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

FORM 10-Q

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

For the quarterly period ended March 31, 2021

OR

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

For the transition period from _____ to _____

Commission File Number: 001-37766

INTELLIA THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**36-4785571**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
40 Erie Street, Suite 130, Cambridge, Massachusetts	**02139**
(Address of Principal Executive Offices)	**(Zip Code)**

857-285-6200

(Registrant's Telephone Number, Including Area Code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each Class	Trade Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	NTLA	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, smaller reporting company, or an emerging growth company. See 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 Act). Yes ☐ No ☒

The number of shares outstanding of the registrant's common stock as of April 30, 2021: 68,153,597 shares.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

INTELLIA THERAPEUTICS, INC.
Condensed Consolidated Balance Sheets (unaudited)
(Amounts in thousands except share and per share data)

	March 31, 2021	December 31, 2020
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 141,538	$ 160,020
Marketable securities	442,525	437,351
Accounts receivable	953	2,130
Prepaid expenses and other current assets	16,068	17,016
Total current assets	601,084	616,517
Marketable securities - noncurrent	16,735	-
Property and equipment, net	16,157	15,943
Operating lease right-of-use assets	77,912	39,114
Other assets	5,003	4,748
Total Assets	$ 716,891	$ 676,322
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 8,688	$ 10,460
Accrued expenses	21,215	25,554
Current portion of operating lease liability	8,255	5,696
Current portion of deferred revenue	22,544	22,544
Total current liabilities	60,702	64,254
Deferred revenue, net of current portion	45,829	51,387
Long-term operating lease liability	64,487	33,609
Commitments and contingencies (Note 6)		
Stockholders' Equity:		
Common stock, $0.0001 par value; 120,000,000 shares authorized; 67,890,334 and 66,234,056 shares issued and outstanding at March 31, 2021 and December 31, 2020, respectively	7	7
Additional paid-in capital	1,027,192	962,173
Accumulated other comprehensive (loss) income	(12)	1
Accumulated deficit	(481,314)	(435,109)
Total stockholders' equity	545,873	527,072
Total Liabilities and Stockholders' Equity	$ 716,891	$ 676,322

See notes to condensed consolidated financial statements.

INTELLIA THERAPEUTICS, INC.
Condensed Consolidated Statements of Operations and Comprehensive Loss (unaudited)
(Amounts in thousands except per share data)

	Three Months Ended March 31,	
	2021	2020
Collaboration revenue	$ 6,445	$ 12,916
Operating expenses:		
Research and development	39,276	34,650
General and administrative	13,594	11,314
Total operating expenses	52,870	45,964
Operating loss	(46,425)	(33,048)
Interest income	220	1,242
Net loss	$ (46,205)	$ (31,806)
Net loss per share, basic and diluted	$ (0.69)	$ (0.63)
Weighted average shares outstanding, basic and diluted	67,183	50,491
Other comprehensive (loss) income:		
Unrealized (loss) gain on marketable securities	(13)	112
Comprehensive loss	$ (46,218)	$ (31,694)

See notes to condensed consolidated financial statements.

INTELLIA THERAPEUTICS, INC.
Condensed Consolidated Statements of Cash Flows (unaudited)
(Amounts in thousands)

	Three Months Ended March 31,	
	2021	**2020**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (46,205)	$ (31,806)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,591	1,541
Equity-based compensation	6,424	4,157
Amortization/accretion of investment premiums/discounts	1,209	(200)
Changes in operating assets and liabilities:		
Accounts receivable	1,177	(8,748)
Prepaid expenses and other current assets	(5,448)	(448)
Operating right-of-use assets	1,596	1,566
Other assets	(255)	97
Accounts payable	(917)	(370)
Accrued expenses	(4,588)	177
Deferred revenue	(5,558)	(3,151)
Operating lease liabilities	(1,402)	(1,360)
Net cash used in operating activities	(52,376)	(38,545)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(2,412)	(845)
Purchases of marketable securities	(148,330)	(31,207)
Maturities of marketable securities	125,200	89,500
Net cash (used in) provided by investing activities	(25,542)	57,448
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock through at-the-market offerings, net of issuance costs	45,255	4,528
Proceeds from options exercised	13,340	336
Net cash provided by financing activities	58,595	4,864
Net (decrease) increase in cash and cash equivalents and restricted cash and cash equivalents	(19,323)	23,767
Cash and cash equivalents and restricted cash and cash equivalents, beginning of period	164,606	57,226
Cash and cash equivalents and restricted cash and cash equivalents, end of period	$ 145,283	$ 80,993
Reconciliation of cash and cash equivalents and restricted cash and cash equivalents to condensed consolidated balance sheet:		
Cash and cash equivalents	$ 141,538	$ 80,993
Restricted cash and cash equivalents, included in prepaids and other current assets and other assets	3,745	-
Total cash and cash equivalents and restricted cash and cash equivalents	$ 145,283	$ 80,993
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Purchases of property and equipment unpaid at period end	$ 901	$ 750
Right-of-use assets acquired under operating leases	40,394	7,347
Proceeds from at-the-market offerings unpaid at period end	-	551

See notes to condensed consolidated financial statements.

1. Overview and Basis of Presentation

Intellia Therapeutics, Inc. ("Intellia" or the "Company") is a leading clinical-stage genome editing company, focused on developing proprietary, potentially curative CRISPR/Cas9-based therapeutics. CRISPR/Cas9, an acronym for Clustered, Regularly Interspaced Short Palindromic Repeats ("CRISPR")/CRISPR associated 9 ("Cas9"), is a technology for genome editing, the process of altering selected sequences of genomic deoxyribonucleic acid ("DNA"). The Company believes the breakthrough CRISPR/Cas9 technology has the potential to transform medicine by both producing therapeutics that permanently edit and/or correct disease-associated genes in the human body with a single dose of treatment and creating enhanced engineered cell therapies. The Company's combination of deep scientific, technical and clinical development experience, and proprietary innovations in genome editing and delivery technologies, along with its intellectual property ("IP") portfolio, puts it in a position to unlock broad therapeutic applications of the CRISPR/Cas9 technology and create new classes of therapeutic products.

The condensed consolidated financial statements of the Company included herein have been prepared, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") have been condensed or omitted from this report, as is permitted by such rules and regulations. Accordingly, these condensed consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K ("Annual Report") for the year ended December 31, 2020.

The unaudited condensed consolidated financial statements include the accounts of Intellia Therapeutics, Inc. and its wholly owned, controlled subsidiary, Intellia Securities Corp. All intercompany balances and transactions have been eliminated in consolidation. Comprehensive loss is comprised of net loss and unrealized gain/loss on marketable securities.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions that affect the amounts reported in the financial statements and accompanying notes. Significant estimates in these condensed consolidated financial statements have been made in connection with the calculation of revenues, research and development expenses and equity-based compensation expense. The Company bases its estimates on historical experience and various other assumptions that management believes to be reasonable under the circumstances at the time such estimates are made. Actual results could differ from those estimates. The Company periodically reviews its estimates in light of changes in circumstances, facts and experience. The extent of the impact of the coronavirus disease 19 ("COVID-19") pandemic on the Company's operational and financial performance will depend on certain developments, including the length and severity of this pandemic, as well as its effect on our employees, collaborators and vendors, all of which are uncertain and cannot be predicted. The Company cannot reasonably estimate the extent to which the disruption may materially impact its consolidated results of operations or financial position.

The effects of material revisions in estimates are reflected in the condensed consolidated financial statements prospectively from the date of the change in estimate.

In the opinion of management, the information furnished reflects all adjustments, all of which are of a normal and recurring nature, necessary for a fair presentation of the results for the reported interim periods. The Company considers events or transactions that occur after the balance sheet date but before the financial statements are issued to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure. The results of operations for interim periods are not necessarily indicative of results to be expected for the full year or any other interim period.

Liquidity

Since its inception through March 31, 2021, the Company has raised an aggregate of $1,165.3 million to fund its operations, of which $275.0 million was through its collaboration agreements, $170.5 million was from its initial public offering ("IPO") and concurrent private placements, $438.3 million was from follow-on public offerings, $196.5 million was from at-the-market offerings and $85.0 million was from the sale of convertible preferred stock. The Company expects that its cash, cash equivalents and marketable securities as of March 31, 2021, as well as research and cost reimbursement funding from its collaboration agreement with Regeneron Pharmaceuticals, Inc. ("Regeneron") (see Note 7), will enable the Company to fund its ongoing operating expenses and capital expenditure requirements for at least the twelve-month period following the issuance of these condensed consolidated financial statements.

2. Summary of Significant Accounting Policies

The Company's significant accounting policies are described in Note 2, "Summary of Significant Accounting Policies" to the consolidated financial statements included in the Annual Report for the year ended December 31, 2020. There have been no material changes during the three months ended March 31, 2021, other than as noted below.

Recent Accounting Pronouncements – Adopted

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which is intended to simplify the accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The Company adopted ASU 2019-12 on January 1, 2021. The adoption did not have a material effect on the Company's condensed consolidated financial statements.

3. Marketable Securities

The following table summarizes the Company's available-for-sale marketable securities as of March 31, 2021 and December 31, 2020 at net book value:

	March 31, 2021			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In thousands)			
Marketable securities:				
U.S. Treasury and other government securities	$ 204,473	$ 49	$ (4)	$ 204,518
Financial institution debt securities	169,979	7	(45)	169,941
Corporate debt securities	51,311	1	(13)	51,299
Other asset-backed securities	33,509	1	(8)	33,502
Total	$ 459,272	$ 58	$ (70)	$ 459,260

	December 31, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In thousands)			
Marketable securities:				
U.S. Treasury and other government securities	$ 245,666	$ 13	$ (11)	$ 245,668
Financial institution debt securities	138,445	6	(8)	138,443
Corporate debt securities	41,765	3	(2)	41,766
Other asset-backed securities	11,474	1	(1)	11,474
Total	$ 437,350	$ 23	$ (22)	$ 437,351

The amortized cost of available-for-sale securities is adjusted for amortization of premiums and accretion of discounts to maturity. At March 31, 2021 and December 31, 2020, the balance in the Company's accumulated other comprehensive (loss) income was composed of activity related to the Company's available-for-sale marketable securities. There were no realized gains or losses in the three months ended March 31, 2021 or for the year ended December 31, 2020. The Company did not reclassify any amounts out of accumulated other comprehensive (loss) income during this period. The Company did not have any securities in a material unrealized loss position at March 31, 2021 or December 31, 2020.

The Company's available-for-sale securities that are classified as short-term marketable securities in the condensed consolidated balance sheet mature within one year or less as of the balance sheet date. Available-for-sale securities that are classified as noncurrent in the condensed consolidated balance sheet are those that mature after one year but within five years from the balance sheet date and that the Company does not intend to dispose of within the next twelve months. At March 31, 2021 and December 31, 2020, the Company did not hold any investments that matured beyond five years of the balance sheet date.

4. Fair Value Measurements

The Company classifies fair value-based measurements using a three-level hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows: Level 1, quoted market prices in active markets for identical assets or liabilities; Level 2, observable inputs other than quoted market prices included in Level 1, such as quoted market prices for markets that are not active or other inputs that are observable or can be corroborated by observable market data; and Level 3, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

As of March 31, 2021 and December 31, 2020, the Company's financial assets recognized at fair value on a recurring basis consisted of the following:

	Fair Value as of March 31, 2021			
	Total	Level 1	Level 2	Level 3
	(In thousands)			
Cash equivalents and restricted cash equivalents	$ 143,129	$ 143,129	$ -	$ -
Marketable securities:				
U.S. Treasury and other government securities	204,518	181,118	23,400	-
Financial institution debt securities	169,941	-	169,941	-
Corporate debt securities	51,299	-	51,299	-
Other asset-backed securities	33,502	-	33,502	-
Total marketable securities	459,260	181,118	278,142	-
Total	$ 602,389	$ 324,247	$ 278,142	$ -

	Fair Value as of December 31, 2020			
	Total	Level 1	Level 2	Level 3
	(In thousands)			
Cash equivalents and restricted cash equivalents	$ 163,805	$ 163,805	$ -	$ -
Marketable securities:				
U.S. Treasury and other government securities	245,668	241,664	4,004	-
Financial institution debt securities	138,443	-	138,443	-
Corporate debt securities	41,766	-	41,766	-
Other asset-backed securities	11,474	-	11,474	-
Total marketable securities	437,351	241,664	195,687	-
Total	$ 601,156	$ 405,469	$ 195,687	$ -

Certain of the Company's financial assets, including cash equivalents, restricted cash equivalents and marketable securities, have been initially valued at the transaction price, and subsequently revalued at the end of each reporting period, utilizing third-party pricing services or other observable market data. The pricing services utilize industry standard valuation models and observable market inputs to determine value. After completing its validation procedures, the Company did not adjust or override any fair value measurements provided by the pricing services as of March 31, 2021 or December 31, 2020.

Other financial instruments, including accounts receivable, accounts payable and accrued expense, are carried at cost, which approximates fair value due to the short duration and term to maturity.

5. Accrued Expenses

Accrued expenses consisted of the following:

	March 31, 2021	December 31, 2020
	(In thousands)	
Accrued research and development	$ 10,010	$ 11,008
Employee compensation and benefits	6,244	10,920
Accrued legal and professional expenses	2,833	1,876
Accrued other	2,128	1,750
Total accrued expenses	$ 21,215	$ 25,554

6. Commitments and Contingencies

Litigation

There have been no material changes to any of the outstanding litigation, nor is the Company a party to any new litigation, since December 31, 2020, except as described below. For further information please see the notes to the consolidated financial statements included in the Company's Annual Report for the year ended December 31, 2020.

Caribou Arbitration

On October 17, 2018, the Company initiated an arbitration proceeding against Caribou Biosciences, Inc. ("Caribou") asserting that Caribou violated the terms and conditions of a license agreement the Company entered into with them in July 2014 related to certain IP (the "Caribou License"), as well as other contractual and legal obligations to the Company, by using and seeking to license to third parties two patent families relating to specific structural or chemical modifications of guide RNAs ("gRNAs"), that were purportedly invented or controlled by Caribou, in the Company's exclusive human therapeutic field, before an agreed-upon cutoff date of January 30, 2018.

On September 26, 2019, the Company announced that the arbitration panel issued an interim award concluding that both the structural and chemical gRNA modification technologies were exclusively licensed to the Company by Caribou pursuant to the Caribou License. Nevertheless, the arbitration panel, solely with respect to the clinically modified gRNAs, stated that it will declare that Caribou has an equitable "leaseback", which it described as exclusive, perpetual and worldwide (the "Caribou Award"). The Caribou Award does not include the structural guide modifications IP also at issue in the arbitration, any other IP exclusively licensed or sublicensed by Caribou to the Company under the Caribou License (including but not limited to the foundational CRISPR/Cas9 IP co-owned by the Regents of the University of California, University of Vienna and Dr. Emmanuelle Charpentier), or any other of the Company's IP. On February 6, 2020, the panel clarified that the Caribou Award is limited to a particular on-going Caribou program, which seeks to develop a chimeric antigen receptor T ("CAR-T") product directed at CD19. As instructed by the panel, the parties have been negotiating the terms of the Caribou Award, including Caribou's future payments to the Company.

License Agreements

The Company is party to license agreements, which include contingent payments. These payments will become payable if and when certain development, regulatory and commercial milestones are achieved. As of March 31, 2021, the satisfaction and timing of the contingent payments is uncertain and not reasonably estimable.

7. Collaborations

To accelerate the development and commercialization of CRISPR/Cas9-based products in multiple therapeutic areas, the Company has formed, and intends to seek other opportunities to form, strategic alliances with collaborators who can augment its leadership in CRISPR/Cas9 therapeutic development. As of March 31, 2021, the Company's accounts receivable and contract liabilities were related to the Company's collaboration with Regeneron. As of March 31, 2020, the Company's accounts receivable and contract liabilities were related to the Company's collaborations with Regeneron and Novartis Institutes for BioMedical Research ("Novartis").

The following table presents changes in the Company's accounts receivable and contract liabilities during the three months ended March 31, 2021 and 2020 (in thousands):

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Three Months Ended March 31, 2021				
Accounts receivable	$ 2,130	$ 953	$ (2,130)	$ 953
Contract liabilities:				
Deferred revenue	$ 73,931	$ -	$ (5,558)	$ 68,373

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Three Months Ended March 31, 2020				
Accounts receivable	$ 4,620	$ 9,765	$ (1,017)	$ 13,368
Contract liabilities:				
Deferred revenue	$ 28,810	$ -	$ (3,151)	$ 25,659

During the three months ended March 31, 2021 and 2020, the Company recognized the following revenues as a result of changes in the contract liability balance (in thousands):

	Three Months Ended March 31,	
Revenue recognized in the period from:	**2021**	**2020**
Amounts included in the contract liability at the beginning of the period	$ 5,558	$ 3,151

Costs to obtain and fulfill a contract

The Company did not incur any expenses to obtain collaboration agreements and costs to fulfill those contracts do not generate or enhance resources of the Company. As such, no costs to obtain or fulfill a contract have been capitalized in any period.

Regeneron Pharmaceuticals, Inc.

License and Collaboration Agreement

In April 2016, the Company entered into a license and collaboration agreement with Regeneron (the "2016 Regeneron Agreement"). The 2016 Regeneron Agreement has two principal components: (i) a product development component under which the parties will research, develop and commercialize CRISPR/Cas-based therapeutic products primarily focused on genome editing in the liver, and (ii) a technology collaboration component, pursuant to which the Company and Regeneron will engage in research-related activities aimed at discovering and developing novel technologies and improvements to CRISPR/Cas technology to enhance the Company's genome editing platform. Under this agreement, the Company also may access the Regeneron Genetics Center and proprietary mouse models to be provided by Regeneron for a limited number of the Company's liver programs. At the inception of the 2016 Regeneron Agreement, Regeneron selected the first of its 10 targets, transthyretin amyloidosis ("ATTR"), which is subject to a co-development and co-promotion agreement between the Company and Regeneron (the "ATTR Co/Co").

On May 30, 2020, the Company entered into (i) amendment no. 1 (the "2020 Regeneron Amendment") to the 2016 Regeneron Agreement, (ii) co-development and co-funding agreements for the treatment of hemophilia A and hemophilia B (the "Hemophilia Co/Co") agreements and (iii) a stock purchase agreement. The collaboration expansion builds upon the jointly developed targeted transgene insertion capabilities designed to durably restore missing therapeutic protein, and to overcome the limitations of traditional gene therapy. The collaboration was extended until April 2024, at which point Regeneron has an option to renew for an additional two years. The 2020 Regeneron Amendment also grants Regeneron exclusive rights to develop products for five additional *in vivo* CRISPR/Cas-based therapeutic liver targets and non-exclusive rights to independently develop and commercialize up to 10 *ex vivo* gene edited products made using certain defined cell types.

Since December 31, 2020, there have been no material changes to the key terms of the 2016 Regeneron Agreement and the 2020 Regeneron Amendment (the "Amended Agreements"). For further information on the terms and conditions of these agreements, please see the notes to the consolidated financial statements included in the Company's Annual Report for the year ended December 31, 2020.

Revenue Recognition – Collaboration Revenue. Through March 31, 2021, excluding amounts allocated to Regeneron's purchase of the Company's common stock, the Company recorded $145.0 million in upfront payments under the Amended Agreements and $35.6 million primarily for research and development services under the ATTR Co/Co agreement. Through March 31, 2021, the Company has recognized $129.7 million of collaboration revenue under all arrangements, including $6.4 million and $7.9 million during the three months ended March 31, 2021 and 2020, respectively, in the condensed consolidated statements of operations and comprehensive loss. This includes $0.9 million and $4.8 million during the three months ended March 31, 2021 and 2020, respectively, primarily representing payments due from Regeneron pursuant to the ATTR Co/Co agreement.

