduct the amount paid from the amount then due to Company. Vertex will in a timely manner transmit to Company an official tax certificate or other evidence of such withholding sufficient to enable Company to

claim such payment of taxes. The Parties will cooperate with one another and use reasonable efforts to reduce or eliminate tax withholding or similar obligations in respect of royalties, milestone payments, and other payments made by Vertex to Company under this Agreement. Company will provide Vertex any tax forms that may be reasonably necessary in order for Vertex not to withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty. Each Party will provide the other with reasonable assistance to enable the recovery, as permitted by Applicable Laws, of withholding taxes, value added taxes, or similar obligations resulting from payments made under this Agreement, such recovery to be for the benefit of the Party bearing such withholding tax or value added tax. Notwithstanding anything in this Agreement to the contrary, if any assignment, or sublicense or a similar transfer of rights or obligations under this Agreement (including through merger or acquisition) by Vertex leads to the imposition of withholding tax liability on any amounts payable under this Agreement that would not have been imposed in the absence of such action or in an increase in such liability above the liability that would have been imposed in the absence of such action, then the sum payable by Vertex (in respect of which such deduction or withholding is required to be made) will be increased to the extent necessary to ensure that Company receives a sum equal to the sum which it would have received had no such action occurred.

6.7. **Records; Audits**. Vertex and its Affiliates will, and will cause their respective Sublicensees to keep and maintain accurate and complete records regarding Net Sales during the [***]. Upon [***] prior written notice from Company, Vertex will permit an independent certified public accounting firm of internationally recognized standing, selected by Company and reasonably acceptable to Vertex, to examine the relevant books and records of Vertex and its Affiliates and Sublicensees, as may be reasonably necessary to verify the royalty reports submitted by Vertex in accordance with Section 6.3.7. An examination by Company under this Section 6.7 will occur not more than [***] and will be limited to the pertinent books and records for any [***] ending not more than [***] before the date of the request; *provided* that Company may not exercise its audit right pursuant to this Section 6.7 in any [***] in which an audit has been conducted pursuant to Section 5.10 of the Collaboration Agreement. The accounting firm will be provided access to such books and records at Vertex's facility or facilities where such books and records are normally kept and such examination will be conducted during Vertex's normal business hours. Vertex 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 Parties a written report disclosing whether the reports submitted by Vertex are correct or incorrect and the specific details concerning any discrepancies. No other information will be provided to Company. If the report or information submitted by Vertex resulted in an underpayment or overpayment, the Party owing the underpaid or overpaid amount will promptly pay such amount to the other Party. The costs and fees of any audit conducted by Company under this Section 6.7 will be borne by Company, unless such audit reveals an underpayment of amounts owed to or an overpayment of amounts owed by Company of more than [***] percent of the amount that was owed by Vertex or owed to Vertex, as applicable, with respect to the relevant period, in which case, Vertex will reimburse Company for the reasonable expense incurred by Company in connection with the audit.

6.8. **Payments under Agreement**. Company acknowledges that Vertex has not participated in Company's determination of the portion of payments made under the Collaboration Agreement that are attributable to the OSIF Technology and Vertex takes no position on Company's determination of the portion of the payments set forth or described in Article 5 of the Collaboration Agreement that is attributable to the OSIF Technology.

ARTICLE 7.
INTELLECTUAL PROPERTY

7.1. Prosecution and Maintenance of Patents.

7.1.1. **OSIF Prosecution Right**. The Parties acknowledge and agree that, pursuant to the OSIF Agreement, OSIF has the initial right to control Prosecution and Maintenance of the OSIF Patents using counsel of its choosing. For so long as OSIF controls such Prosecution and Maintenance, [***] agrees to keep [***] reasonably informed with respect thereto and consult in good faith with [***] regarding such matters. Company will not cease paying costs for any OSIF Patent in a Major Market Country pursuant to Section 6.4 of the OSIF Agreement without the prior written consent of Vertex, not to be unreasonably withheld, conditioned, or delayed. With respect to OSIF Patents in countries other than Major Market Countries, if Company intends to cease paying costs for any such OSIF Patent pursuant to Section 6.4 of the OSIF Agreement, then Company will notify Vertex of such intention and give Vertex at least [***] to elect, upon written notice to Company, to pay for such costs. If Vertex does not make such election during such period, Company will be free to notify OSIF that it intends to cease paying for the applicable costs.

7.1.2. **OSIF Platform Patents**. This Section 7.1.2 applies only to OSIF Platform Patents as to which OSIF has notified Company that OSIF has decided not to Prosecute or Maintain pursuant to Section 6.2 of the OSIF Agreement. As between the Parties, [***] will have the first right (but not the obligation) to Prosecute and Maintain such OSIF Platform Patents at [***]'s own expense using patent counsel that is reasonably acceptable to [***]. [***] agrees to keep [***] reasonably informed with respect to the Prosecution and Maintenance of such OSIF Platform Patents and consult in good faith with [***] regarding such matters. If [***] intends to abandon any such OSIF Platform Patent that [***] is responsible for Prosecuting and Maintaining in a particular country, then [***] will notify [***] of such intention at least [***] before such Patent will become abandoned. Following such notice, [***] may elect, upon written notice to [***], to control the Prosecution and Maintenance thereof at its own expense with counsel of its own choice. Upon such election, [***] will cooperate and assist in transitioning the Prosecution and Maintenance of such Patent to [***].

7.1.3. **OSIF Product-Specific Patents**. This Section 7.1.3 applies only to OSIF Product-Specific Patents as to which OSIF has notified Company that OSIF has decided not to Prosecute or Maintain pursuant to Section 6.2 of the OSIF Agreement. As between the Parties, [***] will have the first right (but not the obligation) to Prosecute and Maintain such OSIF Product-Specific Patents at [***]'s own expense. [***] agrees to keep [***] reasonably informed with respect to the Prosecution and Maintenance of OSIF Product-Specific Patents (including providing copies of any office actions or office action responses or other correspondence that [***] provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings of such OSIF Product-Specific Patents), to consult in good faith with [***] regarding such matters, and to [***] with respect to such matters. If [***] intends to abandon any such OSIF Product-Specific Patent that [***] is responsible for Prosecuting and Maintaining in a particular country, then [***] will notify [***] of such intention at least [***] before such Patent will become abandoned. Following such notice, [***] may elect, upon written notice to [***], to control the Prosecution and Maintenance thereof at its own expense with counsel of its own choice. Upon such election, [***] will cooperate and assist in transitioning the Prosecution and Maintenance of such OSIF Product-Specific Patent to [***].

7.1.4. **Prosecution Strategy**. Promptly following the Effective Date and subject to any rights of OSIF under the OSIF Agreement, the Parties will aim to agree on, and will thereafter comply with, a Patent filing strategy that allows for [***].

7.1.5. **IP Committee**. During the Term, each Party will keep the other Party informed through the IP Committee (or to the other Party, if the IP Committee is disbanded) as to material developments with respect to the Prosecution and Maintenance of OSIF Patents for which such Party has responsibility for Prosecution and Maintenance pursuant to this Section 7.1, including by providing copies of any office actions or office action responses or other correspondence that such Party provides to or receives from any patent office, including notice of all interferences, reissues, re-examinations, or oppositions, and all patent-related filings within [***] after such receiving or filing such documents, and by providing the other Party the timely opportunity to have reasonable input into the strategic aspects of such Prosecution and Maintenance.

7.2. Defense of Claims Brought by Third Parties. If any Third Party brings a claim or otherwise asserts that a Product or Licensed Agent infringes such Third Party's Patent or misappropriates such Third Party's Know-How (each, a "**Third-Party Infringement Claim**"), the Party first having notice of the claim or assertion will promptly notify the other Party in writing. Subject to Section 9.1, [***] will have the sole right to undertake and control the defense or settlement of any Third-Party Infringement Claim using counsel of its choice, at its expense. Subject to Section 9.1, if [***] is named as a defendant in any such Third Party Infringement Claim, [***] will have the right to participate in such defense and settlement with its own counsel, at its expense. Subject to Section 9.1, [***] will not enter into any settlement of any Third-Party Infringement Claim that is instituted or threatened to be instituted against [***] without [***]'s prior written consent, which will not be unreasonably withheld, conditioned or delayed; *provided* that such consent will not be required if [***]. As requested by [***], [***] will provide reasonable cooperation and assistance to [***] in connection with [***]'s control of the defense or settlement of a Third-Party Infringement Claim. Such cooperation and assistance will include executing all necessary and proper documents and taking such actions as will be appropriate to allow [***] to control the defense and settlement of such Third-Party Infringement Claim. Subject to Section 9.1, [***] will reimburse [***] for the reasonable FTE Costs and Out-of-Pocket Costs incurred by [***] in providing such assistance and cooperation; *provided* that [***] will have no obligation to reimburse [***] for any such FTE Costs and Out-of-Pocket Costs incurred if Company exercises its right to participate in the defense and settlement of a Third-Party Infringement Claim with its own counsel. [***]will keep [***] reasonably informed of the progress of any Third Party Infringement Claim. To the extent reasonable, both Parties will cooperate in good faith to [***].

7.3. Enforcement of Patents Against Competitive Infringement.

7.3.1. **Duty to Notify of Competitive Infringement**. If either Party learns of an infringement, unauthorized use, misappropriation, threatened infringement, or a request for a compulsory license by a Third Party with respect to any OSIF Technology by reason of the making, using, offering to sell, selling, importing or other exploitation of a compound or product in the [***] (a "**Competitive Infringement**"), such Party will promptly notify the other Party in writing and will provide such other Party with available information regarding such Competitive Infringement.

7.3.2. **Enforcement**.

(a) [***] will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding under any OSIF Product-Specific Patent with respect to any Competitive Infringement by counsel of its own choice, at its own expense. If [***] fails to initiate such a Proceeding within [***] after written notice of such Competitive Infringement is first provided by a Party under Section 7.3.1, or [***] if such Proceeding is an ANDA litigation, other than with respect to a request for a compulsory

license, [***] will have the right to initiate and control a Proceeding with respect to such Competitive Infringement by counsel of its own choice, at its own expense and [***] will have the right, at its own expense, to be represented in any such action by counsel of its own choice; *provided* that, if [***] notifies Company during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***] will not have the right to initiate and control any Proceeding with respect to such Competitive Infringement (other than as provided in Section 6.4.2(b)).

(b) [***] will have the first right, but not the obligation, to institute, prosecute, and control a Proceeding under any OSIF Platform Patent with respect to any Competitive Infringement by counsel of its own choice, at its own expense. If [***] fails to initiate such a Proceeding within [***] after written notice of such Competitive Infringement is first provided by a Party under Section 7.3.1, or [***] if such Proceeding is an ANDA litigation, other than with respect to a request for a compulsory license, [***] will have the right to initiate and control a Proceeding with respect to such Competitive Infringement by counsel of its own choice, at its own expense; *provided* that if (i) [***] notifies Vertex during such [***] period (or such [***] period for a Proceeding that is an ANDA litigation) that [***] will not have the right to initiate, prosecute and control any Proceeding under the OSIF Platform Patents with respect to such Competitive Infringement.

(c) The Party prosecuting and controlling any such Proceeding will (i) keep the other Party reasonably apprised of the progress of such Proceeding, (ii) reasonably consider the other Party's comments with respect to the conduct of such Proceeding and (iii) not enter into a settlement, consent judgment or other voluntary final disposition of a Proceeding that [***] without the other Party's prior written consent, not to be unreasonably withheld, conditioned, or delayed; *provided* that [***].

(d) Notwithstanding the foregoing, [***]'s right to enforce the OSIF Patents will be subject to OSIF's enforcement rights under the OSIF Agreement.

7.3.3. **Joinder**. If a Party initiates a Proceeding in accordance with this Section 7.3, the other Party agrees to be joined as a party plaintiff where necessary and to give the first Party reasonable assistance and authority to file and prosecute the Proceeding. Subject to Section 7.3.4, the costs and expenses of each Party incurred pursuant to this Section 7.3.3 will be borne by the Party initiating such Proceeding.

7.3.4. **Share of Recoveries**. Any damages or other monetary awards recovered with respect to a Proceeding brought pursuant to this Section 7.3 will be shared as follows (after OSIF receives its applicable percentage of the portion of such award that is attributable to enforcement of the OSIF Patents pursuant to the OSIF Agreement):

(a) the amount of such recovery will first be applied to the Parties' reasonable Out-of-Pocket Costs incurred in connection with such Proceeding (which amounts will be allocated *pro rata* if insufficient to cover the totality of such expenses); then

(b) any remaining proceeds constituting direct or actual damages for acts of infringement will be paid to, or retained by, [***]; *provided* that such amounts will be [***]; and

(c) any remaining proceeds constituting [***] will be allocated between the Parties as follows: the Party initiating the Proceeding will retain [***]% of such proceeds and the other Party will receive [***]% of such proceeds.

7.3.5. **Settlement**. Notwithstanding anything to the contrary under this ARTICLE 7, neither Party may enter a settlement, consent judgment or other voluntary final disposition of a suit under this ARTICLE 7 that disclaims, limits the scope of, admits the invalidity or unenforceability of, or grants a license, covenant not to sue or similar immunity under a Patent Controlled by the other Party or its Affiliates without first obtaining the written consent of the Party that Controls the relevant Patent; *provided* that the foregoing restriction on granting a license will not apply with respect to any Sublicense granted by Vertex.

7.4. Other Infringement.

7.4.1. **Patents Solely Owned by Company**. Company will retain all rights to pursue (a) an infringement of any Patent solely owned by Company that is not a Competitive Infringement and (b) an infringement of any Patent solely owned by Company, and in each case of (a) and (b), Company will retain all recoveries with respect thereto.

7.4.2. **Patents Solely Owned by Vertex**. Vertex will retain all rights to pursue an infringement of any Patent solely owned by Vertex and Vertex will retain all recoveries with respect thereto.

7.5. Patent Listing. [***] will have the sole right, but not the obligation, to submit to all applicable Regulatory Authorities patent information pertaining to each applicable Product pursuant to 21 U.S.C. § 355(b)(1)(G), any similar statutory or regulatory requirement enacted in the future regarding biologic products, or any similar statutory or regulatory requirement in any non-U.S. country or other regulatory jurisdiction.

7.6. Common Ownership Legislation. Notwithstanding anything to the contrary in this ARTICLE 7, neither Party will have the right to make an election under the Common Ownership Legislation when exercising its rights under this ARTICLE 7 without the prior written consent of the other Party, which will not be unreasonably withheld, conditioned or delayed. With respect to any such permitted election, the Parties will use reasonable efforts to cooperate and coordinate their activities with respect to any submissions, filings or other activities in support thereof. The Parties acknowledge and agree that this Agreement is a "joint research agreement" as defined in the Common Ownership Legislation. Notwithstanding the foregoing, the other Party's consent under this Section 7.6 will not be required in connection with an obviousness-type double patenting rejection in any patent application claiming a Licensed Agent, Product, or uses thereof.

7.7. Patent Term Extension. [***] will have the sole right, at its sole cost, to obtain patent term restoration in any country in the Territory under 35 U.S.C. § 156 or any statute or regulation equivalent or similar thereto, where applicable to a Product and where such patent term restoration arises from, or is calculated in reference to, the Development of a Product or Licensed Agent, including with respect to any [***], except as provided below with respect [***]. Subject to OSIF's rights under the OSIF Agreement, [***] will determine which relevant patents will be extended (including by filing supplementary protection certificates and any other extensions that are now or in the future become available); *provided, however*, that any decision

to [***] prior to assignment of this Agreement to OSIF will require the prior written approval of [***], which may be withheld in [***]'s sole discretion. [***] will cooperate, at [***]'s cost, as reasonably requested by [***], in connection with the foregoing (including by providing appropriate information and executing appropriate documents). For clarity, as between the Parties, [***] will have the sole right to obtain patent term restoration in any country in the Territory for any [***] where such patent term restoration arises from, or is calculated in reference to, [***], in its sole discretion.

7.8. **Recording**. If Vertex deems it necessary or desirable to register or record this Agreement or evidence of this Agreement with any patent office or other appropriate Governmental Authority in one or more jurisdictions in the Territory, Company will reasonably cooperate to execute and deliver to Vertex any documents accurately reflecting or evidencing this Agreement that are necessary or desirable, in Vertex's reasonable judgment, to complete such registration or recordation. Vertex will reimburse Company for all reasonable Out-of-Pocket Costs, including attorneys' fees, incurred by Company in complying with the provisions of this Section 7.8.

7.9. **Unitary Patent System**. The Party Prosecuting and Maintaining a Patent in Europe pursuant to Section 7.1 will have the exclusive right to opt-in or opt-out of the Europe Unitary Patent System for such Patent. For clarity, "to opt-in or opt-out" refers to both the right to have or have not a European patent application or an issued European patent registered to have unitary effect within the meaning of Regulation (EU) No 1257/2012 of December 17, 2012 as well as the Agreement on a Unified Patent Court as of February 19, 2013; and to the right to opt-in or opt-out from the exclusive competence of the Unified Patent Court in accordance with Article 83(3) of that Agreement on a Unified Patent Court. Without limiting the generality of the foregoing, unless a Party or its Affiliate has expressly opted in to the Europe Unitary Patent System with respect to a given Patent, the other Party will not initiate any action with respect to such Patent under the Europe Unitary Patent System without such Party's prior written approval, such approval to be granted or withheld in such Party's sole discretion.

7.10. **Trademarks**. As between the Parties, all trademarks and trade dress rights used in connection with the Commercialization of the Products in the Field in the Territory will be owned exclusively by Vertex.