As of March 31, 2021, there was approximately $68.4 million of the aggregate transaction price of the Amended Agreements remaining to be recognized, which the Company expects to be recognized during the research term through April 2024.

As of March 31, 2021 and December 31, 2020, the Company had accounts receivable of $1.0 million and $2.1 million, respectively, and deferred revenue of $68.4 million and $73.9 million, respectively, related to the Amended Agreements.

Novartis Institutes for BioMedical Research, Inc.

In December 2014, the Company entered into a strategic collaboration agreement with Novartis (the "2014 Novartis Agreement"), primarily focused on the research of new *ex vivo* CRISPR/Cas9-edited therapies using CAR-T cells and hematopoietic stem cells ("HSCs"). The agreement was amended in December 2018 (the "Novartis Amendment") to also include research on ocular stem cells ("OSCs"). In December 2019, per the terms of the 2014 Novartis Agreement, the research term ended, although the 2014 Novartis Agreement remains in effect, for which the Company will be eligible to receive milestone and royalty payments in the future. Since December 31, 2020, there have been no material changes to the key terms of the 2014 Novartis Agreement and the Novartis Amendment. For further information on the terms and conditions of these agreements, please see the notes to the consolidated financial statements included in the Company's Annual Report for the year ended December 31, 2020.

Revenue Recognition – Milestone. During the three months ended March 31, 2020, the U.S. Food and Drug Administration ("FDA") accepted the investigational new drug ("IND") application submitted by Novartis for a CRISPR/Cas9-based engineered cell therapy for the treatment of sickle cell disease. As a result of meeting this milestone, the Company recognized $5.0 million as collaboration revenue within the condensed consolidated statement of operations and comprehensive loss. No other milestones under the 2014 Novartis Agreement and the Novartis Amendment were achieved during the three months ended March 31, 2021 or 2020. The Company is eligible to receive additional downstream success-based milestones and royalties.

As of March 31, 2021 and December 31, 2020, the Company had no accounts receivable or deferred revenue related to the 2014 Novartis Agreement and the Novartis Amendment.

8. Leases

In March 2020, the Company entered into an agreement to lease approximately 39,000 square feet of office and laboratory space at 281 Albany Street in Cambridge, Massachusetts under an operating lease agreement (the "281 Albany Lease"). The Company's obligation to pay rent will start on the date that is six months after the commencement date or the date on which the Company occupies the premises, whichever occurs earlier (the "Rent Commencement Date"). The initial term of the 281 Albany Lease is ten years following the Rent Commencement Date. As of March 31, 2021 the Company determined, in accordance with Accounting Standards Codification 842, *"Leases (Topic 842)"*, that the commencement date of the lease has been met as the facility was substantially complete and available for use and, accordingly, the Company recognized a right-of-use asset and a lease liability of approximately $40.4 million and $34.8 million, respectively, in the first quarter of 2021 related to the 281 Albany Lease. In determining the lease liability, the Company used an incremental borrowing rate of 5.52% based on a number of factors including the total lease payments, the Company's credit rating, and the lease term. In addition, the Company had prepaid approximately $5.6 million in lease payments as of March 31, 2021 under the terms of this lease, which are included in the recognized right-of-use asset. The base rent under the 281 Albany Lease is $99.00 per square foot per year during the first year of the term, which is subject to scheduled annual increases up to $128.87 per square foot per year during the last year of the initial term, plus certain operating expenses and taxes. In addition, the landlord agreed to contribute an aggregate of $4.4 million toward the cost of construction and tenant improvements for the premises. In accordance with the 281 Albany Lease, the Company is required to maintain a letter of credit in the amount of $1.9 million that is restricted for the

term of the lease. These restricted cash equivalents are reported in “Other Assets” in the Company’s condensed consolidated balance sheet. The Company has the option to extend the 281 Albany Lease for two successive five-year terms. The option for this extension is not included as part of the lease liability and right-of-use asset at March 31, 2021, as it is not reasonably certain that it will be exercised.

9. Equity-Based Compensation

In April 2016, the Company adopted the Amended and Restated 2015 Stock Option and Incentive Plan (the “2015 Plan”). The 2015 Plan provides for the grant of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock units (“RSUs”) and other stock-based awards. Recipients of incentive stock options and non-qualified stock options are eligible to purchase shares of the Company’s common stock at an exercise price equal to the fair value of such stock on the grant date. Stock options granted under the 2015 Plan generally vest 25% on the first anniversary of the original vesting date, with the balance vesting monthly over the remaining three years, unless they contain specific performance-based vesting provisions. The maximum term of stock options granted under the 2015 Plan is ten years.

As of March 31, 2021, there were 2,890,540 shares available for future issuance. The number of shares reserved for issuance under the 2015 Plan shall be cumulatively increased by four percent of the number of shares of stock issued and outstanding on the immediately preceding December 31 or such lesser number of shares of stock as determined by the board of directors.

Equity-based compensation expense is classified in the condensed consolidated statements of operations and comprehensive loss as follows:

	Three Months Ended March 31,	
	2021	2020
	(In thousands)	
Research and development	$ 3,491	$ 2,160
General and administrative	2,933	1,997
Total	$ 6,424	$ 4,157

Restricted Stock

Restricted stock is measured at fair value based on the quoted price of the Company’s common stock.

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

	Number of Shares	Weighted Average Grant Date Fair Value per Share
Unvested restricted stock as of December 31, 2020	193,936	$ 23.98
Granted	259,839	57.71
Vested	-	-
Cancelled	(11,035)	27.59
Unvested restricted stock as of March 31, 2021	442,740	$ 43.69

In March 2021, the Company granted 259,839 RSUs with a service condition to executive and non-executive employees as part of their annual grant, which vest over a period of four years. The weighted average grant date fair value of these RSUs was $57.71. The vesting start date for these RSUs is January 1, 2021.

Included in the unvested restricted stock as of March 31, 2021 are 107,360 RSUs that include a performance condition in addition to a service condition. The RSUs vest over a period of three years and are subject to accelerated vesting based on the Company's programs achieving certain development milestones before December 1, 2022. The fair value of the RSUs at date of grant was $15.05. There has been no additional vesting of these shares in the three months ended March 31, 2021.

As of March 31, 2021, there was $17.8 million of unrecognized equity-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 3.6 years.

Stock Options

The weighted average grant date fair value of options, estimated as of the grant date using the Black-Scholes option pricing model, was $36.64 and $7.96 per option for those options granted during the three months ended March 31, 2021 and 2020, respectively. The total intrinsic value (the amount by which the fair market value exceeded the exercise price) of stock options exercised during the three months ended March 31, 2021 and 2020 was $54.8 million and $0.3 million, respectively. Weighted average assumptions used to apply this pricing model were as follows:

	Three Months Ended March 31,	
	2021	**2020**
Risk-free interest rate	0.9%	1.0%
Expected life of options	6.0 years	6.0 years
Expected volatility of underlying stock	72.0%	66.7%
Expected dividend yield	0.0%	0.0%

Risk-free Interest Rate. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant with maturities approximately equal to the option's expected term.

Expected Dividend Yield. The expected dividend yield assumption is based on the fact that the Company has never paid cash dividends and has no present intention to pay cash dividends.

Expected Volatility. The expected volatility was derived from a blend of the Company's historical volatility and an average of the historical stock volatilities of several peer companies within the Company's industry, both over a period equivalent to the expected term of the stock option grants.

Expected Term. The expected term represents the period that stock option awards are expected to be outstanding. For option grants that are considered to be "plain vanilla," the Company determines the expected term using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the options. The Company uses the simplified method because it does not have sufficient historical option exercise data to provide a reasonable basis upon which to estimate the expected term.

The Company uses the market closing price of its common stock as reported on the Nasdaq Global Select Market to determine the fair value of the shares of common stock underlying stock options. The following is a summary of stock option activity for the three months ended March 31, 2021:

	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
			(In years)	(In thousands)
Outstanding at December 31, 2020	6,977,440	$ 15.43		
Granted	1,645,823	57.94		
Exercised	(1,014,569)	13.15		
Forfeited	(129,393)	20.71		
Outstanding at March 31, 2021	7,479,301	$ 25.00	8.25	$ 413,258
Exercisable at March 31, 2021	2,734,966			

As of March 31, 2021, there was $86.9 million of unrecognized compensation cost related to stock options that have not yet vested. These costs are expected to be recognized over a weighted average remaining vesting period of 3.2 years.

10. Loss Per Share

The Company calculates basic loss per share by dividing net loss for each respective period by the weighted average number of common shares outstanding for each respective period. The Company computes diluted loss per share after giving consideration to the dilutive effect of stock options and unvested restricted stock that are outstanding during the period, except where such securities would be anti-dilutive.

Basic and diluted loss per share was calculated as follows:

	Three Months Ended March 31,	
	2021	2020
	(In thousands)	
Net loss	$ (46,205)	$ (31,806)
Weighted average shares outstanding, basic and diluted	67,183	50,491
Net loss per share, basic and diluted	$ (0.69)	$ (0.63)

The following common stock equivalents were excluded from the calculation of diluted loss per share because their inclusion would have been anti-dilutive:

	Three Months Ended March 31,	
	2021	2020
	(In thousands)	
Unvested restricted stock	443	248
Stock options	7,479	7,243
	7,922	7,491

11. Stockholders' Equity

The following tables present changes in stockholders' equity for the three-month periods ended March 31, 2021 and 2020 (in thousands, except share data):

	Common		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit	Equity
Balance at December 31, 2020	66,234,056	$ 7	$ 962,173	$ 1	$ (435,109)	$ 527,072
Issuance of common stock through at-the-market offerings, net of issuance costs of $52	641,709	-	45,255	-	-	45,255
Exercise of stock options	1,014,569	-	13,340	-	-	13,340
Equity-based compensation	-	-	6,424	-	-	6,424
Other comprehensive loss	-	-	-	(13)	-	(13)
Net loss	-	-	-	-	(46,205)	(46,205)
Balance at March 31, 2021	67,890,334	$ 7	$ 1,027,192	$ (12)	$ (481,314)	$ 545,873

	Common		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Income	Deficit	Equity
Balance at December 31, 2019	50,198,044	$ 5	$ 570,493	$ 261	$ (300,878)	$ 269,881
Issuance of common stock through at-the-market offerings, net of issuance costs of $48	351,252	-	5,079	-	-	5,079
Exercise of stock options	53,579	-	336	-	-	336
Equity-based compensation	-	-	4,157	-	-	4,157
Other comprehensive income	-	-	-	112	-	112
Net loss	-	-	-	-	(31,806)	(31,806)
Balance at March 31, 2020	50,602,875	$ 5	$ 580,065	$ 373	$ (332,684)	$ 247,759

At-the-Market Offering Programs

In August 2019, the Company entered into an Open Market Sale Agreement (the "2019 Sales Agreement") with Jefferies, under which Jefferies was able to offer and sell, from time to time in "at-the-market" offerings, common stock having aggregate gross proceeds of up to $150.0 million. The Company agreed to pay Jefferies cash commissions of 3.0% of the gross proceeds of sales of common stock under the 2019 Sales Agreement. Please refer to the Company's Annual Report for the year ended December 31, 2020 for additional information regarding these offerings.

During the three months ended March 31, 2021, the Company issued 641,709 shares of its common stock in a series of sales at an average price of $72.79 per share in accordance with the 2019 Sales Agreement, for aggregate net proceeds of $45.3 million after payment of cash commissions to Jefferies and approximately $0.1 million related to legal, accounting and other fees in connection with the sales. During the three months ended March 31, 2020, the Company issued 351,252 shares of its common stock in a series of sales at an average price of $15.05 per share in accordance with the 2019 Sales Agreement, for aggregate net proceeds of $5.1 million after payment of cash commissions to Jefferies and approximately $0.1 million related to legal, accounting and other fees in connection with the sales.

As of March 31, 2021, $47.4 million in shares of common stock remain eligible for sale under the 2019 Sales Agreement.

12. Related Party Transactions

In the ordinary course of business, the Company may purchase materials or supplies from entities that are associated with a party that meets the criteria of a related party of the Company. These transactions are reviewed quarterly and to date have not been material to the Company's condensed consolidated financial statements.

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

Forward-looking Information

This Quarterly Report on Form 10-Q contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements may be identified by such forward-looking terminology as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. Our forward-looking statements are based on a series of expectations, assumptions, estimates and projections about our company, are not guarantees of future results or performance and involve substantial risks and uncertainty. We may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements. Our business and our forward-looking statements involve substantial known and unknown risks and uncertainties, including the risks and uncertainties inherent in our statements regarding:

- *our ability to execute our clinical study strategy for NTLA-2001, our program for the treatment of transthyretin amyloidosis;*
- *the anticipated timing of preclinical studies, manufacturing activities, our investigational new drug application ("IND") or equivalent regulatory filing, and clinical studies for NTLA-5001, our program for the treatment of acute myeloid leukemia;*
- *the anticipated timing of preclinical studies, manufacturing activities, our IND application or equivalent regulatory filing, and clinical studies for NTLA-2002, our program for the treatment of hereditary angioedema;*
- *our ability to use a modular platform capability or other strategy to efficiently discover and develop product candidates, including by applying learnings from one program to other programs;*
- *our ability to research, develop or maintain a pipeline of product candidates;*
- *our ability to manufacture or obtain material for our preclinical and clinical studies, and our product candidates;*
- *our ability to advance any product candidates into, and successfully complete, clinical studies, including clinical studies necessary for regulatory approval and commercialization, and to demonstrate to the regulators that the product candidates are safe, effective, pure and potent and that their benefits outweigh known and potential risks for the intended patient population;*
- *our ability to advance our genome editing and therapeutic delivery capabilities;*
- *the scope of protection we are able to develop, establish and maintain for intellectual property rights, including patents and license rights, covering our product candidates and technology;*
- *our ability to operate, including commercializing products, without infringing or breaching the proprietary or contractual rights of others;*
- *the issuance or enforcement of, and compliance with, regulatory requirements and guidance regarding preclinical and clinical studies relevant to genome editing and our product candidates;*
- *the market acceptance, pricing and reimbursement of our product candidates, if approved;*
- *estimates of our expenses, future revenues, capital requirements and our needs for additional financing;*
- *the potential benefits of strategic agreements, such as collaborations, co-development and co-commercialization, acquisitions, dispositions, mergers, joint venture and investment agreements, and our ability to establish and maintain strategic arrangements under favorable terms;*
- *our ability to acquire and maintain relevant intellectual property licenses and rights, and the scope and terms of such rights;*

- *developments relating to our licensors, licensees, third-parties from which we derive rights, collaborators, competitors and our industry;*
- *the effect of the coronavirus disease 2019 ("COVID-19") pandemic, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations; and*
- *other risks and uncertainties, including those listed under the caption "Risk Factors."*

All of our express or implied forward-looking statements are as of the date of this Quarterly Report on Form 10-Q only. In each case, actual results may differ materially from such forward-looking information. We can give no assurance that such expectations or forward-looking statements will prove to be correct. An occurrence of or any material adverse change in one or more of the risk factors or risks and uncertainties referred to in this Quarterly Report on Form 10-Q or included in our other public disclosures or our other periodic reports or other documents or filings filed with or furnished to the Securities and Exchange Commission (the "SEC") could materially and adversely affect our business, prospects, financial condition and results of operations. Except as required by law, we do not undertake or plan to update or revise any such forward-looking statements to reflect actual results, changes in plans, assumptions, estimates or projections or other circumstances affecting such forward-looking statements occurring after the date of this Quarterly Report on Form 10-Q, even if such results, changes or circumstances make it clear that any forward-looking information will not be realized. Any public statements or disclosures by us following this Quarterly Report on Form 10-Q that modify or impact any of the forward-looking statements contained in this Quarterly Report on Form 10-Q will be deemed to modify or supersede such statements in this Quarterly Report on Form 10-Q.

Management Overview

Intellia Therapeutics, Inc. ("we," "us," "our," "Intellia," or the "Company") is a leading clinical-stage genome editing company, focused on developing proprietary, potentially curative CRISPR/Cas9-based therapeutics. CRISPR/Cas9, an acronym for Clustered, Regularly Interspaced Short Palindromic Repeats ("CRISPR")/CRISPR associated 9 ("Cas9"), is a technology for genome editing, the process of altering selected sequences of genomic deoxyribonucleic acid ("DNA"). We believe the breakthrough CRISPR/Cas9 technology has the potential to transform medicine by both producing therapeutics that permanently edit and/or correct disease-associated genes in the human body with a single dose of treatment and creating enhanced engineered cell therapies. Our combination of deep scientific, technical and clinical development experience, and proprietary innovations in genome editing and delivery technologies, along with our intellectual property ("IP") portfolio, puts us in a position to unlock broad therapeutic applications of the CRISPR/Cas9 technology and create new classes of therapeutic products.

Our management's discussion and analysis of our financial condition and results of operations are based upon our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, which have been prepared by us in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim periods and with Regulation S-X, promulgated under the Securities Exchange Act of 1934, as amended. This discussion and analysis should be read in conjunction with the unaudited condensed consolidated financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q as well as in conjunction with the audited financial statements and notes thereto included in our Annual Report on Form 10-K ("Annual Report") for the year ended December 31, 2020.

Our mission is to transform the lives of people with severe diseases by developing curative genome editing treatments. We believe we can deliver on our mission and provide long-term benefits for all of our stakeholders by focusing on four key elements:

- Develop curative CRISPR/Cas9-based medicines;
- Advance our science;
- Be the best place to make therapies; and
- Focus on long-term sustainability.

Our strategy is to build a full-spectrum genome editing company, by leveraging our modular platform, to advance *in vivo* and *ex vivo* therapies for diseases with high unmet need. For *in vivo* applications to address genetic diseases, we deploy CRISPR/Cas9 as the therapy that targets cells within the body. All of our revenue to date has been collaboration revenue. Since our inception and through March 31, 2021, we have raised an aggregate of approximately $1,165.3 million to fund our operations, of which $275.0 million was through our collaboration agreements, $170.5 million was from our initial public offering and concurrent private placements, $438.3 million was from follow-on public offerings, $196.5 million was from at-the-market offerings and $85.0 million was from the sale of convertible preferred stock.

Our lead *in vivo* candidate, NTLA-2001 for the treatment of transthyretin amyloidosis ("ATTR"), is the first-ever systemically delivered CRISPR/Cas9-based therapy to enter clinical evaluation. In parallel, we are developing *ex vivo* applications to address immuno-oncology and autoimmune diseases, where CRISPR/Cas9 is the tool that creates the engineered cell therapy. Our most advanced *ex vivo* programs include a wholly owned T cell receptor ("TCR") -T cell candidate, NTLA-5001 for the treatment of acute myeloid leukemia ("AML"), and a program with Novartis Institutes for BioMedical Research, Inc. ("Novartis") to engineer hematopoietic stem cells ("HSCs") for the treatment of sickle cell disease.

Our Pipeline

In Vivo *Programs*

Our selection criteria include identifying diseases that originate in the liver; have well-defined mutations that can be addressed by a single knockout, repair or insertion approach; have readily measurable therapeutic endpoints with observable clinical responses; and for which effective treatments are absent, limited or unduly burdensome. Our initial *in vivo* indications target genetic liver diseases, including our ATTR and hereditary angioedema ("HAE") development programs. Our current efforts on *in vivo* delivery focus on the use of lipid nanoparticles ("LNPs") for delivery of the CRISPR/Cas9 complex to the liver.