7.11. **Bankruptcy**.

7.11.1. All rights and licenses now or hereafter granted by Company to Vertex under or pursuant to this Agreement, including, for the avoidance of doubt, the licenses granted to Vertex pursuant to Section 5.1, are, for all purposes of 11 U.S.C. § 365(n), licenses of rights to "intellectual property" as defined in the U.S. Bankruptcy Code. Upon the occurrence of any Insolvency Event with respect to Company, Company 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. Without limiting the generality of the foregoing, the Parties intend and agree that any sale of Company's assets under Section 363 of the Bankruptcy Code will be subject to Vertex's rights under Section 365(n), that Vertex cannot be compelled to accept a money satisfaction of its interests in the intellectual property licensed pursuant to this Agreement, and that any such sale therefore may not be made to a purchaser "free and clear" of Vertex's rights under this Agreement and Section 365(n) without the express, contemporaneous consent of Vertex. Further, each Party agrees and acknowledges that all payments by Vertex to Company hereunder, other than the up-front fee pursuant to Section 6.1, royalty payments pursuant to Section 6.3, and the milestone payments pursuant to Section 6.2.1 and Section 6.2.2, do not constitute royalties within the meaning of Section 365(n) of the Bankruptcy Code or relate to licenses of intellectual property hereunder. Company will, during the 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 OSIF Technology and all information related to the OSIF Technology. If (a) a case under the U.S. Bankruptcy Code is commenced by or against Company, (b) this Agreement is rejected as provided in the U.S. Bankruptcy Code, and (c) Vertex elects to retain its rights hereunder as provided in Section 365(n) of the U.S. Bankruptcy Code, Company (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) will:

(a) provide Vertex with copies of all such intellectual property (including all embodiments thereof) held by Company; and

(b) 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.

Nothing herein will be deemed a waiver by Vertex of any claims it may have against Company resulting from rejection of the license or failure to perform its obligations hereunder.

ARTICLE 8.
REPRESENTATIONS AND WARRANTIES

8.1. **Representations and Warranties of Vertex**. Vertex hereby represents and warrants to Company, as of the Execution Date and the Effective Date, that:

8.1.1. it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization;

8.1.2. it (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;

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

8.1.4. the execution, delivery and performance of this Agreement by Vertex will not constitute a default under or conflict with any agreement, instrument, obligation 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;

8.1.5. except with respect to any required Antitrust Filings (as defined under the Collaboration Agreement), it 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;

8.1.6. the representations and warranties of Vertex in this Agreement, and the information, documents and materials furnished to Company in connection with its period of diligence prior to the Execution Date or the Effective Date, as applicable, do not, taken as a

whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading; and

8.1.7. Vertex is solvent and has the ability to pay and perform all of its obligations due as of the Effective Date, including any such payment obligations under this Agreement.

8.2. Representations and Warranties of Company. Company hereby represents and warrants to Vertex, as of the Execution Date and the Effective Date, that, except as set forth in the corresponding section of Schedule 8.2, which schedule may be supplemented or updated within [***] following the Antitrust Clearance Date (as defined under the Collaboration Agreement); *provided* that any such supplement or update may only contain information arising after the Execution Date:

8.2.1. it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization;

8.2.2. it (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;

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

8.2.4. the execution, delivery and performance of this Agreement by Company will not constitute a default under or conflict with any agreement, instrument, obligation 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;

8.2.5. except with respect to any required Antitrust Filings (as defined under the Collaboration Agreement), it 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;

8.2.6. Company Controls all Patents and Know-How licensed to Company or its Affiliates by OSIF under the OSIF Agreement that are necessary or useful to Exploit Licensed Agents and Products in the Field;

8.2.7. Company is the exclusive licensee of the OSIF Technology, all of which is free and clear of any liens, charges and encumbrances (other than any license granted by Company or its Affiliates to any Third Party that do not conflict with or affect the scope of the licenses granted under this Agreement and other than any liens, charges and encumbrances resulting from the action or inaction of OSIF or its Affiliates without Company's knowledge), and, as of the Execution Date and the Effective Date, neither any license granted by Company or its Affiliates to any Third Party, nor any agreement between any Third Party and Company or its Affiliates, conflicts with the licenses or other rights granted to Vertex hereunder and Company is entitled to grant all rights and licenses (or sublicenses, as the case may be) it purports to grant to Vertex under this Agreement;

8.2.8. Company has disclosed to Vertex in Schedule 1.84 all OSIF Patents that, to its knowledge, are existing as of the Execution Date and the Effective Date and such disclosure indicates whether each such Patent is owned by Company or licensed by Company from a Third Party and if so licensed, identifies the licensor or sublicensor from which the Patent is licensed and Company has provided Vertex with a true and complete copy of each such license agreement;

8.2.9. to its knowledge, the OSIF Patents, are subsisting and are, or, upon issuance, will be, valid and enforceable patents and no Third Party has challenged the scope validity or enforceability of such Patents (including by way of example through the institution or written threat of institution of interference, nullity or similar invalidity proceedings before the United States Patent and Trademark Office or any analogous foreign Governmental Authority);

8.2.10. to its knowledge, no Third Party is infringing or threatening to infringe any of the OSIF Patents or misappropriating or threatening to misappropriate any OSIF Know-How;

8.2.11. it has complied with Applicable Law, including any disclosure requirements of the United States Patent and Trademark Office or any analogous foreign Governmental Authority, in connection with the Prosecution and Maintenance of the OSIF Patents and has timely paid all filing and renewal fees payable with respect to any such Patents for which it controls Prosecution and Maintenance;

8.2.12. to Company's knowledge, (a) the applicable patent owner has obtained assignments from the inventors of all inventorship rights relating to the OSIF Patents, and (b) all such assignments of inventorship rights relating to such Patents are valid and enforceable;

8.2.13. Company has provided a true and complete copy of the OSIF Agreement, including all amendments or modifications thereto, to Vertex. The OSIF Agreement is in full force and effect. Neither Company nor its Affiliates nor, to its knowledge, the Third Party licensor in the OSIF Agreement is in material breach of, or in default with respect to a material obligation under, the OSIF Agreement, and neither such party has claimed or has grounds upon which to claim that the other party is in material breach of, or in default with respect to a material obligation under, the OSIF Agreement;

8.2.14. Company and its Affiliates have taken commercially reasonable measures consistent with industry practices to protect the secrecy, confidentiality and value of all OSIF Know-How that constitutes trade secrets under Applicable Law (including requiring all employees, consultants and independent contractors to execute binding and enforceable agreements requiring all such employees, consultants and independent contractors to maintain the confidentiality of such OSIF Know-How) and, to Company's knowledge, such OSIF Know-How has not been used, disclosed to or discovered by any Third Party except pursuant to such confidentiality agreements and there has not been a breach by any party to such confidentiality agreements;

8.2.15. to Company's knowledge, the conception, development, and reduction to practice of the OSIF Technology have not constituted or involved the misappropriation of any Know-How of any Third Party, and the practice of the OSIF Know-How in the Exploitation by Company or Vertex (or their respective Affiliates or Sublicensees) of a Licensed Agent or Product as contemplated by this Agreement does not and will not constitute a misappropriation of any Know-How of any Third Party;

8.2.16. there are no judgments or settlements against or owed by Company or its Affiliates or, to its knowledge, pending or threatened claims or litigation, in either case relating to the OSIF Technology;

8.2.17. there is no action, claim, demand, suit, proceeding, arbitration, grievance, citation, summons, subpoena, inquiry or investigation of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending, or, to its knowledge, threatened, against Company, any of its Affiliates or, to its knowledge, any Third Party, in each case in connection with the OSIF Technology, the Licensed Agents, the Products, or otherwise relating to the transactions contemplated by this Agreement;

8.2.18. with respect to any OSIF Technology, Licensed Agent or Product or activities to be performed by Company in connection with this Agreement, Company has not taken any action directly or indirectly to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and has not accepted any such unlawful payment;

8.2.19. to its knowledge, except to the extent permissible under United States law, neither Company nor any of its Affiliates has, on its own behalf or in acting on behalf of any other Person, directly or indirectly engaged in any transaction, or has otherwise dealt with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated by this Agreement; and

8.2.20. the representations and warranties of Company in this Agreement, and the information, documents and materials furnished to Vertex in connection with its period of diligence prior to the Execution Date or the Effective Date, as applicable, do not, taken as a whole, (a) contain any untrue statement of a material fact, or (b) omit to state any material fact necessary to make the statements or facts contained therein, in light of the circumstances under which they were made, not misleading.

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

8.3.1. Vertex will, and will require its Affiliates, Sublicensees, and subcontractors to, comply with Applicable Law and accepted pharmaceutical industry business practices in conducting its activities hereunder, including (a) to the extent applicable to Vertex or its Affiliates, Sublicensees, or subcontractor, the FD&C Act, the Anti-Kickback Statute (42 U.S.C. 1320a-7b), Civil Monetary Penalty Statute (42 U.S.C. 1320a-7a), the False Claims Act (31 U.S.C. 3729 et seq.), comparable state statutes, the regulations promulgated under all such statutes and the regulations issued by the FDA, consistent with the 'Compliance Program Guidance for Pharmaceutical Manufacturers' published by the Office of Inspector General, U.S. Department of Health and Human Services, (b) the applicable laws and regulations of the countries where it operates, including anti-bribery and anti-corruption laws, accounting and record keeping laws and laws relating to interactions with healthcare professionals or healthcare providers and Government Officials and (c) where appropriate GMP, GCP and GLP (or similar standards);

8.3.2. Vertex will not engage directly or indirectly, 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;

8.3.3. Vertex will inform Company 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 Vertex, any of its Affiliates or any such Person performing services hereunder or thereunder;

8.3.4. Vertex will be, will cause its Affiliates to be, in compliance with all applicable economics sanctions, import, and export control laws, regulations, and orders;

8.3.5. with respect to any OSIF Technology, Licensed Agent, Product, payments or activities performed by Vertex in connection with this Agreement, Vertex will not take any action to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and will not accept any such unlawful payment;

8.3.6. Vertex will not, and will cause its Affiliates not to, engage with or engage in any transaction, or otherwise deal with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated under this Agreement;

8.3.7. Vertex will be, as between the Parties, solely responsible to ensure Compliance by it and its Affiliates; and

8.3.8. Vertex will not, during the term of this Agreement, grant any rights in the Know-How and Patents Controlled by Vertex or its Affiliates that conflict or are inconsistent with the rights granted to Company under this Agreement or that would otherwise prevent Company from exercising its rights or performing its obligations under this Agreement.

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

8.4.1. Company will, and will require its Affiliates and subcontractors to, comply with Applicable Law and accepted pharmaceutical industry business practices in conducting its activities hereunder, including (a) to the extent applicable to Company or its Affiliates or subcontractor, the FD&C Act, the Anti-Kickback Statute (42 U.S.C. 1320a-7b), Civil Monetary Penalty Statute (42 U.S.C. 1320a-7a), the False Claims Act (31 U.S.C. 3729 et seq.), comparable state statutes, the regulations promulgated under all such statutes and the regulations issued by the FDA, consistent with the 'Compliance Program Guidance for Pharmaceutical Manufacturers' published by the Office of Inspector General, U.S. Department of Health and Human Services, (b) the applicable laws and regulations of the countries where it operates, including anti-bribery and anti-corruption laws, accounting and record keeping laws and laws relating to interactions with healthcare professionals or healthcare providers and Government Officials and (c) where appropriate GMP, GCP and GLP (or similar standards);

8.4.2. Company will maintain and not breach, and will cause its Affiliates to maintain and not breach, the OSIF Agreement;

8.4.3. Company will promptly notify Vertex in writing of any material breach by Company or its Affiliate or a Third Party of the OSIF Agreement, and will promptly notify Vertex in writing if Company or its Affiliate sends or receives a notice of material breach of the OSIF Agreement, and in the event of a breach by Company or its Affiliate, will permit Vertex to cure such breach on Company's or its Affiliate's behalf upon Vertex's request;

8.4.4. Company will not, and will cause its Affiliates not to, amend, modify or terminate the OSIF Agreement in a manner that would adversely affect Vertex's rights hereunder without first obtaining Vertex's written consent, which consent may be withheld in Vertex's sole discretion;

8.4.5. neither Company nor any of its Affiliates will effect any corporate restructuring or enter into any new agreement or otherwise obligate itself to any Third Party or Affiliate, or amend an existing agreement with a Third Party or Affiliate, in each case, in a manner that restricts, limits, or encumbers the rights granted to Vertex under this Agreement or the obligations of Company or its Affiliates under this Agreement;

8.4.6. Company will not, and will cause its Affiliates not to (a) license, sell, assign or otherwise transfer to any Person any OSIF Technology (or agree to do any of the foregoing), (b) negotiate with, offer to, or grant any license to any Person, or (c) incur or permit to exist, with respect to any OSIF Technology, any lien, encumbrance, charge, security interest, mortgage, liability, grant of license to Third Parties or other restriction (including in connection with any indebtedness), in each case ((a) through (c)), that would conflict with, limit, impair or restrict the rights and licenses granted to Vertex hereunder or would cause any OSIF Technology to cease to be Controlled by Company;

8.4.7. Company will be, and will cause its Affiliates to be, in compliance with all applicable economics sanctions, import, and export control laws, regulations, and orders;

8.4.8. with respect to any OSIF Technology, Licensed Agent, Product, payments or activities performed by Company in connection with this Agreement, Company will not take any action to unlawfully offer, promise, or pay, or authorize the offer or payment of, any money or anything of value in order to improperly or corruptly seek to influence any Government Official or any other person in order to gain an improper advantage, and will not accept any such unlawful payment;

8.4.9. Company will not, and will cause its Affiliates not to, engage with or engage in any transaction, or otherwise deal with, any country or Person targeted by the United States, Europe or other relevant economic sanctions laws in connection with any activities contemplated under this Agreement; and

8.4.10. Company will be, as between the Parties, solely responsible to ensure Compliance by it and its Affiliates.

8.5. **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 Company understand that each Product is the subject of ongoing Research and Development and that neither Party can assure the safety, usefulness or commercial or technical viability of any Product.

ARTICLE 9.
INDEMNIFICATION; INSURANCE; LIMITATIONS

9.1. **Indemnification**.

9.1.1. **Indemnification by Vertex**. Subject to Section 9.1.3, Vertex will indemnify Company, its Affiliates, and its and its Affiliates' employees, officers and directors (each, a "**Company Indemnified Party**") from and against any liability, loss, damage or expense (including reasonable attorneys' fees and expenses) (collectively, "**Liability**") that the

Company Indemnified Party may incur or otherwise be required to pay to one or more Third Parties in connection with any Third Party suit, investigation, claim or demand resulting from or arising out of:

(a) the Exploitation of any Licensed Agent or Product by, on behalf of, or under the authority of, Vertex;

(b) the breach by Vertex of any of its representations, warranties or covenants set forth in this Agreement; or

(c) the gross negligence or willful misconduct of Vertex or any Vertex Indemnified Party;

and except, in each case ((a)–(c)), to the extent such claim results from or arises out of an event described in clause (a) through (b) of Section 9.1.2, as to such claim each Party will indemnify the other to the extent of their respective liability.

9.1.2. **Indemnification by Company**. Subject to Section 9.1.3, Company will indemnify Vertex, its Affiliates and its and its Affiliates' employees, officers and directors, Sublicensees and Distributors (each, a "**Vertex Indemnified Party**") from and against any Liability that the Vertex Indemnified Party may incur or otherwise be required to pay to one or more Third Parties in connection with any Third Party suit, investigation, claim or demand resulting from or arising out of:

(a) the breach by Company of any of its representations, warranties or covenants set forth in this Agreement; or

(b) the gross negligence or willful misconduct of Company or any Company Indemnified Party;

and except, in each case ((a)–(b)), to the extent such claim results from or arises out of an event described in clause (a) through (c) of Section 9.1.1, as to such claim each Party will indemnify the other to the extent of their respective liability.

9.1.3. **Procedure**. Each Party will notify the other Party in writing if it becomes aware of a claim for which such Party may seek indemnification hereunder. If any Proceeding is instituted against a Party (or another Company Indemnified Party in the case of Company or another Vertex Indemnified Party in the case of Vertex) with respect to which indemnity may be sought pursuant to Section 9.1.1 or 9.1.2, as applicable, such Party (the "**Indemnified Party**") will give prompt written notice of the indemnity claim to the other Party (the "**Indemnifying Party**") and provide the Indemnifying Party with a copy of any complaint, summons or other written notice that the Company Indemnified Party or Vertex Indemnified Party, as applicable, receives in connection with any such claim. An Indemnified Party's failure to deliver such written notice will relieve the Indemnifying Party of liability to the Company Indemnified Party or Vertex Indemnified Party under Section 9.1.1 or 9.1.2, as applicable, 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 Company Indemnified Party or Vertex Indemnified Party, as applicable, will permit the Indemnifying Party to control any litigation relating to such claim and the disposition of such claim by negotiated settlement or otherwise (subject to this Section 9.1) and any failure to contest such obligation 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 prior written consent of the Company Indemnified Party or Vertex Indemnified Party, as applicable, which will not be

unreasonably withheld, conditioned or delayed; *provided* that such consent will not be required with respect to any settlement involving only the payment of monetary awards for which the Indemnifying Party will be fully responsible. The Indemnified Party will cooperate with the Indemnifying Party in the Indemnifying Party's defense of any claim for which indemnity is sought under this Agreement, at the Indemnifying Party's cost and expense.