Transthyretin Amyloidosis ("ATTR") Program

Background

ATTR is a progressive and fatal disorder resulting from deposition of insoluble amyloid fibrils into multiple organs and tissues leading to systemic failure. Blood-borne transthyretin ("TTR") protein is produced by hepatocytes and normally circulates as a soluble homotetramer that facilitates transport of vitamin A, via retinol binding protein, as well as the thyroid hormone, thyroxine. Mutations in the *TTR* gene lead to the production of TTR proteins that are destabilized in their tetramer form. These tetramers more readily dissociate into the monomeric form, and thence to an aggregative form that results in amyloid deposits in tissues. These deposits cause damage in those tissues, resulting in a disorder known as hereditary TTR amyloidosis ("hATTR"). Over 120 different genetic mutations are currently known to cause hATTR.

Deposits of TTR amyloid in the heart, nerves and/or other tissues can lead to diverse disease manifestations, including two main hereditary forms – hATTR with polyneuropathy ("hATTR-PN"), and hATTR with cardiomyopathy ("hATTR-CM"). Typical onset of disease symptoms is during adulthood and can be fatal within two to 15 years. Estimates suggest that approximately 50,000 patients suffer from hATTR worldwide.

In addition to the hereditary forms described above, ATTR can also develop spontaneously in the absence of any *TTR* gene mutation. This wild-type ATTR ("wtATTR") is increasingly being recognized as a significant and often undiagnosed cause of heart failure in the elderly and is the subject of active investigation. Recent estimates suggest that, globally, between 200,000 and 500,000 people may suffer from wtATTR with cardiomyopathy ("wtATTR-CM").

In non-human primate ("NHP") studies, we have demonstrated our ability to reduce circulating TTR protein to estimated therapeutically relevant levels after a single systemic administration of LNPs containing our CRISPR/Cas9 complex. In December 2019, we completed a year-long durability study of our lead LNP formulation, maintaining an average reduction of more than 95% of serum TTR protein after a single dose in NHPs. The data from our various NHP studies has shown that following editing, our proprietary modular LNP delivery system is rapidly cleared from circulation, such that exposure to components is transient and all CRISPR/Cas9 complex is undetectable in blood within 14 days of administration.

About the NTLA-2001 Clinical Program

In November 2020, we announced that the first patient had been dosed with NTLA-2001, which we are developing as a single-dose, potentially curative therapy for ATTR, in our global Phase 1 study. We are conducting our global Phase 1 study to evaluate NTLA-2001 for hATTR-PN patients. Our first patient was dosed in the United Kingdom ("U.K.") pursuant to authorization of our Clinical Trial Application ("CTA"), which was received from the U.K.'s Medicines and Healthcare products Regulatory Agency in October 2020. In November 2020, as part of our ongoing Phase 1 study for NTLA-2001, we received a second CTA authorization from New Zealand's Medicines and Medical Device Safety Authority to enroll ATTR patients at a clinical site. As part of our ongoing global development strategy, we are submitting additional regulatory applications in other countries. In March 2021, we announced that the European Commission ("EC") granted orphan drug designation to NTLA-2001.

Our global Phase 1 trial is an open-label, multi-center, two-part study of NTLA-2001 in adults with hATTR-PN. The trial's primary objectives are to assess the safety, tolerability, pharmacokinetics and pharmacodynamics of NTLA-2001. Patients receive a single dose of NTLA-2001 via intravenous administration. The study will enroll up to 38 participants (ages 18-80 years) and consist of a single-ascending dose phase in Part 1 and, following the identification of an optimal dose, an expansion cohort in Part 2. Following safety assessment and dose optimization, we intend to further evaluate NTLA-2001 in a broader ATTR patient population of both polyneuropathy and cardiomyopathy patients. We anticipate reporting interim clinical data from the single ascending dose portion of the Phase 1 study evaluating NTLA-2001 in adults with hATTR-PN in mid-2021. NTLA-2001 is part of a co-development and co-promotion ("Co/Co") agreement directed to our first collaboration target with Regeneron Pharmaceuticals, Inc. ("Regeneron"), ATTR (the "ATTR Co/Co"), for which we are the clinical and commercial lead party and Regeneron is the participating party. Regeneron shares in approximately 25% of worldwide development costs and commercial profits for the ATTR program. For more information regarding our collaboration with Regeneron, see the section below entitled "**Collaborations - *Regeneron Pharmaceuticals, Inc."***

Hereditary Angioedema ("HAE") Program

Background

HAE is a rare genetic disorder characterized by recurrent, painful and unpredictable episodes of severe swelling. The most common areas of the body to develop swelling are the limbs, face, intestinal tract and airway. Minor trauma or stress may trigger an attack but swelling often occurs without a known trigger. Episodes involving the intestinal tract cause severe abdominal pain, nausea and vomiting. Swelling in the airway can restrict breathing and lead to life-threatening obstruction of the airway. The disease is caused by increased levels of bradykinin, a protein which leads to swelling. Most patients with HAE have a deficiency of C1 esterase inhibitor ("C1-INH") protein, which normally prevents the unregulated release and buildup of bradykinin. HAE is estimated to affect 1 in 50,000 people, with an estimated 11,000 to 21,500 diagnosed HAE patients in the U.S. and Europe.

Currently, there are multiple therapies approved to treat HAE, including acute and prophylactic approaches. Acute treatments are used to treat patients who are experiencing an attack. Prophylactic treatments are used to reduce the number of attacks that a patient may experience. Prophylactic treatments have proven to be effective in reducing the number of attacks for most patients, though some patients still experience breakthrough attacks and such treatment options require regular injections that can be associated with significant treatment burden and impact on quality of life.

Using our modular LNP delivery system, we aim to knock out the *kallikrein B1 ("KLKB1"*) gene with a single dose of treatment to permanently reduce the plasma kallikrein protein and activity and thereby ameliorate the frequency and intensity of HAE attacks. We expect our approach should eliminate the current, significant treatment burden for people living with HAE and minimize the risk of breakthrough attacks with extensive and continuous reduction in plasma kallikrein activity. We believe *KLKB1* knockout to be safe, as humans with prekallikrein deficiency appear to have no known health effects. In addition, inhibition of kallikrein activity has proven to be clinically effective as a prophylactic treatment for HAE.

NTLA-2002 is our wholly owned development candidate for the treatment of HAE. In March 2021, we presented preclinical results confirming greater reductions in serum kallikrein protein levels and activity versus the current standard of care for HAE, sustained over seventeen months following a single dose in an ongoing NHP study. Additionally, we presented data from a humanized KLKB1 mouse model of bradykinin-mediated vascular permeability, establishing that a single administration of NTLA-2002 prevented captopril-induced vascular leakage. These results affirm NTLA-2002's therapeutic hypothesis of preventing HAE attacks. We plan to submit an IND or IND-equivalent for NTLA-2002 in the second half of 2021.

In Vivo *Research Programs*

We continue to work on various liver-focused programs, such as hemophilia A and hemophilia B, which we are co-developing with Regeneron, primary hyperoxaluria type 1, alpha-1 antitrypsin deficiency, as well as other liver targets, which are worked on both independently and in partnership with Regeneron, which leverage our capabilities to knockout, insert and make consecutive edits to the genome. In September 2020, we presented data that showed the persistence of *in vivo* CRISPR/Cas9 edits in regenerated liver tissue, both knockout and insertion, and corresponding durability of effect following a partial hepatectomy ("PHx") and liver regrowth in a murine model. Unlike traditional gene therapy, for which a significant loss (over 80%) in transgene expression was observed in the insertion PHx model, our targeted gene insertion approach yielded durable edits, with no significant loss in expression.

In addition, we have developed combination approaches for delivering the editing machinery by LNP, and the repair and insertion templates by adeno-associated virus ("AAV") vectors. For example, at the Alpha-1 Foundation's 20th Gordon L. Snider Critical Issues Workshop: The Promise of Gene-Based Interventions of Alpha-1 Antitrypsin Deficiency, we demonstrated expression of physiological protein levels of human alpha-1 antitrypsin ("AAT") in NHPs following a single administration. Compared to traditional AAV gene therapy, our targeted liver gene insertion technology has the ability to achieve therapeutic levels of protein expression, in a stable and durable manner, after a single dose of treatment.

We are further investigating delivery strategies that target tissues outside of the liver. For example, at the Keystone eSymposium: Precision Engineering of the Genome, Epigenome and Transcriptome in March 2021, we presented preclinical data establishing proof-of-concept for non-viral genome editing of bone marrow and HSCs in mice. This represented our first demonstration of systemic *in vivo* genome editing in bone marrow using our proprietary non-viral delivery platform. These results extend our modular *in vivo* capabilities to treat inherited blood disorders such as sickle cell disease.

Ex Vivo *Programs*

We are independently researching and developing proprietary engineered cell therapies to treat various oncological and other disease indications, for example TCR-engineered T cells and chimeric antigen receptor T ("CAR-T") cells for immuno-oncology applications and engineered regulatory T cells for autoimmune disorders. Our diverse product strategy includes multiple elements. In particular:

- We are developing TCR-engineered T cells as immuno-oncological therapies. For example, in our existing collaboration with Ospedale San Raffaele, Milan, a leading European research-university hospital, we have identified optimized TCRs that recognize a tumor target, Wilms' Tumor 1 ("WT1"), that could be used to treat a variety of blood cancers and solid tumors;

- We seek to develop allogeneic cellular therapies, which are those derived from unmatched donors and modified outside of the human body to allow them to be administered to an unrelated patient. These therapies could be used to treat both oncological and immunological diseases; and

- We are also exploring methods to apply CRISPR/Cas9 editing to cluster of differentiation 4 ("CD4") immune cells to induce a non-reverting regulatory T cell phenotype, to create therapies that address autoimmune diseases.

In addition, our partner Novartis is developing therapies directed to selected targets using CAR-T cells for oncology indications, as well as HSC and ocular stem cell- ("OSC") based therapies.

Acute Myeloid Leukemia ("AML")

Background

AML includes a heterogenous group of blood cancers arising from the malignant expansion of hematopoietic cells of the myeloid lineage. AML is associated with weakness, fatigue and bleeding resulting from the depletion of healthy myeloid cells, and is typically rapidly progressive and fatal without immediate treatment. AML is an aggressive and hard-to-treat cancer, resulting in less than 30% of patients living more than five years after diagnosis. AML is the most common acute leukemia in adults and is associated with the largest number of annual deaths from leukemia in the U.S. It is estimated that there were over 11,000 deaths due to AML, as well as nearly 20,000 new AML cases in the U.S. in 2020. While AML can occur at any age, the prevalence of the disease increases with age, resulting in a median age at diagnosis of 68 years.

Over the past several years, new treatments have emerged for AML with different mechanisms of action. While these treatments have led to improvements in response rates and in some cases increased overall survival, the outcomes demonstrated thus far have been incremental in nature and long-term outcomes in AML continue to be extremely poor.

NTLA-5001 is our engineered T cell therapy development candidate for the treatment of AML, utilizing our TCR-directed approach to target the WT1 intracellular antigen. As WT1 is overexpressed in >90% of AML blasts, we are developing NTLA-5001 as a broadly applicable treatment for AML, regardless of mutational subtypes of a patient's leukemia. This approach employs CRISPR/Cas9 complexes to knock out and replace the patient's endogenous TCR with a natural, high avidity therapeutic TCR. The resulting cells are engineered to be capable of specific and potent killing of AML blasts without bone marrow cell toxicity. In December 2020, we presented data on NTLA-5001 highlighting the high anti-tumor activity observed in proof-of-concept mouse models of acute leukemias and the faster expansion and superior function of T cells manufactured by our proprietary approach, compared to T cells engineered with a standard genome editing process.

We expect to submit an IND or IND-equivalent for NTLA-5001 in mid-2021. This first-in-human trial intends to evaluate safety and activity in patients with persistent or recurrent AML who have previously received first-line therapies. Additional research efforts are underway to evaluate the potential use of NTLA-5001 to treat WT1-positive solid tumors.

Ex Vivo *Research Programs*

We are developing engineered cell therapies to treat a range of hematological and solid tumors. We are pursuing modalities, such as TCR, with broad potential in multiple indications. We continue to advance efforts to move from autologous to allogeneic therapies and from liquid to solid tumors. Our researchers are developing and improving cell-engineering manufacturing and delivery processes that, we believe, may allow us to deliver T cell therapies with high levels of editing, robust levels of cell expansion, desirable memory phenotypes, improved function and no translocations above background levels. Our proprietary T cell engineering process enables multiple, sequential gene edits and is a significant improvement over standard engineering processes commonly used to introduce proteins and nucleic acids into cells. These platform advances support NTLA-5001 and other ongoing engineered cell research programs.

At the seventh annual Cold Spring Harbor Laboratory virtual scientific meeting in March 2021, we presented our first preclinical data set on our novel, proprietary cytosine deaminase base editor technology. We demonstrated the technology's potential for enhanced cell engineering, with multiple simultaneous gene knockouts achieving >90% T cell editing efficiency and no detectable increase in translocation above background levels.

Novartis-Led Sickle Cell Disease and Other Research Programs

In December 2019, the research term under our collaboration agreement with Novartis entered into in 2014 (the "2014 Novartis Agreement") ended, although the 2014 Novartis Agreement remains in effect. Under the 2014 Novartis Agreement, Novartis has selected particular CAR-T cell, HSC and OSC targets for continued development. Novartis has initiated clinical studies for OTQ923 and HIX763, two therapeutic candidates, based on CRISPR/Cas9 editing of HSCs, that resulted from our research collaboration with them. Novartis is currently recruiting patients for its Phase 1/2 study of these investigational candidates for treatment of sickle cell diseases. Novartis is developing several other product candidates arising from the 2014 Novartis Agreement. For more information regarding our collaboration with Novartis, see the section below entitled **"Collaborations** - ***Novartis Institutes for BioMedical Research, Inc."***

Collaborations

To accelerate the development and commercialization of CRISPR/Cas9-based products in multiple therapeutic areas, we have formed, and may seek other opportunities to form, strategic alliances with collaborators who can augment our leadership in CRISPR/Cas9 therapeutic development.

Regeneron

As described in Note 7, "Collaborations—Regeneron Pharmaceuticals, Inc.," to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q, in April 2016 we entered into a license and collaboration agreement with Regeneron (the "2016 Regeneron Agreement"). The 2016 Regeneron Agreement has two principal components: (i) a product development component under which the parties will research, develop and commercialize CRISPR/Cas-based therapeutic products primarily focused on genome editing in the liver; and (ii) a technology collaboration component, pursuant to which the parties will engage in research and development activities aimed at discovering and developing novel technologies and improvements to CRISPR/Cas technology to enhance our genome editing platform. Under the 2016 Regeneron Agreement, we also may access the Regeneron Genetics Center and proprietary mouse models to be provided by Regeneron for a limited number of our liver programs.

On May 30, 2020, we entered into amendment no. 1 (the "2020 Regeneron Amendment") to the 2016 Regeneron Agreement, pursuant to which we expanded the existing collaboration to co-develop potential products for the treatment of hemophilia A and hemophilia B. The collaboration expansion builds upon the jointly developed targeted transgene insertion capabilities designed to durably restore a missing therapeutic protein, and to overcome the limitations of traditional gene therapy. The collaboration was extended until April 2024, at which point Regeneron has an option to renew for an additional two years. The 2020 Regeneron Amendment also grants Regeneron rights to develop products for five additional *in vivo* CRISPR/Cas-based therapeutic liver targets and non-exclusive rights to independently develop and commercialize up to 10 *ex vivo* gene edited products made using certain defined cell types.

Through March 31, 2021, excluding the amounts allocated to Regeneron's purchase of our common stock, we have recorded $145.0 million in upfront payments under the 2016 Regeneron Agreement and the 2020 Regeneron Amendment (the "Amended Agreements") and $35.6 million primarily for research and development services under the ATTR Co/Co agreement, as described in Note 7 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q. Through March 31, 2021, we have recognized $129.7 million of collaboration revenue under all arrangements, including $6.4 million and $7.9 million during the three months ended March 31, 2021 and 2020, respectively, in the condensed consolidated statements of operations and comprehensive loss. This includes $0.9 million and $4.8 million during the three months ended March 31, 2021 and 2020, respectively, primarily representing payments due from Regeneron pursuant to the ATTR Co/Co agreement, which is accounted for under Accounting Standards Codification 808, *Collaborative Arrangements*. As of March 31, 2021, and December 31, 2020, we had accounts receivable of $1.0 million and $2.1 million, respectively, and deferred revenue of $68.4 million and $73.9 million, respectively, related to these arrangements.

Novartis

As described in Note 7, "Collaborations—Novartis Institutes for BioMedical Research, Inc.," to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q, in December 2014, we entered into a strategic collaboration agreement with Novartis (the "2014 Novartis Agreement"), primarily focused on the development of new *ex vivo* CRISPR/Cas9-edited therapies using CAR-T cells and HSCs. The agreement was amended in December 2018 (the "Novartis Amendment") to also include research on OSCs.

In December 2019, per the terms of the 2014 Novartis Agreement, the research term ended, although the 2014 Novartis Agreement remains in effect, for which we will be eligible to receive milestone and royalty payments in the future. Since December 31, 2020, there have been no material changes to the key terms of the 2014 Novartis Agreement and the Novartis Amendment. For further information on the terms and conditions of these agreements, please see the notes to the consolidated financial statements included in our Annual Report for the year ended December 31, 2020.

Revenue Recognition – Milestone. During the three months ended March 31, 2020, the U.S. Food and Drug Administration ("FDA") accepted the IND application submitted by Novartis for a CRISPR/Cas9-based engineered cell therapy for the treatment of sickle cell disease. As a result of meeting this milestone, we recognized $5.0 million as collaboration revenue within the condensed consolidated statement of operations and comprehensive loss. No other milestones under the 2014 Novartis Agreement and the Novartis Amendment were achieved during the three months ended March 31, 2021 or 2020. We are eligible to receive additional downstream success-based milestones and royalties.

As of March 31, 2021 and December 31, 2020, we had no accounts receivable or deferred revenue related to the 2014 Novartis Agreement and the Novartis Amendment.

Financial Overview

Collaboration Revenue

Our revenue consists of collaboration revenue, including amounts recognized related to upfront technology access payments for licenses, technology access fees, research funding and milestone payments earned under our collaboration and license agreements with Regeneron and Novartis.

Research and Development

Research and development expenses consist of expenses incurred in performing research and development activities, such as compensation and benefits, which includes equity-based compensation, for full-time research and development employees, allocated facility-related expenses, overhead expenses, license and milestone fees, contract research, development and manufacturing services, and other related costs.

General and Administrative

General and administrative expenses consist primarily of compensation and benefits, including equity-based compensation, for our executive, finance, legal, business development and support functions. Also included in general and administrative expenses are allocated facility-related costs not otherwise included in research and development expenses, travel expenses and professional fees for auditing, tax and legal services, including IP-related legal services, and other consulting fees and expenses.

Interest Income

Interest income is income earned on our cash, cash equivalents, restricted cash equivalents and marketable securities.

Results of Operations

The following discussion of the financial condition and results of operations should be read in conjunction with the accompanying condensed consolidated financial statements and the related footnotes thereto.

Comparison of Three Months Ended March 31, 2021 and 2020

The following table summarizes our results of operations for the three months ended March 31, 2021 and 2020:

	Three Months Ended March 31,		Period-to-Period Change
	2021	2020	
Collaboration revenue	$ 6,445	$ 12,916	$ (6,471)
Operating expenses:			
Research and development	39,276	34,650	4,626
General and administrative	13,594	11,314	2,280
Total operating expenses	52,870	45,964	6,906
Operating loss	(46,425)	(33,048)	(13,377)
Interest income	220	1,242	(1,022)
Net loss	$ (46,205)	$ (31,806)	$ (14,399)

Collaboration Revenue

Collaboration revenue decreased by $6.5 million to $6.4 million during the three months ended March 31, 2021, as compared to $12.9 million during the three months ended March 31, 2020. The decrease in collaboration revenue during the three months ended March 31, 2021 is primarily driven by the $5.0 million milestone payment earned from Novartis for the IND submission of OTQ923 in 2020. Refer to Note 7 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q for further details.