9.2. **Insurance**. Throughout the Term and for [***] thereafter, each Party will respectively, at its cost, obtain and maintain the insurance coverage listed below, each naming the other Party and its Indemnified Parties as additional insureds, from insurance carriers licensed to do business under the laws of the country, state, commonwealth, province or territory in which such Party's obligations are provided, with insurers that carry a rating of at least an A-VII or better from A.M. Best. In addition, Vertex will use commercially reasonable efforts to have OSIF, OSU and their respective Affiliates, officers, directors and employees named as additional insureds to its commercial general liability insurance. Each Party will furnish to the other Party evidence of such insurance upon request. Notwithstanding the foregoing, Vertex may self-insure to the extent that it self-insures for its other activities.

Insurance Type	Minimum Limits	Minimum Coverage	Respectively Must Be Maintained By
Network Security and Privacy Liability	$[***] per claim/ $[***] annual aggregate	Coverage for all acts, errors, omissions, negligence, network security and privacy risks, including but not limited to unauthorized access, failure of security, breach of privacy perils, wrongful disclosure of data, disclosure of HIPAA / GDPR protected health information, collection, or other negligence in the handling of confidential information, privacy perils, and including coverage for related regulatory defense and penalties	[***].
Workers Compensation	Statutory	Statutory	Both Parties as of the Effective Date
Commercial General Liability	$[***] per occurrence/ $[***] annual aggregate	Coverage arising from premises, operations, personal injury, advertising injury, bodily injury and property damage, including contractual liability	Both Parties as of the Effective Date
Clinical Trial / Products Liability insurance	$[***] per occurrence/ $[***] annual aggregate	Covering all participants screened or treated as part of the relevant study and all claims relating to personal injury suffered as a result of participation in the study and/or the study screening process and not containing any exclusions that would preclude claims by participating study participants	Both Parties commencing prior to first Clinical Trial of a Product
Umbrella Liability	$[***] per occurrence and $[***] annual aggregate	Coverage provides excess, follow-form coverage above all liability limits required herein	Both Parties as of the Effective Date

9.3. Limitation of Consequential Damages. Except for (a) claims of a Third Party that are subject to indemnification under this ARTICLE 9, (b) claims arising out of a Party's willful misconduct or intentional breach of this agreement or (c) any breach by a party of ARTICLE 11, 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, 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 10.
TERM; TERMINATION

10.1. **Term; Expiration**. Except with respect to the rights and obligations set forth in ARTICLE 2, which will become effective on the Execution Date, this Agreement is effective as of the Effective Date and, unless earlier terminated pursuant to the other provisions of this ARTICLE 10, will expire, in its entirety, upon the expiration of the last to expire Royalty Term under this Agreement with respect to all Products in all countries (such period, the "**Term**"):

10.2. **Termination of the Agreement**.

10.2.1. **Termination of Collaboration Agreement**. This Agreement will automatically terminate upon termination of the Collaboration Agreement in its entirety or as otherwise set forth in the Collaboration Agreement.

10.2.2. **Vertex's Termination for Convenience**. Vertex may terminate this Agreement (either in its entirety or on a Product-by-Product basis), for convenience by providing written notice of its intent to terminate to Company, in which case, such termination will be effective [***] after Company's receipt of such written notice; *except* that if any termination under this Section 10.2.1 applies to a Product for which Vertex has received Marketing Approval, such termination will be effective [***] after Company's receipt of such written notice.

10.2.3. **Termination for Material Breach**.

(a) Vertex's Right to Terminate. If Vertex believes that Company is in material breach of this Agreement, Vertex may deliver written notice of such material breach to Company. If the breach is curable, Company will have [***] following its receipt of such written notice to cure such breach. If Company fails to cure such breach within such [***] period or the breach is not subject to cure (a "**Company Breach Event**"), (i) Vertex may terminate this Agreement by providing written notice to Company, in which case, this Agreement will terminate on the date on which Company receives such written notice or (ii) Vertex may elect to exercise the alternate remedy provisions set forth in Section 10.3; *provided, however*, that if (A) the relevant breach is curable, but not reasonably curable within [***], and (B) Company is making a *bona fide* effort to cure such breach, Vertex's right to terminate this Agreement or elect to exercise the alternate remedy provisions set forth in Section 10.3 on account of such breach will be suspended for so long as Company is continuing to make such *bona fide* effort to cure such breach (up to a maximum of [***] after receipt of the applicable written notice above) and if such breach is successfully cured within the foregoing [***] period, Vertex will no longer have the right to terminate this Agreement or elect to exercise the alternate remedy provisions set forth in Section 10.3 on account of such breach.

(b) Company's Right to Terminate. If Company believes that Vertex is in material breach of this Agreement, Company may deliver written notice of such material breach to Vertex. If the breach is curable, Vertex will have [***] following its receipt of such written 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 [***] following its receipt of such written notice). If Vertex fails to cure such breach within the [***] or [***] period, as applicable, or the breach is not subject to cure, Company may terminate this Agreement by providing written notice to Vertex, in which case, this Agreement will terminate on the date on which Vertex receives such written notice; *provided, however*, that if (i) the relevant breach (A) does not

involve Vertex's failure to make a payment when due and (B) is curable, but not reasonably curable within [***], and (ii) Vertex is making a *bona fide* effort to cure such breach, Company's right to terminate this Agreement on account of such breach will be suspended for so long as Vertex is continuing to make such *bona fide* effort to cure such breach (up to a maximum of [***] after receipt of the applicable written notice above) and if such breach is successfully cured within the foregoing [***] period, Company will no longer have the right to terminate this Agreement on account of such breach.

10.2.4. **Disputes Regarding Material Breach**. Notwithstanding the foregoing, if the Breaching Party in Section 10.2.3 disputes in good faith the existence, materiality, or failure to cure of any breach, and provides written 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 Section 10.2.3, or the right to exercise the alternative remedy provisions of Section 10.3, as applicable, unless and until the relevant dispute has been resolved in accordance with Section 12.12. During the pendency of such dispute, the relevant cure period will be tolled, all the terms of this Agreement will remain in effect and the Parties will continue to perform all of their respective obligations hereunder.

10.2.5. **Termination for Insolvency**. If either Party makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over all or substantially all of its property, files a petition under any bankruptcy or insolvency act or code, including the U.S. Bankruptcy Code, or has any such petition filed against it that is not discharged within [***] after the filing thereof (each, an "**Insolvency Event**"), the other Party may terminate this Agreement in its entirety by providing written notice of its intent to terminate this Agreement to such Party, in which case, this Agreement will terminate on the date on which such Party receives such written notice.

10.3. **Alternative Remedies to Termination**. If Vertex has the right to terminate this Agreement pursuant to Section 10.2.3(a), in addition to any other remedies available to Vertex in law or equity, in lieu of terminating this Agreement, Vertex may elect, upon written notice to Company, to reduce the milestone payments under Section 6.2 by [***]% and royalty payments under Section 6.3 by [***]% (after giving effect to all other applicable deductions and credits available under such Section 6.3). Company stipulates and agrees that such reductions would be a reasonable remedy in such circumstance and not a penalty. For clarity, if Vertex exercises the alternative remedy set forth above in this Section 10.3, such remedy will be Vertex's sole remedy for such breach.

10.4. **Patent Challenge**. Company has the right to terminate this Agreement upon written notice to Vertex in the event that Vertex or any of its Affiliates or Sublicensees directly or indirectly challenges in a legal or administrative proceeding the patentability, enforceability, or validity of any OSIF Patent (a "**Patent Challenge**"). In the event of such a Patent Challenge, Company will provide written notice of such Patent Challenge to Vertex, and if Vertex (a) with respect to a patent challenge brought by Vertex or an Affiliate of Vertex, fails to withdraw such Patent Challenge within [***] after such receipt of such notice or (b) with respect to a Patent Challenge brought by a Sublicensee, fails to cause the Sublicensee to withdraw such Patent Challenge within [***] after such receipt of such notice or to terminate the applicable sublicense agreement for such Sublicensee within [***] after receipt of such notice, then, in either case of (a) or (b), Company may terminate this Agreement by providing written notice of such termination to Vertex. As used herein, a Patent Challenge includes: (i) filing an action under 28 U.S.C. §§ 2201-2202 seeking a declaration of invalidity or unenforceability of any such Patent; (ii) filing, or joining in, a petition under 35 U.S.C. § 311 to institute *inter partes* review of any such Patent; (iii) filing, or joining in, a petition under 35 U.S.C. § 321 to institute post-grant review of any such Patent or any portion thereof; (iv) filing or commencing any opposition, nullity, or similar proceedings challenging the validity of any such Patent in any country or

region; or (v) any foreign equivalent of clauses (i), (ii), (iii) or (iv), including under Applicable Law. Notwithstanding the foregoing, Company will not have the right to terminate this Agreement under this Section 10.4 (x) with respect to any Patent Challenge in which Vertex or its Affiliate or Sublicensee has been compelled to participate in such Patent Challenges by a court or patent office or (y) if a Patent Challenge is necessary or reasonably required to assert a cross claim or a counterclaim or to respond to a court request or order or administrative law request or order, including asserting any defense or counterclaim in, or otherwise responding to, any Patent infringement suit filed by Company or any of its Affiliates, licensors, licensees or sublicensees against Vertex or any of its Affiliates or Sublicensees. In addition, Company will not have the right to terminate this Agreement pursuant to this Section 10.4 if any Affiliate that first becomes an Affiliate of Vertex pursuant to a Change of Control of Vertex after the Effective Date was undertaking activities in connection with a Patent Challenge prior to such Affiliate first becoming an Affiliate of Vertex.