Research and Development

Research and development expenses increased by $4.6 million to $39.3 million during the three months ended March 31, 2021, as compared to $34.7 million during the three months ended March 31, 2020.

The following table summarizes our research and development expenses for the three months ended March 31, 2021 and 2020, together with the changes in those items in dollars (in thousands) and the respective percentages of change:

	Three Months Ended March 31,		Period-to-Period Change	Percent Change
	2021	2020		
External development expenses by program:				
NTLA-2001	$ 2,322	$ 7,046	$ (4,724)	-67%
NTLA-2002	2,155	833	1,322	159%
NTLA-5001	4,528	1,628	2,900	178%
Unallocated research and development expenses:				
Employee-related expenses	13,667	10,661	3,006	28%
Research materials and contracted services	6,977	5,927	1,050	18%
Facility-related expenses	5,183	4,978	205	4%
Stock-based compensation	3,491	2,160	1,331	62%
Other	953	1,417	(464)	-33%
Total research and development expenses	$ 39,276	$ 34,650	$ 4,626	13%

The increase in research and development expenses for the three months ended March 31, 2021 compared to the three months ended March 31, 2020 was primarily attributable to:

- a $4.7 million decrease in external costs related to the development of NTLA-2001, our lead product candidate, primarily due to a decrease in contracted services and manufactured components incurred as compared to the prior period;
- a $1.3 million increase in external costs related to the development of NTLA-2002, primarily due to an increase in components as we prepare to enter into the clinic;
- a $2.9 million increase in external costs related to the development of NTLA-5001, primarily due to an increase in contracted services as we prepare to enter into the clinic;
- a $3.0 million increase in employee-related expenses driven by an increase in the size of our workforce due to the advancement of our programs;
- a $1.1 million increase in research materials and contracted services primarily due to an increase in purchased materials;
- a $0.2 million increase in facility-related expenses primarily related to rent, depreciation and technology expense allocated to research and development; and
- a $1.3 million increase in stock-based compensation driven by our larger workforce and stock valuation.

Through 2021, we expect research and development expenses to increase as we continue to grow our development team, execute clinical trials for ATTR and progress our AML and HAE programs into the clinic.

General and Administrative

General and administrative expenses increased by $2.3 million to $13.6 million during the three months ended March 31, 2021, compared to $11.3 million during the three months ended March 31, 2020. This increase was primarily related to employee-related expenses, including stock-based compensation of $0.9 million.

Interest Income

Interest income decreased by $1.0 million to $0.2 million during the three months ended March 31, 2021 as compared to $1.2 million during the three months ended March 31, 2020. This decrease was due to a decline in investment income due to market conditions.

Liquidity and Capital Resources

Since our inception through March 31, 2021, we have raised an aggregate of $1,165.3 million to fund our operations, of which $275.0 million was through our collaboration agreements, $170.5 million was from our initial public offering and concurrent private placements, $438.3 million was from follow-on public offerings, $196.5 million was from at-the-market offerings and $85.0 million was from the sale of convertible preferred stock.

As of March 31, 2021, we had $600.8 million in cash, cash equivalents and marketable securities.

We are entitled to receive research payments under our collaboration with Novartis and are also eligible to earn a significant amount of milestone payments and royalties, in each case, on a per-product basis under our collaboration with Novartis and on a per-target basis under our collaboration with Regeneron. Our ability to earn these milestone payments and the timing of achieving these milestones is dependent upon the outcome of our research and development activities and is uncertain at this time. Our rights to payments under our collaboration agreements are our only committed external source of funds.

At-the-Market Offering Programs

In August 2019, we entered into an Open Market Sale Agreement (the "2019 Sales Agreement") with Jefferies, under which Jefferies is able to offer and sell, from time to time in "at-the-market" offerings, shares of our common stock having aggregate gross proceeds of up to $150.0 million. We agreed to pay to Jefferies cash commissions of 3.0% of the gross proceeds of sales of common stock under the 2019 Sales Agreement.

During the three months ended March 31, 2021, we issued 641,709 shares of our common stock in a series of sales at an average price of $72.79 per share in accordance with the 2019 Sales Agreement, for aggregate net proceeds of $45.3 million after payment of cash commissions to Jefferies and approximately $0.1 million related to legal, accounting and other fees in connection with the sales.

As of March 31, 2021, $47.4 million in shares of common stock remain eligible for sale under the 2019 Sales Agreement.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, research and development contracted services, compensation and related expenses, laboratory and office facilities, research supplies, legal and regulatory expenses, patent prosecution filing and maintenance costs for our licensed IP and general overhead costs. During 2021, we expect our expenses to increase compared to prior periods in connection with our ongoing activities as we continue to grow our research and development team and advance additional programs into clinical development.

Because our lead programs are still in the preclinical or early clinical stage and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of any future product candidates or whether, or when, we may achieve profitability. Until such time as we can generate substantial product revenues, if ever, we expect to finance our ongoing cash needs through equity financings and collaboration arrangements. We receive cost reimbursements from Regeneron for the ATTR and hemophilia programs. Additionally, we are eligible to earn milestone payments and royalties, in each case, on a per-product basis under our collaboration with Novartis and on a per-target basis under our collaboration with Regeneron, subject to the provisions of our agreements with each of them. Except for these sources of funding, we will not have any committed external source of liquidity. To the extent that we raise additional capital through the future sale of equity, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing stockholders. If we raise additional funds through collaboration arrangements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Outlook

Based on our research and development plans and our expectations related to the progress of our programs, we expect that our cash, cash equivalents and marketable securities as of March 31, 2021, as well as research and cost reimbursement funding from Regeneron, will enable us to fund our ongoing operating expenses and capital expenditure requirements at least through the next twenty-four months, excluding any potential milestone payments or extension fees that could be earned and distributed under the collaboration agreements with Regeneron and Novartis or any strategic use of capital not currently in the base case planning assumptions. We have based this estimate on current assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect.

Our ability to generate revenue and achieve profitability depends significantly on our success in many areas, including: developing our delivery technologies and our CRISPR/Cas9 technology platform; selecting appropriate product candidates to develop; completing research and preclinical and clinical development of selected product candidates; obtaining regulatory approvals and marketing authorizations for product candidates for which we complete clinical trials; developing a sustainable and scalable manufacturing process for product candidates; launching and commercializing product candidates for which we obtain regulatory approvals and marketing authorizations, either directly or with a collaborator or distributor; obtaining market acceptance of our product candidates; addressing any competing technological and market developments; negotiating favorable terms in any collaboration, licensing, or other arrangements into which we may enter; maintaining good relationships with our collaborators and licensors; maintaining, protecting, and expanding our portfolio of IP rights, including patents, trade secrets, and know-how; and attracting, hiring, and retaining qualified personnel.

Cash Flows

The following is a summary of cash flows for the three months ended March 31, 2021 and 2020:

	Three Months Ended March 31,	
	2021	2020
	(In millions)	
Net cash used in operating activities	$ (52.4)	$ (38.5)
Net cash (used in) provided by investing activities	(25.5)	57.4
Net cash provided by financing activities	58.6	4.9

Net cash used in operating activities

Net cash used in operating activities of $52.4 million during the three months ended March 31, 2021 primarily reflects the increased spend in our research and development activities, offset in part by the receipt of $2.4 million in payments from our collaboration partners during those periods. Net cash used in operating activities of $38.5 million during the three months ended March 31, 2020 primarily reflects increased spend in our research and development activities, offset in part by the receipt of $1.0 million in payments from our collaboration partners during those periods.

Net cash (used in) provided by investing activities

During the three months ended March 31, 2021, our investing activities used net cash of $25.5 million. The decrease in the three months ended March 31, 2021 is primarily due to a decrease in marketable securities activity during the period, as $148.3 million in marketable securities were purchased and $125.2 million in marketable securities matured. The decrease in cash is also due to $2.4 million for the purchase of property and equipment during the period. The increase in the three months ended March 31, 2020 is primarily due to an increase of $58.3 million in marketable securities activity during the period, as $89.5 million in marketable securities matured and $31.2 million in marketable securities were purchased. This increase in cash was offset in part by the use of $0.8 million in cash for the purchase of property and equipment during the period.

Net cash provided by financing activities

Net cash provided by financing activities of $58.6 million during the three months ended March 31, 2021 includes $45.3 million in net proceeds from at-the-market offerings and $13.3 million in cash received from the exercise of stock options. Net cash provided by financing activities of $4.9 million during the three months ended March 31, 2020 includes $4.5 million in net proceeds from at-the-market offerings and $0.3 million in cash received from the exercise of stock options.

Critical Accounting Policies

Our critical accounting policies require the most significant judgments and estimates in the preparation of our condensed consolidated financial statements. Management has determined that our most critical accounting policies are those relating to revenue recognition and equity-based compensation. There have been no changes to our critical accounting policies from those which were discussed in our Annual Report for the year ended December 31, 2020.

Recent Accounting Pronouncements

Please read Note 2, "Summary of Significant Accounting Policies", to our condensed consolidated financial statements included in Part I, Item 1, "Notes to Condensed Consolidated Financial Statements," of this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements applicable to our business.

Contractual Obligations

There were no material changes to our contractual obligations during the three months ended March 31, 2021. For a complete discussion of our contractual obligations, please refer to our *Management's Discussion and Analysis of Financial Condition and Results of Operations* in our Annual Report for the year ended December 31, 2020.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements as defined under the rules and regulations of the SEC.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of March 31, 2021, we had cash equivalents and marketable securities of $600.8 million consisting of interest-bearing money market accounts, commercial paper, asset-backed securities, corporate and financial institution debt securities and U.S. Treasury securities. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are primarily in marketable securities. Due to the short-term duration of our investment portfolios and the low risk profile of our investments, we do not believe an immediate change of 100 basis points, or one percentage point, would have a material effect on the fair market value of our investment portfolio. Declines in interest rates, however, would reduce future investment income.

We do not have any foreign currency or derivative financial instruments. Inflation generally affects us by increasing our cost of labor and program costs. We do not believe that inflation had a material effect on our results of operations during the three months ended March 31, 2021.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

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

Our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives. Our disclosure controls and procedures have been designed to provide reasonable assurance of achieving their objectives. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of March 31, 2021.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the three months ended March 31, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

In the ordinary course of business, we are from time to time involved in lawsuits, claims, investigations, proceedings, and threats of litigation related to intellectual property ("IP"), commercial arrangements and other matters. The outcome of any such legal proceedings, regardless of the merits, is inherently uncertain. In addition, litigation and related matters are costly and may divert the attention of our management and other resources that would otherwise be engaged in other activities. If we were unable to prevail in any such legal proceedings, our business, results of operations, liquidity and financial condition could be adversely affected.

"Item 3. Legal Proceedings" of our Annual Report on Form 10-K ("Annual Report") for the fiscal year ended December 31, 2020 includes additional discussion of our current legal proceedings.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. 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-Q, our Annual Report for the year ended December 31, 2020 and in other documents that we file with the SEC, in evaluating us and our business. If any of the following risks and uncertainties actually occurs, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks summarized and described below are not intended to be exhaustive and are not the only risks facing us. New risk factors can emerge from time to time, and it is not possible to predict the impact that any factor or combination of factors may have on our business, prospects, financial condition and results of operations.

Summary of the Material Risks Associated with Our Business

- CRISPR/Cas9 genome editing technology is not yet clinically validated for human therapeutic use. The approaches we are taking to discover and develop novel therapeutics using CRISPR/Cas9 systems are unproven and may never lead to marketable products. If we are unable to develop viable product candidates, achieve regulatory approval for any such product candidate or market and sell any product candidates, we may never achieve profitability.
- Results, including positive results, from our preclinical activities and studies are not necessarily predictive of our other ongoing and future preclinical and clinical studies, and they do not guarantee or indicate the likelihood of approval of any potential product candidate by the U.S. Food and Drug Administration ("FDA") or any other regulatory agency. If we cannot replicate the positive results from any of our preclinical or clinical activities and studies, we may be unable to successfully develop, obtain regulatory approval for and commercialize any potential product candidate.
- *In vivo* genome editing products and *ex vivo* engineered cell therapies based on CRISPR/Cas9 genome editing technology are novel and may be complex and difficult to manufacture. We could experience manufacturing problems or regulatory requirements that result in delays in the development, approval or commercialization of our product candidates or otherwise harm our business.
- Clinical development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any product candidates.
- If we experience delays or difficulties in the enrollment of patients in clinical trials, our ability to complete clinical trials or our receipt of necessary regulatory approvals could be delayed or prevented.
- Even if we obtain regulatory approval of any product candidates, such candidates may not gain market acceptance among physicians, patients, hospitals, third-party payors and others in the medical community.
- Business interruptions resulting from the COVID-19 outbreak or similar public health crises could cause a disruption of the development of our product candidates and adversely impact our business.

- We face significant competition in an environment of rapid technological change. The possibility that our competitors may achieve regulatory approval before we do or develop therapies that are more advanced or effective than ours may harm our business and financial condition or our ability to successfully market or commercialize our product candidates.
- Our ability to generate revenue from product sales and become profitable is dependent on the success of our application of CRISPR/Cas9 technology for human therapeutic use, which is at an early stage of development and will require significant additional discovery efforts, preclinical testing and clinical studies and manufacturing capabilities, as well as applicable regulatory guidance regarding preclinical testing and clinical studies from the FDA and other similar regulatory authorities, before we can seek regulatory approval and begin commercial sales of any potential product candidates.
- Negative public opinion and increased regulatory scrutiny of CRISPR/Cas9 use, genome editing or gene therapy generally may damage public perception of the safety of any product candidates that we develop and adversely affect our ability to conduct our business or obtain regulatory approvals for such product candidates.
- Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our operations and development efforts.
- Our technological advancements and any potential for revenue may be derived in part from our collaborations with Novartis Institutes for BioMedical Research, Inc. (“Novartis”) and Regeneron Pharmaceuticals, Inc. (“Regeneron”), and if either of these collaboration agreements were to be terminated or materially altered in an adverse manner, our business, financial condition, results of operations and prospects would be harmed.
- Under our license agreement with Caribou Biosciences, Inc. (“Caribou”), we sublicense a patent family from the Regents of the University of California and the University of Vienna that is co-owned by Dr. Emmanuel Charpentier. The outcome of on-going legal proceedings, as well as potential future proceedings, related to this patent family may affect our ability to utilize certain intellectual property sublicensed under our license agreement with Caribou.
- We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our products or product candidates, or asserting and defending our intellectual property rights that protect our products and technologies.
- We could be unable to avoid, obtain or invalidate patent rights from third parties necessary to develop, manufacture or commercialize our product candidates in one or more jurisdictions.
- We have incurred net losses in each period since our inception, anticipate that we will continue to incur net losses in the future, and may never achieve profitability.
- The price of our common stock historically has been volatile, which may affect the price at which you could sell any shares of our common stock.

Risks Related to Our Business

Risks Related to Clinical Development

CRISPR/Cas9 genome editing technology is not yet clinically validated for human therapeutic use. The approaches we are taking to discover and develop novel therapeutics using CRISPR/Cas9 systems are unproven and may never lead to marketable products. If we are unable to develop viable product candidates, achieve regulatory approval for any such product candidate or market and sell any product candidates, we may never achieve profitability.

We are focused on developing curative medicines utilizing the CRISPR/Cas9 genome editing technology, including *in vivo* therapies and engineered cell therapies. Although there have been significant advances in recent years in the fields of gene therapy and genome editing, *in vivo* CRISPR-based genome editing technologies are relatively new and their therapeutic utility is largely unproven. Our approach to developing therapies centers on using the CRISPR/Cas9 technology to alter, introduce or remove genetic information *in vivo* to treat various disorders, or to engineer human cells *ex vivo* to create therapeutic cells that can be introduced into the human body to address the underlying disease.

Successful development of products by us will require solving a number of issues, including developing or obtaining technologies to safely deliver a therapeutic agent into target cells within the human body or engineer human cells while outside of the body such that the modified cells can have a therapeutic effect when delivered to the patient, optimizing the efficacy and specificity of such products, and ensuring and demonstrating the therapeutic selectivity, efficacy, potency, purity and safety of such products. There can be no assurance we will be successful in solving any or all of these issues. Indeed, no genome editing *in vivo* therapy or genome-edited engineered cell therapy has been approved in the United States ("U.S."), European Union ("EU") countries or other key jurisdictions. With regards to CRISPR/Cas9-based therapies specifically, we are beginning to clinically test our potential *in vivo* therapy candidates and have not obtained clearance to start clinical testing of our engineered therapy candidates. Further, we are unaware of any clinical trials validating safety and efficacy having been completed by any third parties. Accordingly, the potential to successfully obtain approval for any of our CRISPR/Cas9 therapies remains unproven.

Our future success also is highly dependent on the successful development of CRISPR-based genome editing technologies, cellular delivery methods and therapeutic applications for the indications on which we have focused our on-going research and development efforts. We may decide to alter or abandon these programs as new data become available and we gain experience in developing CRISPR/Cas9-based therapeutics. We cannot be sure that our CRISPR/Cas9 efforts and technologies will yield satisfactory products that are safe and effective, sufficiently pure or potent, manufacturable, scalable or profitable in our selected indications or any other indication we pursue. We cannot guarantee that progress or success in developing any particular CRISPR/Cas9 therapeutic product will translate to other CRISPR/Cas9 products.

Public perception and related media coverage of potential therapy-related efficacy or safety issues, including adoption of new therapeutics or novel approaches to treatment, as well as ethical concerns related specifically to genome editing and CRISPR/Cas9, may adversely influence the willingness of subjects to participate in clinical trials, or if any therapeutic is approved, of physicians and patients to accept these novel and personalized treatments. Physicians, health care providers and third-party payors often are slow to adopt new products, technologies and treatment practices, particularly those that may also require additional upfront costs and training. Physicians may not be willing to undergo training to adopt these novel and potentially personalized therapies, may decide the particular therapy is too complex or potentially risky to adopt without appropriate training, and may choose not to administer the therapy. Further, due to health conditions, genetic profile or other reasons, certain patients may not be candidates for the therapies. In addition, responses by federal and state agencies, congressional committees and foreign governments to negative public perception, ethical concerns or financial considerations may result in new legislation, regulations, or medical standards that could limit our ability to develop or commercialize any product candidates, obtain or maintain regulatory approval or otherwise achieve profitability. New government requirements may be established that could delay or prevent regulatory approval of our product candidates under development. It is impossible to predict whether legislative changes will be enacted, regulations, policies or guidance changed, or interpretations by agencies or courts changed, or what the impact of such changes, if any, may be. Based on these and other factors, health care providers and payors may decide that the benefits of these new therapies do not or will not outweigh their costs.

Clinical development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any product candidates.

All of our lead programs are still in the discovery, preclinical or early clinical stage. Our current and future product candidates will require preclinical and clinical activities and studies, regulatory review and approval in each jurisdiction in which we intend to market the products, substantial investment, establishing manufacturing capabilities, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. Before obtaining marketing approval from regulatory authorities for the sale of a product candidate, we must conduct extensive clinical trials to demonstrate the safety, potency and efficacy of the product in humans. It is impossible to predict when or if any of our programs will prove effective and safe in humans or will receive regulatory approval. Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. We may be unable to establish clinical endpoints that regulatory authorities consider clinically meaningful, and a clinical trial can fail at any stage. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain approval of their products.