10.5. Consequences of Expiration or Termination of the Agreement.

10.5.1. **In General**. If this Agreement expires or is terminated in whole or in part with respect to one or more Products by a Party pursuant to this ARTICLE 10, the following terms will apply to this Agreement, either in its entirety or with respect to the Product that is the subject of such termination, as the case may be:

(a) each Party will take all action required under Section 11.3 if requested by the other Party;

(b) 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 prior to such expiration or termination;

(c) such expiration or termination will not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement; and

(d) the following provisions of this Agreement will survive the expiration or termination of this Agreement: ARTICLE 1, Section 5.3, Sections 6.5 through 6.7 (inclusive, solely to the extent applicable and with respect to any amounts due prior to expiration or termination), Section 7.4 (with respect to proceedings to the extent relating to events occurring prior to the effective date of termination), Section 8.5, ARTICLE 9 (with respect to Section 9.2, for the time period set forth therein), this Section 10.5, Sections 11.1 through 11.5 (inclusive, for the time period set forth therein), and ARTICLE 12 (but not including Section 12.2).

10.5.2. **Early Termination**. If this Agreement is terminated in its entirety or in part by a Party pursuant to Sections 10.2.1, 10.2.3, 10.2.5, or 10.4, the following terms will apply with respect to any Product that is the subject of such termination (i.e., all Products worldwide in the case of termination of this Agreement in its entirety or the applicable Product in the Territory in the case of termination of this Agreement for a particular Product, as the case may be):

(a) except as set forth in Section 10.5.2(d), the applicable licenses granted by Company to Vertex with respect to such Product(s) in the Territory under this Agreement will terminate;

(b) except as set forth in this Section 10.5, Vertex will have no further rights and Company will have no further obligations with respect to such Product(s) in the Territory;

(c) if terminated with respect to a particular Product or Products, the definition of Product will be automatically amended to exclude the relevant Product or Products; and

(d) any permitted Sublicense of Vertex will, at the applicable Sublicensee's option, survive such termination on the condition that the relevant Sublicensee is not in material breach of any of its obligations under such Sublicense. In order to effect this provision, at the request of the Sublicensee, Company will enter into a direct license with the Sublicensee on terms that are substantially the same terms as the applicable terms of this Agreement; *provided* that Company will not be required to undertake obligations in addition to those required by this Agreement, and Company's rights under such direct license will be consistent with its rights under this Agreement, taking into account the scope of the license granted under such direct license;

10.5.3. **Relationship to Collaboration Agreement**. Neither Party will be permitted to terminate this Agreement, and Vertex will not be permitted to exercise its rights under Section 10.3, unless in each case the terminating Party (or Vertex in the case of Section 10.3) exercises the corresponding right under the Collaboration Agreement. For the avoidance of doubt, a material breach of the Collaboration Agreement will be deemed to be a material breach of this Agreement, and vice versa.

ARTICLE 11.
CONFIDENTIALITY

11.1. **Confidentiality**. During the Term and for [***] thereafter, each Party (the "**Receiving Party**") receiving any Confidential Information of the other Party (the "**Disclosing Party**") hereunder will: (a) keep the Disclosing Party's Confidential Information confidential; (b) not publish, or allow to be published, and will not otherwise disclose, or permit the disclosure of, the Disclosing Party's Confidential Information; and (c) not use, or permit to be used, the Disclosing Party's Confidential Information for any purpose, except, in each case, to the extent expressly permitted under this Agreement or the Collaboration Agreement (including, for clarity, to exercise any of its rights and perform any of its obligations) or otherwise agreed in writing. Without limiting the generality of the foregoing, to the extent that either Party provides the other Party any Confidential Information owned by any Third Party, the Receiving Party will handle such Confidential Information in accordance with the terms of this ARTICLE 11 applicable to a Receiving Party.

11.2. **Authorized Disclosure**. Notwithstanding Section 11.1, each Party may disclose the other Party's Confidential Information to the extent such disclosure is reasonably necessary to:

(a) following discussion between the Parties of such disclosure through the IP Committee, file or prosecute patent applications as contemplated by this Agreement or the Collaboration Agreement;

(b) subject to the remainder of this Section 11.2, prosecute or defend litigation;

(c) exercise its rights and perform its obligations hereunder; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein (except with respect to the duration of such terms which will be commercially reasonable under the circumstances);

(d) subject to the remainder of this Section 11.2, its advisors (including financial advisors, attorneys and accountants), actual or potential acquisition partners, financing sources, investors, underwriters or sub(licensees) on a need to know basis; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein (except with respect to the duration of such terms which will be commercially reasonable under the circumstances) which may include professional ethical obligations;

(e) subject to the remainder of this Section 11.2, comply with Applicable Law; or

(f) include such Confidential Information in Regulatory Filings.

In addition to the foregoing, each Party may disclose the other Party's Confidential Information to Third Parties (other than an actual or potential competitor of such Party) in connection with its obligations under this Agreement or the Collaboration Agreement; *provided* that such disclosure is covered by terms of confidentiality similar to those set forth herein.

If a Party deems it reasonably necessary to disclose Confidential Information belonging to the other Party pursuant to Sections 11.2(b) or 11.2(e), the disclosing Party will, to the extent possible, give reasonable advance notice of such disclosure to the other Party and take reasonable measures to ensure confidential treatment of such information.

11.3. **Expiration or Termination of this Agreement**. Following the expiration or termination of this Agreement, if requested by the Disclosing Party, the Receiving Party will return or destroy, at the Receiving Party's election, all data, files, records and other materials containing or comprising the Disclosing Party's Confidential Information, except to the extent such Confidential Information is necessary or useful to conduct surviving obligations or exercise surviving rights. Notwithstanding the foregoing, (a) the Receiving Party will be permitted to retain one copy of such data, files, records, and other materials for archival and legal compliance purposes and (b) the Receiving Party will not be required to delete or destroy any electronic back-up tapes or other electronic back-up files that have been created solely by the Receiving Party's or its Affiliate's automatic or routine archiving and back-up procedures, to the extent created and retained in a manner consistent with its or their standard archiving and back-up procedures.

11.4. **Applicable Law; SEC Filings and Other Disclosures**. Either Party may disclose the terms of this Agreement or activities performed hereunder 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, to the extent such disclosure includes terms or information that have not previously been so disclosed, such Party will provide the other Party a reasonable opportunity to review such disclosure and reasonably consider the other Party's comments regarding confidential treatment sought for such disclosure.

11.5. **[***]**

ARTICLE 12.
MISCELLANEOUS

12.1. **Assignment**. This Agreement will not be assignable by either Party to any Third Party without the written consent of the non-assigning Party. Notwithstanding the foregoing, either Party may assign this Agreement or its rights and obligations under this Agreement, without the written consent of the other Party, to an Affiliate or to a Third Party that acquires all or substantially all of the business or assets of such Party to which this Agreement relates (whether by merger, reorganization, acquisition, sale or otherwise), and agrees in writing to be

bound by the terms of this Agreement; *provided* that such Affiliate or Third Party maintains the rights and abilities to perform the obligations of the assigning Party under this Agreement. The Parties agree that this Agreement and the Collaboration Agreement will always be assigned together to the same assignee; *provided, however*, that upon termination of the OSIF Agreement, this Agreement may be assigned to OSIF pursuant to Section 8.6(a) of the OSIF Agreement. 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 12.1 will be void. Notwithstanding anything to the contrary in this Agreement and subject to prior written notice by Company to Vertex, Company may sell, assign or otherwise transfer or pledge as a security all or any part of its rights to receive royalties and other related payments under this Agreement (collectively, "**Rights**") without the prior consent of Vertex, and any permitted assignee, pledgee or other transferee of such Rights may likewise sell, assign or otherwise transfer or pledge as a security all or any part of such assignee, pledgee or other transferee's Rights without the prior written consent of Vertex, and Company or such assignee, pledgee or other transferee may disclose Royalty Information (as defined under the Collaboration Agreement) in accordance with Section 10.8 of the Collaboration Agreement as if such permitted assignee, pledgee or other transferee were Company.

12.2. **Change of Control of Company**. Company will notify Vertex in writing promptly (and in any event within [***]) following the execution of a definitive agreement by Company, its Affiliates or its equity holders that could reasonably be expected to result in a Change of Control of Company.