Successful completion of clinical trials is a prerequisite to submitting a Biologics License Application ("BLA") to the FDA, and similar applications to comparable foreign regulatory authorities, for each product candidate and, consequently, the ultimate approval and commercial marketing of any product candidates. We do not know whether any of our clinical trials will begin or be completed on schedule, if at all.

Because these are new therapeutic approaches, discovering, developing, manufacturing and commercializing our product candidates subject us to a number of challenges or delays in completing our preclinical studies and initiating or completing clinical trials. We also may experience numerous unforeseen events during, or as a result of, any future clinical trials that we could conduct, which could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- challenges in obtaining regulatory clearance or approval to commence clinical trials in the U.S. from the FDA through an investigational new drug application ("IND") or from other national regulatory agencies outside the U.S., such as the U.K.'s Medicines and Healthcare products Regulatory Agency ("MHRA"), through corresponding applications, such as a Clinical Trial Application ("CTA"), a Clinical Trial Notification or a Clinical Trial Exemption, because these agencies have very limited or no experience with the clinical development of CRISPR/Cas9 therapeutics, which may require additional significant testing or data compared to more traditional therapies;
- successfully developing processes for the safe administration of these products, including long-term follow-up for patients who receive treatment with any of our product candidates;
- regulators, institutional review boards ("IRBs") or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial;
- inability to reach, or delays in reaching, agreement on acceptable terms with trial sites and contract research organizations ("CROs");
- clinical trials of any product candidates may fail to show safety or efficacy, or could produce negative or inconclusive results, which could result in having to conduct additional preclinical studies or clinical trials or terminating the product development programs;
- we may not be able to initiate or complete clinical trials of a product candidate if the required number of subjects is larger than we anticipated, the number of subjects willing to enroll is smaller than required, the pace of enrollment is slower than anticipated, or subjects drop out or fail to return for post-treatment follow-up at a higher rate than we anticipated;
- we may need to educate medical personnel, including clinical investigators, and patients regarding the potential benefits and side effect profile of each of our product candidates;
- regulatory agencies may require us to perform more extensive or lengthier clinical testing compared to existing therapeutic modalities;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all, or may deviate from the clinical trial protocol or drop out of the trial, which may require that we add new clinical trial sites or investigators;
- we may elect to, or regulators, IRBs or ethics committees may require that we or our investigators, suspend or terminate clinical research or trials for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of preclinical studies and clinical trials of any product candidates may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate, or not available in a reasonable timeframe;
- we may face challenges in sourcing clinical and, if approved, commercial supplies for the materials used to manufacture and process our product candidates, which may include importing or exporting materials between different jurisdictions;

- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators, IRBs or ethics committees to suspend or terminate the trials, or reports may arise from preclinical or clinical testing of other gene therapies or genome editing-based therapies that raise safety or efficacy concerns about our product candidates;
- 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 or rely on a clinical trial;
- we may be unable to develop a manufacturing process and distribution network with a cost of goods that allows for an attractive return on investment;
- we may face challenges in establishing sales and marketing capabilities in anticipation of, and after obtaining, any regulatory approval to gain market authorization; and
- we may not ultimately obtain regulatory approval for a BLA, or corresponding applications outside the U.S., such as a Marketing Authorization Application ("MAA") from the U.K. and other similar regulatory authorities, such as the European Medicines Agency ("EMA"), which may have very limited or no experience with the clinical development of CRISPR/Cas9 therapeutics.

In addition, disruptions caused by the COVID-19 pandemic may increase the likelihood that we encounter such difficulties or delays in initiating, enrolling, conducting or completing our planned clinical trials. We could also encounter delays if a clinical trial is suspended or terminated by us, the IRBs of the institutions in which such trials are being conducted or the relevant ethics committee, the Data Safety Monitoring Board ("DSMB") for such trial, or the FDA or other relevant regulatory authorities. Such authorities may impose such a suspension or termination 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, manufacturing or quality control issues, 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 product candidates. Further, the FDA or other regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials or may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials.

Additionally, because our *in vivo* technology potentially involves genome editing across multiple cell and tissue types, we are subject to many of the challenges and risks that other genome editing therapeutics and gene therapies face, including:

- regulatory guidance regarding the requirements governing gene and genome editing therapy products have changed and may continue to change in the future;
- to date, only a limited number of products that involve *in vivo* gene transfer have been approved globally;
- improper modulation of a gene sequence, including unintended editing events or insertion of a sequence into certain locations in a patient's chromosome, could lead to cancer, other aberrantly functioning cells or other diseases, including death;
- transient expression of the Cas9 protein could lead to patients having an immunological reaction towards those cells, which could be severe or life-threatening;
- corrective expression of a missing protein in patients' cells could result in the protein being recognized as foreign, and lead to a sustained immunological reaction against the expressed protein or expressing cells, which could be severe or life-threatening; and
- regulatory agencies may require extended follow-up observation periods of patients who receive treatment using genome editing products including, for example, the FDA's recommended 15-year follow-up observation period for these patients, and we will need to adopt such observation periods for our product candidates if required by the relevant regulatory agency, which could vary by country or region.

Further, because our *ex vivo* product candidates involve editing human cells and then delivering modified cells to patients, we are subject to many of the challenges and risks that engineered cell therapies face. For example, clinical trials using engineered cell-based gene therapies may require unique products to be created for each patient and such individualistic manufacturing may be both inefficient and cost-prohibitive.

To date, human clinical trials utilizing either *in vivo* or *ex vivo* CRISPR/Cas9-based therapeutics, including our clinical trial for NTLA-2001 for transthyretin amyloidosis ("ATTR"), are still at an early stage. There is no certainty that the FDA or other similar agencies will continue to apply to all our CRISPR/Cas9 product candidates the same regulatory pathway and requirements it is applying to other *in vivo* therapies or *ex vivo* engineered therapeutics. In addition, if any product candidates encounter safety or efficacy problems, development delays, regulatory issues or other problems, our development plans and business could be significantly harmed. Further, competitors that are developing *in vivo* or *ex vivo* products with similar technology may experience problems with their product candidates or programs that could in turn cause us to identify problems with our product candidates and programs that would potentially harm our business.

Negative public opinion and increased regulatory scrutiny of CRISPR/Cas9 use, genome editing or gene therapy generally may damage public perception of the safety of any product candidates that we develop and adversely affect our ability to conduct our business or obtain regulatory approvals for such product candidates.

Gene therapy in general, and genome editing in particular, remain novel technologies, with only a limited number of gene therapy products approved to date in the U.S. and EU. Public perception may be influenced by claims that gene therapy or genome editing, including the use of CRISPR/Cas9, is unsafe or unethical, or carries an undue risk of side effects, such as improper modification of a gene sequence in a patient's chromosome that could lead to cancer, and gene therapy or genome editing may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians who specialize in the treatment of diseases targeted by our product candidates prescribing treatments that involve the use of our product candidates in lieu of, or in addition to, existing treatments with which they are more familiar and for which greater clinical data may be available. In addition, responses by the U.S., state or foreign governments to negative public perception or ethical concerns may result in new legislation or regulations that could limit our ability to develop or commercialize any product candidates, obtain or maintain regulatory approval or otherwise achieve profitability. More restrictive statutory regimes, government regulations or negative public opinion could have an adverse effect on our business, financial condition and results of operations and prospects, and may delay or impair the development and commercialization of our product candidates or demand for any products we may develop. For example, certain gene therapy trials led to several well-publicized adverse events, including cases of leukemia and death. Serious adverse events, such as these, in our clinical trials, or other clinical trials involving gene therapy or genome editing products or our competitors' products, even if not ultimately attributable to the relevant product candidates, and the resulting publicity could result in increased government regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our product candidates, stricter labeling requirements for those product candidates that are approved and a decrease in demand for any such product candidate. In addition, the use of the technology by third parties in areas that are not being pursued by us, such as for targeting and editing of embryonic cells, could adversely impact public and governmental perceptions regarding the ethics and risks of the CRISPR/Cas9 technology and lead to social or legal changes that could limit our ability to apply the technology to develop human therapies addressing disease. For example, reports of the use of CRISPR/Cas9 in China and Russia to edit embryos *in utero* have generated and may continue to create negative public perception about the use of the technology in humans. Negative public and governmental perception of the technology, or additional governmental regulation of our technologies, could also adversely affect our stock price or our ability to enter into revenue generating collaborations or obtain additional funding from the public markets.

Risks Related to Commercialization

If, in the future, we are unable to establish sales, marketing and distribution capabilities or enter into agreements with third parties to sell, market and distribute products based on our technologies, we may not be successful in commercializing our products if and when any product candidates or therapies are approved and we may not be able to generate any revenue.

We do not currently have a sales, marketing or distribution infrastructure and, as a company, have no experience in the sale, marketing or distribution of therapeutic products. To achieve commercial success for any approved product candidate for which we retain sales and marketing responsibilities, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. There are risks involved with both establishing our own sales and marketing capabilities and entering into arrangements with third parties to perform these services.

Factors that may inhibit our efforts to commercialize our product candidates include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future product candidates that we may develop;
- the lack of complementary treatments to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines;
- the location of patients in need of our product candidates and the treating physicians who may prescribe the products; and
- unforeseen costs and expenses, as well as legal and regulatory requirements, associated with creating and operating a sales and marketing organization.

If we enter into arrangements with third parties to perform sales, marketing and distribution services, we would likely have lower product revenue or profitability than if we ourselves were to market and sell our product candidates. In addition, we may be unable to enter into sales and marketing arrangements with third parties, or into arrangements with terms that are favorable to us. We likely will have little control over such third parties and any of them may fail to devote the necessary resources and attention to sell and market our product candidates effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or through third parties, we may not be successful in commercializing our product candidates, and our business, results of operations, financial condition and prospects will be materially adversely affected.

Risks Related to Competition

We face significant competition in an environment of rapid technological change. The possibility that our competitors may achieve regulatory approval before we do or develop therapies that are more advanced or effective than ours may harm our business and financial condition or our ability to successfully market or commercialize our product candidates.

The biotechnology and pharmaceutical industries are extremely competitive in the race to develop new products. While we believe we have significant competitive advantages with our industry-leading expertise in genome editing, clinical development expertise and dominant IP position, we currently face and will continue to face competition for our development programs from companies that use genome editing or gene therapy development platforms and from companies focused on more traditional therapeutic modalities such as small molecules and antibodies. The competition is likely to come from multiple sources, including large and specialty pharmaceutical and biotechnology companies, academic research institutions, government agencies and public and private research institutions. Many of these competitors may have access to greater capital and resources than us. For any products that we may ultimately commercialize, not only will we compete with any existing therapies and those therapies currently in development, but we will also have to compete with new therapies that may become available in the future.

Competitors in our efforts to provide genetic therapies to patients can be grouped into at least three sets based on their product discovery platforms:

Our platform and product focus are on the development of therapies using CRISPR/Cas9 gene-editing technology. Genome editing companies focused on CRISPR based technologies include: Beam Therapeutics Inc., Caribou Biosciences, Inc., CRISPR Therapeutics AG, Editas Medicine, Inc. and ToolGen, Inc.

There are also companies developing therapies using additional gene-editing technologies, which include Allogene Therapeutics, Inc., bluebird bio, Inc., Cellectis S.A., Precision Biosciences, Inc., Sangamo Therapeutics, Inc., Homology Medicines, Inc. and Poseida Therapeutics, Inc.

We are also aware of companies developing therapies in various areas related to our specific research and development programs. In immuno-oncology, these companies include Allogene Therapeutics, Inc., Precision BioSciences, Inc., CRISPR Therapeutics AG, Cellectis S.A. and Editas Medicine, Inc. In *in vivo*, these companies include Editas Medicine, Inc., CRISPR Therapeutics AG, Locus Biosciences, Inc., Excision Biotherapeutics, Inc. and Precision Biosciences, Inc.

Our competitors will also include companies that are or will be developing other genome editing methods as well as small molecules, biologics, *in vivo* gene therapies, engineered cell therapies (both autologous and allogeneic) and nucleic acid-based therapies for the same indications that we are targeting with our CRISPR/Cas9-based therapeutics.

Any advances in gene therapy, engineered cell therapies or genome editing technology made by a competitor may be used to develop therapies that could compete against any of our product candidates.

Many of these competitors have substantially greater research and development capabilities and financial, scientific, technical, intellectual property, manufacturing, marketing, distribution and other resources than we do, and we may not be able to successfully compete with them.

Even if we are successful in selecting and developing any product candidates, in order to compete successfully we may need to be first-to-market or demonstrate that our CRISPR/Cas9-based products are superior to therapies based on the same or different treatment methods. If we are not first-to-market or are unable to demonstrate such superiority, any products for which we are able to obtain approval may not be commercially successful. Furthermore, in certain jurisdictions, if a competitor has orphan drug status for a product and if our product candidate is determined to be contained within the scope of a competitor's orphan drug exclusivity, then approval of our product for that indication or disease could potentially be blocked, for example, for up to seven years in the U.S. and 10 years in the EU.

We may never succeed in any or all of these activities and, even if we do, we may never generate revenues that are significant or large enough to achieve profitability. 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 would decrease our value and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations.

Risks Related to the Industry

Results, including positive results, from our initial preclinical activities and studies are not necessarily predictive of our other ongoing and future preclinical and clinical studies, and they do not guarantee or indicate the likelihood of approval of any potential product candidate by the FDA or any other regulatory agency. If we cannot replicate the positive results from any of our preclinical or clinical activities and studies, we may be unable to successfully develop, obtain regulatory approval for and commercialize any potential product candidate.

There is a high failure rate, as well as potential substantial and unanticipated delays, for product candidates progressing through preclinical and clinical studies. Even if we are able to successfully complete our ongoing and future preclinical and clinical activities and studies for any potential product candidate, we may not be able to replicate, or may have to engage in significant efforts and resource and time investments to replicate, any positive results from these or any other studies in any of our future preclinical and clinical trials, and they do not guarantee approval of any potential product candidate by the FDA or any other necessary regulatory authorities in a timely manner or at all. For more information regarding these risks, see also the above risk factor section entitled "Risks Related to Clinical Development".

Inconclusive results, lack of efficacy, adverse events or additional safety concerns in clinical trials that we or others conduct may impede the regulatory approval process or overall market acceptance of our future product candidates.

Therapeutic applications of genome editing technologies, and CRISPR/Cas9 in particular, for both *in vivo* products and in engineered cell therapies, are unproven and must undergo rigorous clinical trials and regulatory review before receiving marketing authorization. If the results of our clinical studies or those of any other third parties, including with respect to genome editing technology or engineered cell therapies, are inconclusive, fail to show efficacy or if such clinical trials give rise to safety concerns or adverse events, we may:

- be prevented from, or delayed in, obtaining marketing approval for our future product candidates;
- 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 the addition of labeling statements, such as warnings or contraindications, or other types of regulatory restrictions or scrutiny;
- be subject to changes in the way the product is administered;

- be required to perform additional clinical studies to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities modify or withdraw their legal requirements or written guidance, if any, regarding the applicable regulatory approval pathway or any approval of the product in question, or impose restrictions on its distribution in the form of a modified Risk Evaluation and Mitigation Strategy ("REMS");
- be sued; or
- experience damage to our reputation.

Additionally, our future product candidates could potentially cause other adverse events that have not yet been predicted and the potentially permanent nature of genome editing effects, including CRISPR/Cas9's effects, on genes or novel cell therapies in the organs of the human body may make these adverse events irreversible. The inclusion of critically ill patients in our clinical studies or those of our competitors may result in deaths or other adverse medical events, including those due to other therapies or medications that such patients may be using. Any of these events could prevent us from achieving or maintaining regulatory approval or market acceptance of our future product candidates and impair our ability to achieve profitability.

Research and development of biopharmaceutical products is inherently risky. We may not be successful in our efforts to use and enhance our genome editing technology to create a pipeline of product candidates, establish the necessary manufacturing capabilities, obtain regulatory approval and develop commercially successful products, or we may expend our limited resources on programs that do not yield a successful product candidate and fail to capitalize on potential product candidates or diseases that may be more profitable or for which there is a greater likelihood of success. If we fail to develop product candidates, our commercial opportunity, if any, will be limited.

We are at an early stage of development and our technology and approach has not yet led, and may never lead, to the approval or commercialization of any of our product candidates, including NTLA-2001 for ATTR, or for other product candidates being deemed appropriate for clinical development and ultimately approval, including NTLA-2002 for HAE or NTLA-5001 for AML, by a regulatory agency. Even if we are successful in building our pipeline of product candidates, completing clinical development, establishing the necessary manufacturing processes and capabilities, obtaining regulatory approvals and commercializing product candidates will require substantial additional funding and are subject to the risks of failure inherent in therapeutic product development. Investment in biopharmaceutical product development involves significant risk that any potential product candidate will fail to demonstrate acceptable safety and efficacy profiles, gain regulatory approval, or become commercially viable.

We cannot provide any assurance that we will be able to successfully advance any of our product candidates, including NTLA-2001, NTLA-2002 or NTLA-5001, through the entire research and development process. Any of our other programs may show promise, yet fail to yield product candidates for clinical development or commercialization for many reasons. For more information regarding these risks, see the above risk factor section entitled "Risks Related to Clinical Development*."*

Even if we obtain regulatory approval of any product candidates, such candidates may not gain market acceptance among physicians, patients, hospitals, third-party payors and others in the medical community.

The use of the CRISPR/Cas9 system to create genome editing-based therapies is a recent development and may not become broadly accepted by patients, health care providers, third-party payors and other stakeholders. A variety of factors will influence whether our product candidates are accepted in the market, including, for example:

- the clinical indications for which our product candidates are approved;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the incidence and severity of any side effects, including any unintended DNA changes;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA or other regulatory authorities;
- the timing of market introduction of our product candidates;
- availability or existence of competitive products;

- the cost of treatment in relation to alternative treatments;
- the amount of upfront costs or training required for health care providers to administer our product candidates;
- the availability of adequate coverage, reimbursement and pricing by government authorities and other third-party payors;
- patients' ability to access health care providers capable of delivering our product candidates;
- patients' willingness and ability to pay out-of-pocket in the absence of coverage and reimbursement by government authorities and other third-party payors;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies;
- any restrictions on the use of our product candidates together with other medications;
- interactions of our product candidates with other medicines patients are taking;
- potential adverse events for any products developed, or negative interactions with regulatory agencies, by us or others in the gene therapy and genome editing fields; and
- the effectiveness of our sales and marketing efforts and distribution support.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete. In addition, adverse publicity due to the ethical and social controversies surrounding the therapeutic *in vivo* use of CRISPR/Cas9, gene edited modified cells, or other therapeutics mediums, such as viral vectors that we may use in our clinical trials may limit market acceptance of our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, third-party payors or others in the medical community, we will not be able to generate significant revenue. Our efforts to educate the health care providers, patients and third-party payors about our products may require significant resources and may never be successful.

Risks Related to Healthcare

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, if approved, which could make it difficult for us to sell any product candidates or therapies profitably.

The success of our product candidates, if approved, depends on the availability of adequate coverage and reimbursement from third-party payors, including government agencies, private health insurers and health maintenance organizations. There is significant uncertainty related to the insurance coverage and reimbursement of any newly approved product, but in particular novel gene editing and engineered cell products. All the therapeutic indications approved by the relevant authorities may not be covered or reimbursed. In addition, we cannot be sure that coverage and reimbursement will be available for, or accurately estimate the potential revenue from, our product candidates because they are novel treatments for diseases using a new technology and delivery approaches.

In the U.S. and some other jurisdictions, 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 in the U.S., and commercial payors are critical to new product acceptance.

Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. In the U.S., 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. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare, and private payors often follow CMS' coverage decisions. Other jurisdictions have agencies, such as the National Institute for Health and Care Excellence ("NICE") in the U.K., that evaluate the use and cost-effectiveness of therapies, which impact the utilization and price of the medicine in such jurisdiction.

In the U.S., no uniform policy of coverage and reimbursement for products exists among third-party payors. As a result, obtaining coverage and reimbursement approval of a product from a third-party payor is a time-consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of our products to each potential payor, with no assurance that coverage and adequate reimbursement will be obtained from all or any of them. Even if we obtain coverage for a given product, the resulting reimbursement payment rates might be insufficient or may require co-payments that patients find unacceptably high, which may prevent us from achieving or sustaining profitability. Additionally, third-party payors may not cover, or provide adequate reimbursement for, long-term follow-up evaluations required following the use of our gene-modifying products.

In addition, each country in which we seek approval to market our product candidates has unique laws and market practices regulating coverage and reimbursement for human therapeutics. Market acceptance and sales of our products in each country will depend on our ability to meet each of these jurisdiction's requirements for coverage and reimbursement. Further, changes to the country's existing requirements may also affect our ability to commercialize our products in the future, or achieve profitability from their sale.

Legal, political and economic uncertainty surrounding the exit of the United Kingdom from the European Union is a source of instability and uncertainty.

The U.K.'s withdrawal from the EU, or Brexit, became effective on January 31, 2020. EU laws, including pharmaceutical laws, continued to apply in the U.K. during a transitional period, which ended on December 31, 2020. The U.K. and EU have signed an EU-U.K. Trade and Cooperation Agreement, which became provisionally applicable on January 1, 2021 and was ratified by the U.K. Parliament on December 30, 2020, but still needs to be ratified by the EU to become formally applicable. This agreement provides details on how some aspects of the U.K. and EU's relationship regarding medicinal products will operate, particularly in relation to Good Manufacturing Practice, however there are still many uncertainties. Many of the regulations that now apply in the U.K. following the transition period (including financial laws and regulations, tax, intellectual property rights, data protection laws, supply chain logistics, environmental, health and safety laws and regulations, medicine approval and regulations, immigration laws and employment laws), will likely be amended in future as the U.K. determines its new approach, which may result in significant divergence from EU regulations. This lack of clarity on future U.K. laws and regulations and their interaction with the EU laws and regulations increases our regulatory burden of operating in and doing business with both the U.K. and the EU.

The long-term effects of Brexit will depend in part on how the EU-U.K. Trade and Cooperation Agreement, and any future agreements signed by the U.K. and the EU, take effect in practice. Such a withdrawal from the EU is unprecedented, and it is unclear how the restrictions on the U.K.'s access to the European single market for goods, capital, services and labor within the EU and the wider commercial, legal and regulatory environment, could impact our current and future operations and clinical activities in the U.K.

We may also face new regulatory costs and challenges that could have an adverse effect on our operations as a result of Brexit. Since the regulatory framework in the U.K. covering quality, safety and efficacy of medicinal products, clinical trials, marketing authorization, commercial sales and distribution of medicinal products is derived from EU directives and regulations, Brexit could materially impact the future regulatory regime with respect to the approval of any of our future product candidates in the U.K. For instance, the U.K. will now no longer be covered by the centralized procedure for obtaining European Economic Area ("EEA")-wide marketing and manufacturing authorizations from the EMA for medicinal products and a separate process for authorization of drug products will be required in the U.K. For a period of two years from 1 January 2021, the MHRA 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 U.K. marketing authorization, however a separate application will still be required. Any delay in obtaining, or an inability to obtain, any regulatory approvals, as a result of Brexit or otherwise, would delay or prevent us from commercializing our current or future product candidates in the U.K. and could restrict our ability to generate revenue from that market.

We expect that, now the transition period has expired, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which EU laws to replicate or replace, including those related to the regulation of medicinal products. Any of these effects of Brexit, and others we cannot anticipate, could negatively impact our business and results of operations in the U.K.

The uncertainty concerning the U.K.'s legal, political and economic relationship with the EU following Brexit may also be a source of instability in the international markets, create significant currency fluctuations, and/or otherwise adversely affect trading agreements or similar cross-border co-operation arrangements (whether economic, tax, fiscal, legal, regulatory or otherwise).

We may be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, physician payment transparency laws, health information privacy and security laws and anti-corruption laws. If we are unable to comply, or have not fully complied, with such laws or their relevant foreign counterparts, we could face substantial penalties.

The sale, distribution and marketing of human therapeutics, as well as data privacy and the relationship with health care providers, are strictly regulated by laws in the US and most other jurisdictions in which we intend to seek approval for our product candidates. Failure to comply with these laws could impair our ability to properly sell our product candidates in particular jurisdictions and subject us to liability from private and governmental entities. In addition, addressing these diverse and sometimes contradictory requirements in myriad jurisdictions may necessitate that we expend significant resources on compliance efforts. Any failure to comply with these requirements may leave us exposed to possible enforcement actions and potential liability.

The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which generally prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or certain rebates) for referring an individual or inducing a transaction for which payment may be made 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 statute or specific intent to violate it in order to have committed a violation. Violators are subject to civil and criminal fines and penalties, as well as imprisonment and exclusion from government healthcare programs;
- federal civil and criminal false claims laws, including the federal False Claims Act ("FCA"), which generally prohibit knowingly making false or fraudulent claims for payment or approval from the federal government, including Medicare, Medicaid and other government payors, or knowingly seeking to conceal, decrease or avoid an obligation to pay money to the federal government. Certain indirect acts, such as promoting products off-label, can be deemed FCA violations by a manufacturer even it did not submit the claim directly to the government payor. Further, under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "Affordable Care Act", or "ACA"), a violation of the federal Anti-Kickback Statute may also constitute a false or fraudulent claim under the FCA. These laws impose criminal and civil penalties on violators. Private individuals may bring civil whistleblower or *qui tam* actions for alleged FCA violations on behalf of the federal government;
- the U.S. federal physician payment transparency requirements, sometimes referred to as the "Physician Payments Sunshine Act," created under the ACA, and their implementing regulations, which require manufacturers of certain products paid under Medicare, Medicaid or the Children's Health Insurance Program, including biopharmaceutical products, to report information related to payments or other consideration made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), other healthcare providers and teaching hospitals, as well as ownership and investment interests held by these healthcare providers and their immediate family members in the manufacturer. Failure to comply could result in civil monetary penalties. Effective January 1, 2022, the U.S. federal physician transparency reporting requirements will extend to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;
- the Foreign Corrupt Practices Act ("FCPA") and other laws, which generally prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. persons and entities to obtain or retain business. In the U.K., for example, the U.K. Bribery Act 2010 prohibits giving financial or other advantages to encourage persons to perform their functions improperly;
- the Federal Food, Drug and Cosmetic Act, which prohibits the commercialization of adulterated or misbranded drugs, and the Public Health Service Act, which prohibits the commercialization of biological products without a biologics license;

- analogous state and foreign legal requirements that:
    - may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, and may be broader in scope than their federal equivalents, such as state anti-kickback and false claims laws;
    - require following the pharmaceutical industry's voluntary compliance guidelines and the federal government's relevant compliance guidance, or otherwise restrict payments to healthcare providers;
    - require reporting information related to payments and other consideration to physicians and other healthcare providers or marketing expenditures; and
- other national and local laws that govern the distribution and sale of pharmaceutical, including imposing requirements regarding licensing, record-keeping, storage and security requirements.

The scope and enforcement of each of these laws is not always certain and is subject to legislative, judicial or prosecutorial changes. Further, because of the breadth of these laws, it is possible that some of our business activities could be subject to challenge under one or more of such laws. Indeed, U.S. federal and state enforcement bodies have increasingly scrutinized healthcare companies and providers interactions, which has led to a number of investigations, prosecutions, convictions and settlements in the industry. Ensuring business arrangements comply with applicable 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 its business.

The increasingly global nature of our business operations, including clinical development efforts, subjects us to domestic and foreign anti-bribery and anti-corruption laws and regulations, such as the FCPA and the U.K. Bribery Act. These activities create the risk of unauthorized payments or offers of payments that are prohibited under the FCPA, the U.K. Bribery Act or similar laws. It is our policy to implement safeguards to discourage these practices by our employees and agents. However, these safeguards may ultimately prove ineffective, and our employees, consultants, and agents may engage in conduct for which we might be held responsible. Violations of the FCPA may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition.

Further, the U.S. federal and state government, as well as other jurisdictions, have myriad laws regulating the collection, storage, distribution and use of data of employees, patients, agents, and others. These different laws governing the privacy and security of health and other personal information often differ from each other in significant ways and may not have the same effective requirements, thus complicating efforts to comply with their respective provisions. For example:

- in the U.S., HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH"), imposes requirements relating to the privacy, security and transmission of individually identifiable health information on certain covered healthcare providers, health plans, and healthcare clearinghouses, and their respective business associates that perform services for them that involve the use or disclosure of such information. These laws impose civil and criminal monetary penalties, and give state attorneys general the authority to file civil actions for damages or injunctions, and attorney's fees, in federal courts to enforce the laws;
- the California Consumer Privacy Act ("CCPA") requires covered companies to provide new disclosures to California consumers and afford such consumers new rights with respect to their personal information, including the rights to: request deletion of their information, receive the information on record for them, know what categories of information are being maintained about them, and opt-out of certain sales of their information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information, which may increase the likelihood of, and risks associated with, data breach litigation. The CCPA became effective in January 2020 and enforceable in July 2020;
- other U.S. states, such as Massachusetts, Nevada, Illinois and New York have enacted and/or are considering laws that impose stringent privacy and/or data security requirements; and

- in the EU and EEA the collection and use of personal data is regulated by the General Data Protection Regulation ("GDPR") and the members' related data protection and privacy laws, and in the U.K. by its Data Protection Act 2018 and, as of January 1, 2021, the U.K. GDPR (such laws collectively being described as "European Data Protection Law"). Because the European Data Protection Law applies to any business that provides goods or services to individuals in the EU or U.K., it could apply to us. The European Data Protection Law imposes strict requirements, including special protections for "sensitive information," which includes health and genetic information of individuals in the EU or the U.K.; expanded disclosures about the personal data use; information retention limitations; mandatory data breach notification requirements; and additional oversight obligations relating to third-parties retained to process the personal data. The European Data Protection Law grants or enhances the rights of individuals with respect to their personal data, including the rights to object to the processing of the data and request deletion of the same. It also has strict requirements on the transfer of personal data out of the EU or the U.K. to regions that have not been deemed to offer "adequate" privacy protections, such as the U.S. Failure to comply with the requirements of the European Data Protection Law may result in warning letters, mandatory audits, orders to cease/change the use of data, and financial penalties, including fines of up to 4% of global revenues, or 20,000,000 Euro, whichever is greater. Moreover, data subjects can seek damages for violations, and non-profit organizations can bring claims on behalf of data subjects.

The costs associated with ensuring compliance with these laws, including in particular the European Data Protection Law, may be onerous and adversely affect our business, financial condition, results of operations and prospects. Further, due to Brexit, we may have additional costs and operational challenges in complying with the U.K. GDPR and any other developments regulation the transfer between the U.K. and EU. We may also need to rely on multiple third parties to meet these legal requirements, which could result in additional liability for us if they do not comply.

Efforts to ensure that we comply with all applicable healthcare and data privacy laws and regulations, as well as other domestic and foreign legal requirements, will involve substantial costs. It is possible that governmental and enforcement authorities in the U.S. or outside the U.S. will conclude that our business practices do not comply with current or future legal requirements. If any noncompliance 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, including the imposition of significant civil, criminal and administrative penalties, damages, disgorgement, monetary fines, individual imprisonment, exclusion from participation in federal health care programs (such as Medicare and Medicaid), contractual damages, reputational harm, diminished profits and future earnings, and curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, any of which could adversely affect our ability to operate our business and our results of operations. Any action for violation of these laws, even if successfully defended, could result in significant legal expenses and divert management's attention from the operation of the business. Prohibitions or restrictions on sales (including importation or exportation) or withdrawal of future marketed products could materially affect business in an adverse way.

Healthcare cost control initiatives, including healthcare legislative and regulatory reform measures, may have a material adverse effect on our business and results of operations.

The U.S. and many other jurisdictions have enacted or proposed legal changes affecting the healthcare system that could prevent or delay marketing approval of our product candidates, affect our ability to profitably sell our product candidates once approved, and restrict or regulate post-approval activities. Changes in the legal requirements, or their interpretation, could impact our business by compelling, for example, modification to: our manufacturing arrangements; product labeling; pricing and reimbursement arrangements; private or governmental insurance coverage; the sale practices for, or availability of, our products; or record-keeping activities. If any such changes were to be imposed, they could adversely affect the operation of our business.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In the U.S. and certain other jurisdictions, there have been, and are expected to continue to be, a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In the U.S., however, significant uncertainty exists regarding the provision and financing of health care because the newly elected administration and federal legislators have publicly declared their intention to review and potentially significantly modify the current legal and regulatory framework for the health care system.

Current legislation at the U.S. federal and state levels seeks to reduce healthcare costs and improve the quality of healthcare. For example, the U.S. Affordable Care Act, enacted in March 2010, subjected biologic products to potential competition by lower-cost biosimilars; introduced a new methodology to calculate manufacturers' rebates under the Medicaid Drug Rebate Program for certain drugs, including infused or injected drugs; increased manufacturers' minimum Medicaid rebates under the Medicaid Drug Rebate Program; extended the Medicaid Drug Rebate program to pharmaceutical prescriptions of individuals enrolled in Medicaid managed care organizations; imposed new annual fees and taxes for certain branded prescription drugs and biologic agents; created the Medicare Part D coverage gap discount program, in which manufacturers must agree to offer point-of-sale discounts (70% as of January 1, 2019) off negotiated prices on certain 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; and provided incentives to programs that increase the federal government's comparative effectiveness research. At this time, the full effect that the Affordable Care Act would have on our business remains unclear.

Since its enactment, there have been numerous judicial, administrative, executive, and legislative challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example, various portions of the ACA are currently undergoing legal and constitutional challenges in the United States Supreme Court. Additionally, the Trump Administration issued various Executive Orders that eliminated cost sharing subsidies and various provisions that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. The previous Congress also had introduced several pieces of legislation aimed at significantly revising or repealing the ACA, but none were enacted. Given the recent election of President Joseph Biden and the Democratic Party securing majorities in both houses of the U.S. Congress, it is unclear how the ACA could be modified or amended in the future. We cannot predict what affect further unknown changes to the ACA would have on our business.

Other legislative changes relevant to the health care system have been adopted in the U.S. since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013, and, due to subsequent legislative amendments, will remain in effect through 2030 unless additional Congressional action is taken. However, pursuant to the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act") and subsequent legislation, the Medicare sequester reductions under the Budget Contract Act of 2011 have been suspended from May 1, 2020 through March 31, 2021 due to the COVID-19 pandemic. Proposed legislation, if passed, would extend this suspension until the end of the pandemic. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers, cancer centers and other treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. As indicated previously, significant uncertainty exists regarding the future scope and effect of current health care legislation and regulations because of recent changes in U.S. executive and legislative branches, and elected officials' public declarations of their intention to significantly modify or repeal the current legislative framework. We cannot predict the initiatives that may be adopted in the future, any of which could limit or modify the amounts that foreign, federal and state governments as well as private payors, including patients, will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Risks Related to Manufacturing and Supply

In vivo ***genome editing products and*** **ex vivo** ***engineered cell therapies based on CRISPR/Cas9 genome editing technology are novel and may be complex and difficult to manufacture. We could experience manufacturing problems that result in delays in the development, approval or commercialization of our product candidates or otherwise harm our business.***

The manufacturing process used to produce CRISPR/Cas9-based *in vivo* and engineered cell therapy product candidates may be complex, as they are novel and have not been validated for late phase clinical and commercial production and may require components that are difficult to obtain or manufacture at the necessary quantities and in accordance with regulatory requirements. Several factors could cause production interruptions, including equipment malfunctions; facility unavailability or contamination; raw material cost, shortages or contamination; natural disasters, such as COVID-19 pandemic; disruption in utility services; human error; insufficient personnel; inability to meet legal or regulatory requirements; or disruptions in the operations of our suppliers.

Because our product candidates likely will be regulated as biologics, their processing steps will be more complex than those of most small molecule drugs. Moreover, unlike small molecules, the physical and chemical properties of a complex product such as ours generally cannot be fully characterized. As a result, assays of the finished product or relevant components may not be sufficient to ensure that the product will perform in the intended manner. For this reason, we will employ multiple steps to control the manufacturing process to ensure that the process results in product candidates that meet their specifications, but complications at any one step could adversely impact our manufacturing of products. Further, we may encounter problems achieving adequate quantities and quality of clinical grade materials that meet the FDA or other relevant regulatory agency's applicable standards or our specifications with consistent and acceptable production yields and costs. Manufacturing process irregularities, even minor deviations from the normal process, could result in product defects or manufacturing issues that cause lot failures, product recalls, product liability claims and litigation, insufficient inventory or production interruption. In addition, product manufacturing and supply could be delayed if the FDA and other regulatory authorities require us to submit lot samples, testing results and protocols, or if they require that we not distribute a lot until they authorize the product's release.

Further, certain of our product candidates may require components that are unavailable or difficult to acquire or manufacture at the necessary scale and in compliance with regulatory requirements to support our clinical trials or, if approved, commercial efforts. In addition, we rely on third-party CMOs to manufacture these components and the final product candidates. We may not have full control of these CMOs and they may prioritize other customers or be unable to provide us with enough manufacturing capacity to meet our objectives. Even if we decide to manufacture the product candidates or their components ourselves, we may face extremely high costs and long timelines to build and maintain manufacturing facilities. Further, we may rely on CMOs outside the U.S. for certain components of our product candidates, and may be subject to importation regulations that may affect our ability to manufacture or increase the cost of our product candidates.

We also may encounter problems hiring and retaining the experienced scientific, quality-control and manufacturing personnel needed to operate or supervise the necessary manufacturing processes, which could result in delays in production or difficulties in maintaining compliance with applicable regulatory requirements.

Any of these manufacturing and supply issues or delays could restrict our ability to meet clinical or market demand for our products, and be costly to us and otherwise harm our business, financial condition, results of operations and prospects. Further, any problems in manufacturing processes or facilities could make us a less attractive collaborator for potential partners, including larger pharmaceutical companies and academic research institutions, which could limit our access to additional attractive development programs.

Risks Related to Data and Privacy

Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our operations and development efforts.

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 large amounts of 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 vendors who may or could have access to our confidential information. Our third-party collaborators, vendors and service providers also have access to large amounts of confidential information relating to our operations, including our research and development efforts. The size and complexity of our information technology systems, and those of third-party vendors, service providers and collaborators, and the large amounts of confidential information stored on those systems, make such systems potentially vulnerable to service interruptions or systems failures, or to security breaches from inadvertent or intentional actions by our employees, third-party vendors, service providers, collaborators, and/or business partners, or from cyber-attacks by malicious third parties.

In addition to such risks, the adoption of new technologies may also increase our exposure to cybersecurity breaches and failures. Further, having a significant portion of our workforce working from home for extended periods of time due to the COVID-19 pandemic puts us at greater risk of cybersecurity attacks. Cyber-attacks are increasing in their frequency, sophistication, and intensity, and have become increasingly difficult to detect. Cyber-attacks could include the deployment of harmful malware, denial-of-service attacks, social engineering, "phishing" scams and other means to affect service reliability and threaten the confidentiality, integrity, and availability of information. Significant disruptions of these information technology systems or security breaches could adversely affect our business operations and/or result in the loss, misappropriation, and/or unauthorized access, use, or disclosure of, or the prevention of access to, confidential information

(including but not limited to trade secrets or other intellectual property, proprietary business information, and personal information), and could result in financial, legal, business, and reputational harm to us and would adversely affect our operations, including our discovery and research and development programs. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our employees or future clinical trial participants, could harm our reputation, require us to comply with federal and/or state breach notification laws and foreign law equivalents (such as the GDPR or the U.K.'s Data Protection Act), and otherwise subject us to liability, including financial penalties and fines, under laws and regulations that protect the privacy and security of personal information. Also, the loss of preclinical or clinical trial data from completed or future preclinical or clinical trials, respectively, could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed. Security breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type summarized and described above. While we have implemented security measures to protect our information technology systems and infrastructure, there is no assurance that such measures will prevent service interruptions or security breaches that could adversely affect our business.