12.3. **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 written notice of the Force Majeure to the other Party. Such excuse will continue for so long as the condition constituting a Force Majeure continues, on the condition that the nonperforming Party continues to use Commercially Reasonable Efforts to resume performance of its obligations under this Agreement.

12.4. **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, no presumption will exist or be implied against the Party that drafted such terms and provisions.

12.5. **Notices**. All written notices which are required or permitted hereunder will be in writing and sufficient if delivered personally or sent by nationally-recognized overnight courier, or through email to the applicable email address, addressed as follows:

If to Vertex:

Vertex Pharmaceuticals Incorporated
Attn: Business Development
50 Northern Avenue
Boston, Massachusetts 02210
Email: [***]

with a copy to:

Vertex Pharmaceuticals Incorporated
Attn: Corporate Legal
50 Northern Avenue

Boston, Massachusetts 02210
Email: [***] &
[***]

and:

Ropes & Gray LLP
Attn: [***]
Prudential Tower
800 Boylston Street
Boston, Massachusetts 02199
Email: [***]

If to Company:

Entrada Therapeutics, Inc.
Attn: Chief Operating Officer
6 Tide Street
Boston, Massachusetts 02210
Email: [***]

with a copy to:

Entrada Therapeutics, Inc.
Attn: Legal Notice
6 Tide Street
Boston, Massachusetts 02210
Email: [***] &
[***]

and:

Goodwin Procter LLP
Attn: [***]
601 Marshall Street
Redwood City, CA 94063
Email: [***]

or to such other address as the Party to whom written notice is to be given may have furnished to the other Party in writing in accordance herewith. In addition, each Party will deliver a courtesy copy to the other Party's Alliance Manager (as defined under the Collaboration Agreement) concurrently with such notice. Any such written notice will be deemed to have been given and received by the other Party: (a) when delivered if personally delivered; or (b) on receipt if sent by overnight courier or email. Prior to any assignment of this Agreement to OSIF, all notice required under this Agreement will be deemed given if provided to Company for substantially the same purpose or pursuant to any corresponding Section under the Collaboration Agreement and in accordance with Section 11.5 thereof.

12.6. **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 and Company.

12.7. **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 Party 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.

12.8. **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.

12.9. **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.

12.10. **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 Company 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.

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

12.12. **Dispute Resolution**. Subject to Section 12.12.4 regarding the resolution of certain Patent and Know-How-related disputes, if a dispute arises between the Parties in connection with or relating to this Agreement or any document or instrument delivered in connection herewith (a "**Dispute**"), it will be resolved pursuant to Sections 12.12.1, 12.12.2, and 12.12.3.

12.12.1. **Escalation to Executive Officers**. Either Party may refer any Dispute to the Executive Officers of the Parties, who will confer in good faith on the resolution of the issue, by delivering written notice to the other Party.

12.12.2. **Mediation**. If the Executive Officers are unable to agree on the resolution of any such Dispute within [***] (or such other period of time as mutually agreed by the Executive Officers) after such Dispute was first referred to them, then within [***] after the end of such [***] period or such other mutually-agreed period of time, either Party may serve notice to the other Party referring the matter to confidential mediation administered by the American Arbitration Association ("**AAA**") under its Mediation Procedures (subject to this Section 12.12.2). Such mediation will begin within [***] following the service of such mediation notice.

If the Parties are unable to agree on a mediator within [***] after service of the mediation notice, a mediator will be appointed by the AAA. The mediation session will last for at least [***] before any Party has the option to withdraw from the process. The Parties may agree to continue the mediation process beyond [***], until there is a settlement agreement, or one Party or the mediator states that there is no reason to continue. The Parties agree to have their respective principals participate in the mediation process, including being present throughout the mediation session(s). Any period of limitations that would otherwise expire between the reference of the

Disputes to the Executive Officers of the Parties and the conclusion of the mediation will be extended until [***] after the conclusion of mediation.

If the Dispute is not resolved through mediation, then either Party may by written notice to the other Party, elect to initiate an arbitration proceeding pursuant to the procedures set forth in Section 12.12.3 for purposes of having the matter settled (the "**Arbitration Notice**").

12.12.3. **Arbitration**. A Party may elect to resolve any Dispute pursuant to arbitration only after the Parties have escalated the Dispute to the Executive Officers pursuant to Section 12.12.1 and attempted to mediate the Dispute pursuant to Section 12.12.2, which process will be a condition precedent to arbitration. The Parties will follow the following procedures to resolve such Dispute under arbitration:

(a) Binding Arbitration. Within [***] following a Party's receipt of the Arbitration Notice, the Parties will submit such Dispute to, and such Dispute will be finally resolved by, binding arbitration in accordance with the Commercial Arbitration Rules (the "**Rules**") of the AAA by an arbitral tribunal composed of [***] impartial arbitrators bound by The Code of Ethics for Arbitrators in Commercial Disputes, all of whom will have relevant experience in the pharmaceutical industry (and the field of pharmaceutical development, commercialization or any other relevant area, as applicable), [***] appointed by each of the Parties within [***] after the Arbitration Notice, and the [***] who will chair the arbitral tribunal appointed by the Party-appointed arbitrators within [***] after the appointment of the [***] arbitrator, or, failing agreement by the Party-appointed arbitrators, by the AAA in accordance with the Rules. If, at the time of the arbitration, the Parties agree in writing to submit the Dispute to a single arbitrator, said single arbitrator will (i) have relevant experience in the pharmaceutical industry (and the field of pharmaceutical development, commercialization or any other relevant area, as applicable) and (ii) be appointed by agreement of the Parties within [***] after the Arbitration Notice, or, failing such agreement, by the AAA in accordance with the Rules. In no case will any arbitrator have participated in a prior mediation involving either Party unless explicitly agreed to by the Parties. Unless otherwise agreed by the Parties hereto, all such arbitration proceedings will be held in Boston, MA, U.S.A. All arbitration proceedings will be conducted in the English language. The Dispute will not be subject to the Commercial Arbitration Rules' Expedited Procedures, regardless of the amount in controversy, unless otherwise agreed by the Parties in writing.

(b) Limited Discovery. Documentary discovery may be conducted at the discretion of the arbitrator(s); *provided* that any such discovery will (i) be limited to documents directly relating to the Dispute, (ii) be conducted pursuant to document discovery procedures as set forth under the laws of the International Bar Association Rules of Evidence, and (iii) be conducted subject to the schedule stipulated by the Parties, or in the absence of stipulation, the schedule ordered by the arbitrator(s). At the request of a Party, the arbitrator(s) may at their discretion order the deposition of witnesses. Depositions will be limited to a maximum of [***] depositions per Party, each of a maximum of [***] hours duration, unless the arbitrator(s) otherwise determine. Notwithstanding any provision of this Section 12.12.3 to the contrary, all discovery must be completed within [***] after the appointment of the arbitrator(s).

(a) Awards and Fees. The arbitrator(s) have the authority to make awards of declaratory relief and monetary damages, but they may not award damages excluded under Section 9.3, and will not under any circumstances have the authority or power to grant (i) equitable relief or (ii) orders for specific performance. The allocation of expenses of the arbitration, including reasonable attorney's fees, will be determined by the arbitrator(s), or, in the absence of such determination, each Party will pay its own expenses, including attorney's fees.

(b) Rulings. All arbitration proceedings must be completed within [***] after the Arbitration Notice. The Parties hereby agree that, subject to the provisions of this Section 12.12.3, the arbitrator(s) has authority to issue rulings and orders regarding all procedural and evidentiary matters that the arbitrator(s) deem reasonable and necessary with or without petition therefor by the Parties as well as the final award. The final award will be issued no more than [***] after the final submissions of the Parties, or as soon thereafter as practicable. All rulings by the arbitrator(s) will be final and binding on the Parties. The arbitrator(s) will issue a reasoned decision that accompanies the final award.

(c) Enforcement of Rulings by Courts of Competent Jurisdiction. Any ruling issued by the arbitrator(s) pursuant to Section 12.12.3(b) may be enforced, to the extent that such ruling complies with the provisions of Section 12.12.3(a), in any court having jurisdiction over any of the Parties or any of their respective assets.

(d) Confidentiality. All activities undertaken by the arbitrator(s) or the Parties pursuant to this Section 12.12.3 will be conducted subject to obligations of confidentiality no less restrictive than those set forth in ARTICLE 11. Further, the Parties acknowledge and agree that their respective conduct during the course of the arbitration, their respective statements and all information exchanged in connection with the arbitration, and the conduct of the arbitration and any information produced thereunder is Confidential Information under this Agreement and subject to the provisions of ARTICLE 11.