Interruptions in the availability of server systems or communications with internet or cloud-based services, or failure to maintain the security, confidentiality, accessibility or integrity of data stored on such systems, could harm our business.

We rely upon a variety of internet service providers, third-party web hosting facilities and cloud computing platform providers and Software as a Service vendors to support our business. Failure to maintain the security, confidentiality, accessibility or integrity of data stored on such systems could result in interruptions in our operations, damage our reputation in the market, increase our service costs, cause us to incur substantial costs, subject us to liability for damages and/or fines, and divert our resources from other tasks, any one of which could materially adversely affect our business, financial condition, results of operations and prospects. If our security measures or those of our third-party data center hosting facilities, cloud computing platform providers, or third-party service partners, are breached, and unauthorized access is obtained to our data or our information technology systems, we may incur significant legal and financial exposure and liabilities.

We also do not have control over the operations of the facilities of our cloud service providers, Software as a Service vendors or our third-party web hosting providers, and they also may be vulnerable to damage or interruption from natural disasters, cybersecurity attacks, terrorist attacks, power outages and similar events or acts of misconduct. In addition, any changes in these providers' service levels may adversely affect our ability to meet our requirements and operate our business.

In addition, regulatory agencies in and outside the U.S. may experience delays or backlogs due to the worldwide COVID-19 pandemic.

Risks Related to the COVID-19 Pandemic

Business interruptions resulting from the COVID-19 outbreak or similar public health crises could cause a disruption of the development of our product candidates and adversely impact our business.

Public health crises, such as pandemics or similar outbreaks, could adversely impact our business. The current COVID-19 pandemic has continuously evolved, and to date has led to the implementation of various responses, including government-imposed quarantines, travel restrictions and other public health safety measures, as well as reported adverse impacts on healthcare resources, facilities and providers, in Massachusetts, across the U.S. and in other countries. The U.S. government, as well as certain foreign governments, have imposed restrictions on travel to or from the U.S. and other jurisdictions, which may delay or prevent us from conducting our business in a timely and efficient manner. The extent to which COVID-19 impacts our operations or those of our third-party partners will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, additional or modified government actions, new information that will emerge concerning the severity and impact of COVID-19 and the actions to contain COVID-19 or address its impact in the short and long term, among others.

Additionally, execution of our clinical trial for NTLA-2001 for ATTR, as well as timely completion of preclinical activities and initiation of planned clinical trials for other product candidates, such as NTLA-2002 for HAE and NTLA-5001 for AML, is dependent upon the availability of, for example, preclinical and clinical trial sites, researchers and investigators, regulatory agency personnel, and materials, which may be adversely affected by global health matters, such as pandemics. We plan to conduct preclinical activities and clinical trials for our investigational drug product candidates in geographies which are currently being affected by COVID-19.

Further, in response to the pandemic and in accordance with direction from state and local government authorities, we have restricted and may continue to restrict access to our facilities mostly to personnel and third parties who must perform critical activities that must be completed on-site, limited the number of such personnel that can be present at our facilities at any one time, and requested that personnel work remotely, as appropriate. In the event that governmental authorities were to further modify current restrictions, our employees conducting research and development or manufacturing activities may not be able to access our laboratory or manufacturing space, and our core activities may be significantly limited or curtailed, possibly for an extended period of time.

Some factors from the COVID-19 pandemic that could delay or otherwise adversely affect the completion of our preclinical activities and the planned initiation of our clinical trials for our investigational drug product candidates, as well as our business generally, include:

- the potential diversion of healthcare resources away from the conduct of preclinical activities and clinical trials to focus on pandemic concerns, including the availability of necessary materials and the attention of physicians serving as our clinical trial investigators, hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our prospective clinical trials;
- limitations on travel that could interrupt key preclinical activities and trial activities, such as clinical trial site initiations and monitoring, domestic and international travel by employees, contractors or patients to clinical trial sites, including any government-imposed travel restrictions or quarantines that will impact the ability or willingness of patients, employees or contractors to travel to our research, manufacturing and clinical trial sites or secure visas or entry permissions, any of which could delay or adversely impact the conduct or progress of our prospective clinical trials;
- interruption or delays in the operations of the FDA, MHRA and comparable foreign regulatory agencies, which may impact review, inspection, clearance and approval timelines;
- interruption in global shipping affecting the transport of clinical trial materials, such as patient samples, investigational drug product candidates and conditioning drugs and other supplies used in our prospective clinical trials;
- interruption of, or delays in receiving, supplies of our investigational drug product from our CMOs due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems;
- limitations on our business operations by local, state, or the federal government that could impact our ability to conduct our preclinical or clinical activities, including completing our IND-enabling studies or our ability to select future development candidates;
- business disruptions caused by potential workplace, laboratory and office closures and an increased reliance on employees working from home, disruptions to or delays in ongoing laboratory experiments and operations, staffing shortages, travel limitations, or communication or mass transit disruptions, any of which could adversely impact our business operations or delay necessary interactions with local regulators, ethics committees, manufacturing sites, research or clinical trial sites and other important agencies and contractors;
- business disruptions or cybersecurity risks associated with a substantial portion of our workforce working from home for extended periods of time; and
- the impact on the valuation of our marketable securities and other financial assets due to market volatility.

These and other factors arising from COVID-19 could worsen in countries that are already afflicted with coronavirus or could continue to spread to additional countries, each of which could further adversely impact our ability to conduct clinical trials and our business generally, and could have a material adverse impact on our operations and financial condition and results.

In addition, the trading prices for our common stock and other biopharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. As a result, we may face difficulties raising capital through sales of our common stock or such sales may be on unfavorable terms. The COVID-19 outbreak continues to rapidly evolve. The extent to which the outbreak may impact our business, preclinical studies and planned clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and other actions to contain the outbreak or address its impact, such as social distancing and quarantines or lock-downs in the U.S. and other countries, business closures or business disruptions and the effectiveness of actions taken in the U.S. and other countries to contain and address the disease.

Risks Related to Our Financial Position and Need for Additional Capital

Risks Related to Past Financial Condition

We have never generated any revenue from product sales and our ability to generate revenue from product sales and become profitable depends significantly on our success in a number of areas.

We have no products approved for commercial sale, have not generated any revenue from product sales, and do not anticipate generating any revenue from product sales until we have received regulatory approval for the commercial sale of one of our product candidates. Our ability to generate revenue, and achieve and retain profitability, depends significantly on our success in many areas, including:

- selecting commercially viable product candidates and effective delivery methods;
- successfully completing research, preclinical and clinical development of product candidates;
- obtaining regulatory approvals and marketing authorizations for product;
- developing a sustainable and scalable manufacturing process for product candidates, including establishing and maintaining commercially viable supply relationships with third parties, such as CMOs, and potentially establishing our own manufacturing capabilities and infrastructure;
- investing significant resources in developing large scale manufacturing, analytical processes, and operational infrastructure prior to clinical evidence of safety and efficacy for a given product candidate;
- launching and commercializing product candidates for which we obtain regulatory approvals and marketing authorizations, either directly or with a collaborator or distributor;
- accurately assessing the size and addressability of potential patient populations;
- obtaining market acceptance of our product candidates as viable treatment options;
- addressing any competing technological and market developments;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter or which may be necessary for us to develop, manufacture or commercialize our product candidates;
- maintaining good relationships with our collaborators and licensors;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how;
- avoiding infringement of or obtaining licenses to any valid intellectual property owned or controlled by third parties; and
- attracting, hiring and retaining qualified personnel.

Even if one or more product candidates that we discover and develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate and the timing of such costs may be out of our control. If we are not able to generate revenue from the sale of any approved products, we may never become profitable.

Our limited operating history may make difficult the evaluation of our business's success to date and assessment of our future viability.

We are an early clinical-stage company. We were founded and commenced operations in mid-2014. Our operations to date have been limited to organizing and staffing our company, business and scientific planning, raising capital, acquiring and developing technology, identifying potential product candidates, undertaking research and early preclinical studies of potential product candidates for ourselves and collaborators, developing the necessary manufacturing capabilities and evaluating a clinical path for our pipeline programs. All of our product candidates are still in the preclinical development or clinical stage. We have not yet demonstrated our ability to successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture clinical and commercial scale therapeutics, or arrange for a third-party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Our ability to generate product revenue or profits, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of our product candidates, which may never occur. We may never be able to develop or commercialize a marketable product.

Each of our programs may require additional discovery research and then preclinical and clinical development, regulatory approval in multiple jurisdictions, obtaining manufacturing supply, capacity and expertise, building of a commercial organization, substantial investment and significant marketing efforts before we generate any revenue from product sales. In addition, our product candidates must be approved for marketing by the FDA, or certain other foreign regulatory agencies, before we may commercialize any product.

Our limited operating history, particularly in light of the rapidly evolving genome editing field, may make it difficult to evaluate our current business and predict our future performance. Our relatively short history as an operating company makes any assessment of our future success or viability subject to significant uncertainty. We will encounter risks and difficulties frequently experienced by very early stage companies in rapidly evolving fields. If we do not address these risks successfully, our business will suffer.

We have incurred net losses in each period since our inception, anticipate that we will continue to incur net losses in the future and may never achieve profitability.

We are not profitable and have incurred losses in each period since our inception. Our net loss was $46.2 million for the three months ended March 31, 2021. As of March 31, 2021, we had an accumulated deficit of $481.3 million. We expect these losses to increase as we continue to incur significant research and development and other expenses related to our ongoing operations, seek regulatory approvals for our future product candidates, scale-up manufacturing capabilities, maintain, expand and protect our intellectual property portfolio and hire additional personnel to support the development of our product candidates and to enhance our operational, financial and information management systems. Although we believe that our cash, cash equivalents, and marketable securities will enable us to fund our operating and capital expenditure requirements at least through the next twenty four months, we cannot predict the impact of the COVID-19 pandemic on future results of operations and financial condition due to a variety of factors, including the health of our employees, the ability of suppliers to continue to operate and deliver, the ability of Intellia to maintain operations, continued access to transportation resources, any further government and/or public actions taken in response to the pandemic and ultimately the length of the pandemic. We expect to finance our operations through a combination of collaboration revenue, equity or debt financings or other sources, which may include collaborations with third parties. Given the impact of COVID-19 on the U.S. and global financial markets, we may be unable to access further equity or debt financing when needed.

A critical aspect of our strategy is to invest significantly in our technology to improve the efficacy and safety of potential product candidates that we discover. Even if we succeed in discovering, developing and ultimately commercializing one or more of these product candidates, we will continue to incur losses for the foreseeable future relating to our substantial research and development expenditures to develop our technologies. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business, such as the COVID-19 pandemic. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital. Further, the net losses we incur may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance.

Risks Related to Future Financial Condition

We may need to raise substantial additional funding to fund our operations. If we fail to obtain additional financing, we may be unable to complete the development and commercialization of any product candidates.

Our operations have required substantial amounts of cash since inception, and we expect to spend substantial amounts of our financial resources on our discovery programs going forward and future development efforts. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development, manufacture (or have manufactured) product candidates and components, and then conduct extensive clinical trials to demonstrate the safety and efficacy of any of our future product candidates in humans. Because preclinical and clinical testing is expensive and can take many years to complete, we may require additional funding to complete these undertakings. Further, if we are able to identify product candidates that are eventually approved, we will require significant additional amounts in order to launch and commercialize our product candidates. For the foreseeable future, we expect to continue to rely on additional financing to achieve our business objectives. Our future capital requirements will depend on and could increase significantly as a result of many factors, including the scope, progress, results and costs of drug discovery, preclinical development, laboratory testing and clinical trials for our current or future product candidates, including additional expenses attributable to adjusting our development plans (including any supply related matters).

We will require additional capital for the further development and commercialization of any product candidates and may need to raise additional funds sooner if we choose to expand more rapidly than we presently anticipate or due to other unanticipated factors. Disruptions in the financial markets in general and, more recently, due to the COVID-19 pandemic have made equity and debt financing more difficult to obtain, and may have a material adverse effect on our ability to meet our fundraising needs.

We cannot be certain that additional funding will be available on acceptable terms, or at all. We have no committed source of additional capital and if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development, manufacture or commercialization of our product candidates or other research and development initiatives. Our collaboration and license agreements may also be terminated if we are unable to meet the payment or other obligations under the agreements. We could be required to seek collaborators for product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to product candidates in markets where we otherwise would seek to pursue development or commercialization 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.

Raising additional capital may cause dilution to our stockholders and restrict our operations.

We will need additional capital in the future to continue our planned operations. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing stockholders may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. In addition, the impact on the economic and financial markets of the COVID-19 pandemic has depressed the valuation of public companies, which could require selling equity at lower prices to ensure appropriate capitalization. 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, making capital expenditures or declaring dividends.

Unfavorable national or global economic conditions or political developments could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the national or global economy and financial markets. For example, governmental statements, actions or policies, political unrest and global financial crises can cause extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn, political unrest or additional global financial crises, including those resulting from the current COVID-19 pandemic, could result in a variety of risks to our business, including weakened demand for our products, if approved, or our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate, further political developments and financial market conditions could adversely impact our business.

Inadequate funding for, or change of priorities or disruptions at, the FDA and other government agencies in or outside the U.S. could hinder their ability to hire, retain, or deploy key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA and other similar regulatory agencies to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and authorization to accept the payment of user fees, reallocation of resources to address unique or new healthcare issues (such as the COVID-19 pandemic), and statutory, regulatory, and policy changes. For example, the FDA's average review times at the agency have fluctuated in recent years as a result of these factors in the U.S. In addition, government funding of other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other similar agencies may also slow the time necessary for new product applications to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities.

If a prolonged government shutdown occurs (or if the COVID-19 pandemic continues to disrupt or prevent regular inspections, reviews, or other regulatory activities conducted by regulatory agencies) in the U.S. or other jurisdictions where we plan to conduct our clinical trials, manufacturing, or other operations, it could significantly impact the ability of the relevant agency, such as the FDA, to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks Related to Our Reliance on Third Parties

Risks Related to Our Reliance on Novartis and Regeneron

Our technological advancements and any potential for revenue may be derived in part from our collaborations with Novartis and Regeneron, and if either of these collaboration agreements were to be terminated or materially altered, our business, financial condition, results of operations and prospects would be harmed.

In December 2014, we entered into a collaboration agreement with Novartis, which we amended in December 2018 (the "Novartis Agreement") regarding the discovery of new CRISPR/Cas9-based therapies principally using chimeric antigen receptor T ("CAR-T") cells, hematopoietic stem cells ("HSCs") and certain limbal stem cells selected by Novartis. Under the Novartis Agreement, Novartis committed to advance programs in these cells, and we granted it exclusive rights to further develop and commercialize the product candidates against targets it selected during the research term arising out of the programs. The research portion of our agreement with Novartis ended in December 2019, and we cannot guarantee that Novartis will continue to pursue any of its selected programs.

In April 2016, we entered into a collaboration agreement with Regeneron, which we amended in May 2020 (the "Amended Regeneron Agreement"). The Amended Regeneron Agreement includes a product component to research, develop and commercialize CRISPR/Cas-based therapeutic products primarily focused on genome editing in the liver, as well as a technology collaboration component, under which we and Regeneron will engage in research and development activities aimed at discovering and developing novel technologies and CRISPR/Cas technology improvements to enhance our genome editing platform. Pursuant to the Amended Regeneron Agreement, we granted Regeneron exclusive rights to select up to 15 initial targets, subject to certain restrictions and modifications. We retained the rights to solely develop certain indications, and have the right to choose additional liver targets for our own development during the collaboration term. Both parties have defined rights to enter into co-development and co-promotion ("Co/Co") agreements for indications selected by the other. Certain indications, such as ATTR, hemophilia A and hemophilia B are subject to Co/Co agreements. For example, in July 2018, we entered into an ATTR Co/Co under which we are the clinical and commercial lead for ATTR products. In December 2019, Regeneron exercised its right under the ATTR Co/Co agreement to modify its share of worldwide development costs and profits from 50% to 25% as of mid-June 2020. In May 2020, we entered into two co-development and co-funding agreements directed to each of hemophilia A and hemophilia B (the "Hemophilia Co-Co") agreements, under which Regeneron will be the clinical and commercial lead, for these programs. Under the Hemophilia Co-Co agreements, worldwide development costs and profits of any future covered products will be split between Regeneron and us, 65% and 35%, respectively.

Either Novartis or Regeneron may change its strategic focus or pursue alternative technologies in a manner that results in reduced, delayed or no revenue to us. Each of Novartis and Regeneron has a variety of marketed products and product candidates either by itself or with other companies, including some of our competitors, and the respective corporate objectives of Novartis or Regeneron may not be consistent with our best interests. Regeneron may change its position regarding its participation and funding of our joint ATTR activities, which may impact our ability to successfully pursue that program. If either of our collaboration partners fails to develop, obtain regulatory approval for or ultimately commercialize any product candidate from the development programs governed by the respective collaboration agreement, or breaches or terminates our collaboration with it, our business, financial condition, results of operations and prospects could be harmed. In addition, any material alteration of the collaboration agreements, or dispute or litigation proceedings we may have with either Novartis or Regeneron in the future could delay development programs, create uncertainty as to ownership of or access to intellectual property rights, distract management from other business activities and generate substantial expense.

Our existing and future collaborations will be important to our business. If we are unable to maintain any of these collaborations, or if these collaborations are not successful, our business could be adversely affected.

We have limited capabilities for product discovery and development and do not yet have any capability for sales, marketing or distribution. Accordingly, we have entered, and plan to enter, into collaborations with other companies, including our therapeutic-focused collaboration agreements with Novartis and Regeneron, that we believe can provide such capabilities. These current and future therapeutic-focused collaborations could provide us with important technologies and/or funding for our programs and technology. Our existing and future therapeutic collaborations may have a number of risks, including that collaborators:

- have significant discretion in determining the efforts and resources that they will apply;
- may not perform their obligations as expected;
- may dispute the amounts of payments owed;
- may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs or license arrangements based on clinical trial results, changes in their strategic focus or available funding, or external factors, such as a strategic transaction that may divert resources or create competing priorities;
- may delay, insufficiently fund, stop, initiate new or repeat clinical trials, reformulate a product candidate for clinical testing, or abandon a product candidate;
- could develop independently, or with third parties, products that compete directly or indirectly with our products and product candidates;
- may view product candidates discovered in our collaborations as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the development or commercialization of our product candidates;
- may dispute ownership or rights in jointly developed technologies or intellectual property;
- may fail to comply with applicable legal and regulatory requirements regarding the development, manufacture, sale, distribution or marketing of a product candidate or product;
- with sales, marketing, manufacturing and distribution rights to our product candidates may not commit sufficient resources to the product's sale, marketing, manufacturing and distribution;
- may disagree with us about material issues, including proprietary rights, contract interpretation, payment obligations or the preferred course of discovery, development, sales or marketing, which might cause delays or terminations of the research, development or commercialization of product candidates, lead to additional and burdensome responsibilities for us with respect to product candidates, or result in litigation or arbitration, any of which would be time-consuming and expensive;
- may not properly maintain or defend their or our relevant intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation and liability;
- may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- could become involved in a business combination or cessation that could cause them to deemphasize or terminate the development or commercialization of any product candidate licensed to it by us; and
- may terminate our collaborations, which could require us to raise additional capital to develop or commercialize the applicable product candidates, or lose access to the collaborator's intellectual property.