12.12.4. **Patent and Know-How Disputes**. Notwithstanding the foregoing in this Section 12.12, if a dispute arises between the Parties under this Agreement with respect to the interpretation, scope, validity, enforceability, applicability or term of any Patent or inventorship or ownership of any Know-How, then such dispute will not be resolved pursuant to Sections 12.12.1, 12.12.2 and 12.12.3, but instead may be brought by either Party in the federal courts of Massachusetts, in each case, (a) unless the Parties agree in writing to submit such claim to arbitration pursuant to Sections 12.12.1, 12.12.2 and 12.12.3 or (b) except to the extent federal jurisdiction cannot be maintained, in which case such claim will be submitted to arbitration pursuant to Sections 12.12.1, 12.12.2 and 12.12.3.

12.12.5. **Equitable Relief**. Notwithstanding the foregoing in this Section 12.12, nothing contained in this Agreement will in any way limit or preclude a Party from, at any time, seeking or obtaining equitable relief hereunder, whether preliminary or permanent, including a temporary or permanent restraining order, preliminary or permanent injunction, specific performance or any other form of equitable relief, from any United States court of competent jurisdiction if necessary to protect the interests of such Party. Each Party agrees that its unauthorized release of the other Party's Confidential Information will cause irreparable damage to other Party for which recovery of damages would be inadequate, and that such other Party will be entitled to seek timely injunctive relief with respect to such breach, without the need to show irreparable harm or the inadequacy of monetary damages as a remedy, and without the requirement of having to post bond or other security, as well as any further relief that may be granted by a court of competent jurisdiction.

12.13. Entire Agreement. This Agreement constitutes and contains the complete, final and exclusive understanding and agreement of the Parties and cancels and supersedes all prior negotiations, correspondence, understandings and agreements, whether oral or written, between the Parties respecting the subject matter hereof, including the CDA, which is hereby superseded and replaced in its entirety as of the Execution Date.

12.14. Independent Contractors. Both Parties are independent contractors under this Agreement. Nothing contained herein will be deemed to create an employment, agency, joint venture or partnership relationship between the Parties 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.

12.15. **Transparency Laws**. Company agrees that Vertex may publicly disclose any information related to (a) any payment or transfer of value made to Company by Vertex hereunder, or (b) any payment or transfer of value made by Company to any Third Party or Affiliate in connection with this Agreement, in each case (a)-(b), to the extent reasonably required by Transparency Laws and by any means, including reporting through any government platform or system, Vertex's and its Affiliates' websites or any other platform or system. Company will promptly (and in any event within [***]) provide Vertex with any such information as reasonably requested by Vertex to enable compliance with Transparency Laws.

12.16. **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) 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 or instant messaging), (i) 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, (j) any action or occurrence deemed to be effective as of a particular date will be deemed to be effective as of 11:59 PM ET on such date and (k) the term "or" will be interpreted in the inclusive sense commonly associated with the term "and/or."

12.17. **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.

12.18. **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.

12.19. **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 digital transmission (*e.g.*, .pdf), each of which will be binding when received by the applicable Party. The Parties may execute this Agreement by electronically transmitted signature and such electronically transmitted signature will be as effective as an original executed signature page.

[Signature Page Follows]

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

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Reshma Kewalramani

Name: Reshma Kewalramani

Title: Chief Executive Officer and President

ENTRADA THERAPEUTICS, INC.

By: /s/ Dipal Doshi

Name: Dipal Doshi

Title: President and Chief Executive Officer

Schedule 1.8
Baseball Arbitration Procedures

[***]

Schedule 1.71

Licensed Agent

[***]

Schedule 1.84

OSIF Patents
(as of the Execution Date)

[***]

Schedule 8.2
Disclosure Schedule

[***]

ENTRADA THERAPEUTICS, INC.

AMENDED AND RESTATED NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

The purpose of this Amended and Restated Non-Employee Director Compensation Policy (the "Policy") of Entrada Therapeutics, Inc. (the "Company") is to provide a total compensation package that enables the Company to attract and retain, on a long-term basis, high-caliber directors who are not employees or officers of the Company or its subsidiaries ("Outside Directors"). This Policy will become effective as of the effective time of the registration statement for the Company's initial public offering of its equity securities (the "Effective Date"). In furtherance of the purpose stated above, all Outside Directors (other than those Outside Directors who receive compensation for other services to the Company) shall be paid compensation for services provided to the Company as set forth below:

Cash Retainers

Annual Retainer for Board Membership: $40,000 for general availability and participation in meetings and conference calls of our Board of Directors, to be paid quarterly in arrears, pro-rated based on the number of actual days served by the director during such calendar quarter. No additional compensation will be paid for attending individual meetings of the Board of Directors.

Additional Annual Retainer for Non-Executive Chair: $30,000

Additional Annual Retainers for Committee Membership:

Audit Committee Chair: $15,000

Audit Committee member: $7,500

Compensation Committee Chair: $10,000

Compensation Committee member: $5,000

Nominating and Corporate Governance Committee Chair: $8,000

Nominating and Corporate Governance Committee member: $4,000

Chair and committee member retainers are in addition to retainers for members of the Board of Directors. No additional compensation will be paid for attending individual committee meetings of the Board of Directors.

Equity Retainers

Initial Award: An initial, one-time stock option award (the "Initial Award") to purchase shares of the Company's common stock will be granted to each new Outside Director upon his or her election to the Board of Directors. The amount of the Initial Award will be determined as the lesser of (x) a stock option with a Value of $500,000 and (y) a stock option to purchase 32,000 shares. The Initial Award shall vest in equal monthly installments over three years from the date of grant, provided, however, that all vesting shall cease if the director resigns from the Board of Directors or otherwise ceases to serve as a director, unless the Board of Directors determines that the circumstances warrant continuation of vesting. The Initial Award shall expire ten years from the date of grant, and shall have a per share exercise price equal to the

Fair Market Value (as defined in the Company's 2021 Stock Option and Incentive Plan) of the Company's common stock on the date of grant. This Initial Award applies only to Outside Directors who are first elected to the Board of Directors subsequent to the Effective Date. For purposes of this Policy, "Value" shall mean the grant date fair value of the option (i.e., Black-Scholes Value) determined in accordance with the reasonable assumptions and methodologies employed by the Company for calculating the fair value of options under ASC 718.

Annual Award: On each date of each Annual Meeting of Stockholders of the Company following the Effective Date (the "Annual Meeting"), each continuing Outside Director, other than a director receiving an Initial Award, will receive an annual stock option award (the "Annual Award"). The amount of the Annual Award will be determined as the lesser of (x) a stock option with a Value of $250,000 and (y) a stock option to purchase 16,000 shares. The Annual Award shall vest in full upon the earlier of (i) the first anniversary of the date of grant or (ii) the date of the next Annual Meeting; provided, however, that all vesting shall cease if the director resigns from the Board of Directors or otherwise ceases to serve as a director, unless the Board of Directors determines that the circumstances warrant continuation of vesting. Such Annual Award shall expire ten years from the date of grant, and shall have a per share exercise price equal to the Fair Market Value (as defined in the Company's 2021 Stock Option and Incentive Plan) of the Company's common stock on the date of grant.

Acceleration: All outstanding Initial Awards and Annual Awards held by an Outside Director shall become fully vested and exercisable upon a Sale Event (as defined in the Company's 2021 Stock Option and Incentive Plan) or upon such Outside Director's death or disability.

Expenses

The Company will reimburse all reasonable out-of-pocket expenses incurred by non-employee directors in attending meetings of the Board of Directors or any committee thereof.

Maximum Annual Compensation

The aggregate amount of compensation, including both equity compensation and cash compensation, paid by the Company to any Outside Director for service as an Outside Director in a calendar year for services as an Outside Director period shall not exceed $750,000; provided, however, that such amount shall be $1,200,000 for the calendar year in which the applicable Outside Director is initially elected or appointed to the Board of Directors (or such other limits as may be set forth in Section 3(d) of the Company's 2021 Stock Option and Incentive Plan or any similar provision of a successor plan). For this purpose, the "amount" of equity compensation paid in a calendar year shall be determined based on the grant date fair value thereof, as determined in accordance with FASB ASC Topic 718 or its successor provision, but excluding the impact of estimated forfeitures related to service-based vesting conditions.

Adopted March 31, 2023.

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) OR 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dipal Doshi, certify that:

1. I have reviewed this Form 10-Q for the Quarterly Period Ended March 31, 2023 of Entrada Therapeutics, Inc.;

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)) 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) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

   (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: May 10, 2023

By: /s/ Dipal Doshi

Dipal Doshi
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.1

CERTIFICATIONS OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER 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 Entrada Therapeutics, Inc. (the "Company") for the quarterly period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of their knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 10, 2023

By: /s/ Dipal Doshi

Dipal Doshi
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 10, 2023

By: /s/ Kory Wentworth

Kory Wentworth
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) OR 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kory Wentworth, certify that:

1. I have reviewed this Form 10-Q for the Quarterly Period Ended March 31, 2023 of Entrada Therapeutics, Inc.;

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)) 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) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

   (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: May 10, 2023

By: /s/ Kory Wentworth

Kory Wentworth
Chief Financial Officer
(Principal Financial and Accounting Officer)