If our therapeutic collaborations do not result in the successful discovery, development and commercialization of products or if a collaborator terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. All of the risks relating to product discovery, development, regulatory approval and commercialization summarized and described in this report also apply to the activities of our therapeutic collaborators.

Additionally, if one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and our perception in the business and financial communities could be adversely affected.

As part of our business strategy, we may pursue acquisitions or licenses of assets or acquisitions of businesses, or disposition of assets or technologies. We also may pursue strategic alliances and joint ventures that leverage our core technology and industry experience. If we decide to collaborate with other companies to discover, develop and commercialize therapeutic products, we face significant competition in seeking appropriate collaborators because, for example, third-parties have comparable rights to the CRISPR/Cas9 system or similar genome editing technologies. In addition, we have limited experience with acquiring, disposing of or licensing assets or forming strategic alliances and joint ventures. Our ability to 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. If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail, delay or abandon discovery efforts or development programs, and the development, manufacture or commercialization of a product candidate, or increase our expenditures and undertake these activities at our own expense. If we elect to fund and undertake discovery, development, manufacturing or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary discovery, development, manufacturing and commercialization activities, we may not be able to further develop our product candidates, manufacture the product candidates, bring them to market or continue to develop our technology and our business may be materially and adversely affected. Furthermore, we may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, license, strategic alliance or joint venture.

Risks Related to Our Reliance on Third Parties

We expect to rely in part on third parties to manufacture our clinical product supplies, and we intend to rely on third parties for at least a portion of the manufacturing process of our product candidates, if approved. Our business could be harmed if the third parties fail to provide us with sufficient quantities of product inputs or fail to do so at acceptable quality levels or prices or fail to meet legal and regulatory requirements.

We do not currently own any facility that may be used as our clinical-scale manufacturing and processing facility and must rely on outside vendors, such as CMOs, to manufacture supplies and process our product candidates. We have only recently begun to manufacture and process product candidate components on a clinical scale and may not be able to successfully complete or continue to do so. We will make changes to optimize the manufacturing process, and cannot be sure that even minor changes in the process will result in therapies that are safe, potent, pure or effective.

The facilities used by our CMOs to manufacture our product candidates must be inspected and approved by, as applicable, the FDA or other foreign regulatory agencies after we apply for approval or marketing authorization. We will be dependent on our CMO partners to properly manufacture adequate supply of our product candidates and components in a timely manner and in accordance with our specification. We also will depend on these entities for compliance with relevant legal and regulatory requirements for manufacture of our product candidates, including current good manufacturing practice ("cGMP"), and in certain cases, current good tissue practice ("cGTP"), requirements. If they cannot successfully manufacture material that conforms to our specifications and the strict relevant regulatory requirements, our CMOs will not be able to secure or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our CMOs to maintain adequate quality control, quality assurance and qualified personnel, particularly as we increase the scale of our manufactured material. If the FDA or relevant foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates.

Events such as the COVID-19 pandemic could adversely impact the ability of our vendors, including CMOs, to manufacture supplies, process and deliver our product candidates, or to otherwise meet our requirements or those of the applicable regulatory agencies. Additionally, these events could also impact the regulatory agencies' ability to inspect and approve our vendors, including CMOs, within our currently expected timeframe.

We will rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines or comply with legal and regulatory requirements, we may not be able to obtain regulatory approval of or commercialize any potential product candidates.

We will depend upon third parties, including independent investigators, to conduct our clinical trials under agreements with universities, medical institutions, CROs, strategic partners and others. We expect to have to negotiate budgets and contracts with CROs, trial sites and other service and goods providers, which may result in delays to our development timelines and increased costs.

We will rely heavily on third parties over the course of our clinical trials, and, as a result, will have limited control over the clinical investigators and other service providers, and limited visibility into their day-to-day activities, including with respect to their compliance with the approved clinical protocol and other legal, regulatory and scientific standards. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our legal responsibilities. We and these third parties are required to comply with good clinical practice ("GCP"), which are regulations and guidelines enforced by the FDA, EMA and comparable foreign regulatory authorities for product 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 relevant regulatory authorities may require us to suspend 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 product produced under cGMP, and in certain cases, cGTP, requirements and may require a large number of test patients.

Our or these third parties' failure to comply with these requirements or to recruit a sufficient number of patients may require us to delay, suspend, repeat or terminate clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates applicable federal, state or local, as well as foreign, laws and regulations, such as the fraud and abuse or false claims laws and regulations or privacy and security laws. In jurisdictions such as the U.K. and EU, penalties for violations of privacy laws and other regulations can be financially significant. Further, if any of our CROs, clinical investigators or others involved in our clinical trials fail to comply with such laws and regulations, we could be held responsible for its actions or omissions and be negatively impacted. In the event of non-compliance with European Data Protection Law, we could be subject to substantial fines and other penalties, including fines of up to 10,000,000 Euros or up to 2% of our total worldwide annual turnover for certain comparatively minor offenses, or up to 20,000,000 Euros or up to 4% of our total worldwide annual turnover for more serious offenses.

Any third parties conducting our future clinical trials will not be our employees and, except for remedies that may be available to us under our agreements with such third parties, we cannot control whether they devote sufficient time and resources to our ongoing preclinical, clinical, and nonclinical programs. 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 fail to meet their contractual obligations, legal requirements or expected deadlines, need to be replaced, or generate inaccurate or substandard clinical data by failing 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 product candidates. In addition, the COVID-19 pandemic or similar events, and responsive governmental actions, could divert healthcare resources, including necessary materials and clinical trial personnel, away from our clinical trial sites to focus on pandemic concerns. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

The COVID-19 pandemic and government measures taken in response may have a significant impact on our CROs, clinical sites and other service and goods providers, which may affect our ability to initiate and complete preclinical studies and clinical trials.

If any of our relationships with these third-party CROs, clinical sites or other third parties terminate, we may not be able to enter into arrangements with alternative CROs, clinical sites or other third parties or to do so on commercially reasonable terms. Switching or adding additional CROs, clinical sites or other providers involves additional cost and requires management time and focus. In addition, the transition to a new CRO may result in delays, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with these parties, 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.

Risks Related to Employee Matters and Managing Our Growth

Risks Related to Hiring and Retention

We expect to expand our research, development, manufacturing, clinical and regulatory capabilities, and, as a result, we may encounter difficulties in hiring capable personnel and otherwise managing our growth, which could disrupt our operations.

We expect growth in the number of our employees and the scope of our operations, including the areas of technology research, product development and manufacturing, clinical, regulatory and quality affairs and, if any product candidates receive marketing approval, sales, marketing and distribution. To manage our anticipated growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities, and recruit and train additional qualified personnel. Due to our limited financial resources, the significant competition for employees in our market and industry, and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to recruit and train additional qualified personnel or otherwise effectively manage the expansion of our operations, which may lead to significant costs and divert our management and business resources. Any inability to manage growth could delay or disrupt the execution of our business and operational plans.

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

We are highly dependent on the research and development, clinical, legal, financial and business development expertise of John M. Leonard, M.D., our President and Chief Executive Officer, Glenn Goddard, our Executive Vice President and Chief Financial Officer, David Lebwohl, our Executive Vice President and Chief Medical Officer, José E. Rivera, our Executive Vice President and General Counsel, Andrew Schiermeier, our Executive Vice President and Chief Operating Officer, and Laura Sepp-Lorenzino, our Executive Vice President and Chief Scientific Officer, as well as the other principal members of our management, scientific and clinical teams. Although we have entered into employment arrangements with our executive officers, each of them may terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be important for our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives, and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products using our technology. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies, universities and research institutions for similar personnel. The market for qualified personnel in the biotechnology space generally, and genome editing and gene therapy fields in particular, in and around the Cambridge, Massachusetts area is especially competitive. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategies. 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. Further, some of the qualified personnel that we hire and recruit are not U.S. citizens, and there is uncertainty with regard to their future employment status due to the current U.S. administration’s announced intention of modifying the legal framework for non-U.S. citizens to be employed in the U.S. Finally, events such as the COVID-19 pandemic and government restrictions and directives, including immigration policy changes, could adversely impact our ability to recruit, retain or replace key employees necessary to achieve our objectives and strategic imperatives, If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

Risks Related to Government Regulation

Risks Related to Obtaining Regulatory Approval

While the regulatory framework for approval of gene therapy including genome editing products exists, the limited specific guidance and precedent for genome-edited products makes the regulatory approval process potentially more unpredictable and we may experience significant delays in the clinical development and regulatory approval, if any, of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of drug products, including genome editing therapeutics and engineered cell therapies, are subject to extensive regulation by the FDA in the U.S. and other regulatory authorities in other jurisdictions. For example, we are not permitted to market any drug or biological product, including *in vivo* products or engineered cell therapies, until we receive regulatory approval from the relevant regulatory agency, such as the FDA in the U.S. or EMA in the EU. We expect the novel nature of our product candidates to create challenges or raise questions from regulatory agencies in obtaining regulatory approval. For example, in the U.S., the FDA has approved neither any *in vivo* gene editing-based therapeutic nor any nuclease edited cell therapy for human therapeutic use. The FDA may also require a panel of experts, referred to as an Advisory Committee, to deliberate on the adequacy of the safety and efficacy data to support approval. The Advisory Committee's opinion, although not binding, may significantly impact our ability to obtain approval of our product candidates. Moreover, while we are not aware of any specific genetic or biomarker tests for which regulatory approval would be necessary to advance any of our product candidates to clinical trials or commercialization, regulatory agencies could require the development and approval of such tests. Accordingly, the regulatory approval pathway for such product candidates may be uncertain, complex, expensive and lengthy, as well as different in each jurisdiction, and approval may not be obtained in any, some or all jurisdictions.

Other non-regulatory entities may impact the regulatory agencies and ethics committees' evaluation and approval decision regarding our products. For example, in December 2018, the World Health Organization ("WHO") established the Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing. While the standards are expected to focus primarily on germline modifications, the guidelines could impact somatic cell editing research programs, such as ours. In March 2019, the WHO Expert Advisory Committee recommended initiating the first phase of a new global registry to track research on human genome editing. Accepting this recommendation, the WHO announced plans in August 2019 for an initial phase of the registry using the International Clinical Trials Registry Platform ("ICTRP"). This phase will include worldwide registries for both somatic cell editing and germline editing clinical trials. Registration of these clinical trials in the WHO's registry is voluntary. Although registration of these clinical trials in the WHO's registry currently is voluntary, failure to register could impact the evaluation by the regulators and ethics committees.

Patient enrollment is a significant factor in the timing of clinical trials and is affected by many factors, including willingness of physicians to use an experimental therapy, the availability of existing treatments, the trial's geographic locations and the number of patients in each geographic location. In addition, our ability to enroll and dose patients may be delayed by the regulatory authority as well as, the IRB or another ethics committee (whether local or national). Further, a clinical trial may be suspended or terminated by us, the relevant IRBs or ethics committees the trial's DSMB, or the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be impaired. In addition, any delays in completing any clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, but a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA approves a product candidate, comparable regulatory authorities in foreign jurisdictions must also authorize the marketing and sale of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and review periods different from those in the U.S., including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the U.S., a product candidate must be approved for reimbursement before it can be sold in that jurisdiction. In some cases, the price that we are allowed to charge for our products is also subject to approval or to other legal restrictions.

Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the relevant regulatory requirements or to receive applicable marketing approvals, our target markets will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Risks Related to Ongoing Regulatory Obligations

Even if we receive regulatory approval of any product candidates or therapies, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

If any of our product candidates are approved, they may be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, distribution, storage, advertising, promotion, sampling, record-keeping, and submission of safety and efficacy data, and other post-market information and potential obligations (such as post-marketing studies), including both federal and state requirements in the U.S. and requirements of comparable foreign regulatory authorities. In addition, we will be subject to continued compliance with cGMP and GCP, and in certain cases, cGTP, requirements for any clinical trials that we conduct post-approval.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, as applicable, including ensuring that quality control and manufacturing procedures conform to cGMP and, in certain cases, cGTP requirements. As such, we and our CMOs will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any BLA, other marketing applications, and previous responses to inspection observations. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase IV clinical trials and surveillance to monitor the safety and efficacy of the product candidate. For example, the FDA may also require a REMS program as a condition of approval of our product candidates, which could entail requirements for long-term patient follow-up, a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, we will have to comply with their respective legal or regulatory requirements including submissions of safety and other post-marketing information and reports and registration.

The FDA or other regulatory agencies may seek to impose consent decrees, withdraw approval or prohibit the export or import of a product if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA or the relevant regulatory agency to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising, and promotion of products that are placed on the U.S. market, and the relevant foreign regulatory agencies do the same in their respective jurisdictions. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we or our collaborators are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or our collaborators are not able to maintain regulatory compliance, we or our collaborators may lose any marketing approval that we or our collaborators may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

Our employees, independent contractors, clinical investigators, CMOs, CROs, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.

We are exposed to the risk of non-compliance, fraud, misconduct or other illegal activity by our employees, independent contractors, clinical investigators, CMOs, CROs, consultants, commercial partners and vendors. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to: comply with federal and state laws and those of other applicable jurisdictions; provide true, complete and accurate information to the FDA and other similar foreign regulatory bodies; comply with manufacturing standards; comply with federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the U.S. and similar foreign privacy or fraudulent misconduct laws; or report financial information or data accurately; or disclose unauthorized activities to us. If we obtain FDA approval of any of our product candidates and begin commercializing those products in the U.S., our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with clinical investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare products and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, including promotion and marketing of off-label uses of our products, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, 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 comply with these laws or regulations. Additionally, 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, including the imposition of significant fines or other sanctions.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation, and/or adverse publicity and could negatively affect our operating results and business.

We and any potential collaborators, clinical investigators, CMOs, CROs, consultants or vendors may be subject to federal, state, and foreign data protection laws and regulations (i.e., laws and regulations that address privacy and data security). In the U.S., numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA, as amended by HITECH, or by comparable laws in other jurisdictions. Depending on the facts and circumstances, we could be subject to civil, criminal, and administrative penalties if we knowingly obtain, use, or disclose individually identifiable health information maintained by a covered entity in a manner that is not authorized or permitted by laws or regulations.

Compliance with U.S., both state and national, and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with these laws and regulations could result in government enforcement actions (which could include civil, criminal and administrative penalties), private litigation, and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects, employees and other individuals about whom we or our potential collaborators obtain personal information, as well as the providers who share this information with us, may limit our ability to collect, use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

Given that we are conducting a clinical trial in the U.K., and our current and future requests for approval to conduct clinical trials in the U.K. and other jurisdictions outside the U.S., we are and may be subject to additional privacy laws. For example, the GDPR applies extraterritorially, and we may be subject to the GDPR because of data processing activities that involve the personal data of individuals in the EU or the U.K. in connection with EU or U.K. clinical trials. As discussed above, the GDPR regulates the processing of personal data of data subjects in the EU or the U.K. by imposing a broad range of strict requirements on companies subject to the GDPR, including requirements relating to having legal bases for processing personal data and transferring such information outside the EU or the U.K., including to the U.S., providing robust disclosures to individuals regarding the processing of their personal data, keeping personal data secure, having data processing agreements with third parties who process personal data, responding to individuals' requests to exercise their rights in respect of their personal data, reporting security breaches involving personal data to the competent national data protection authority and affected individuals, appointing data protection officers, conducting data protection impact assessments, and record-keeping. In the event of non-compliance with the GDPR, we could be subject to substantial fines and other penalties, including fines of up to 10,000,000 Euros or up to 2% of our total worldwide annual turnover for certain comparatively minor offenses, or up to 20,000,000 Euros or up to 4% of our total worldwide annual turnover for more serious offenses. We face uncertainty as to the exact interpretation of the new requirements and we may be unsuccessful in implementing all measures required by data protection authorities or courts in interpretation of the law.

In addition, as it relates to processing and transfer of health and genetic data, the GDPR specifically allows national laws to impose additional and more specific requirements or restrictions, and European laws have historically differed quite substantially in this field, leading to additional uncertainty.

If we are investigated by a European data protection authority, we may face fines and other penalties. Any such investigation or charges by European data protection authorities could have a negative effect on our existing business and on our ability to attract and retain new clients or pharmaceutical partners. We may also experience hesitancy, reluctance, or refusal by European or multi-national clients or pharmaceutical partners to continue to use our products and solutions due to the potential risk exposure as a result of the current (and, in particular, future) data protection obligations imposed on them by certain data protection authorities in interpretation of current law, including the GDPR. Such clients or pharmaceutical partners may also view any alternative approaches to compliance as being too costly, too burdensome, too legally uncertain, or otherwise objectionable and therefore decide not to do business with us. Any of the foregoing could materially harm our business, prospects, financial condition and results of operations.

If we fail to comply with environmental, health and safety, and laboratory animal welfare laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous federal, state and local environmental, health and safety, and laboratory animal welfare laws and regulations. These legal requirements include those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes as well as those which regulate the care and use of animals in research. Our operations will involve research using research animals and the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also may produce hazardous waste products. We generally anticipate contracting with third parties for the disposal of these materials and wastes. We will not be able to eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from any use by us of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

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 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, and laboratory animal welfare laws and regulations. These current or future laws and regulations 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.

Failure to comply with labor and employment laws and regulations could subject us to legal liability and costs, including fines or penalties, as well as reputational damage that could harm our business.

We are subject to numerous federal, state and local laws and regulations relating to the recruiting, hiring, compensation and treatment of employees and contractors. These laws and regulations cover financial compensation (including wage and hour standards), benefits (including insurance and 401K plans), discrimination, workplace safety and health, benefits, and workers' compensation.

The Commonwealth of Massachusetts also has laws that expand on federal laws or create additional rights for employees or obligations for employers. For example, on July 1, 2018, the Massachusetts Equal Pay Act went into effect, which added protections employers must comply with regarding pay equity for "comparable work". There is currently uncertainty regarding the exact scope of these new legal limits and such uncertainty may remain for the foreseeable future. We may face increased employment and legal costs to ensure we are complying with this law. In addition, on October 1, 2018, a new Massachusetts non-compete law went into effect, placing additional restrictions on employers seeking to enter into non-competition agreements with employees. This law may negatively impact our ability to prevent employees from working with direct or indirect competitors in the future and may affect our ability to retain key talent in a competitive market.

Our failure to comply with these and other related laws could expose us to civil and, in some cases, criminal liability, including fines and penalties. Further, government or employee claims that we have violated any of these laws, even if ultimately disproven, could result in increased expense and management distraction, as well as have an adverse reputational impact on us.

Risks Related to Intellectual Property

Risks Related to Third Party and Licensed Intellectual Property

Third-party claims of intellectual property infringement against us, our licensors or our collaborators may prevent or delay our product discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the valid patents and proprietary rights of third parties.

Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we are developing our product candidates and in areas potentially related to components and methods we use or may use in our research and development efforts. As industry, government, academia and other biotechnology and pharmaceutical research expands and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others. Our development candidates are complex and may include multiple components such as Cas9 protein or mRNA encoding Cas9 protein, guide RNAs, targeting molecules, or formulation components such as lipids. We cannot guarantee that any of these components of our technology, processes, future product candidates or the use of such product candidates do not infringe third-party patents. It is also possible that we have failed to identify relevant third-party patents or applications. Because patent rights are granted jurisdiction-by-jurisdiction, our freedom to practice certain technologies, including our ability to research, develop and commercialize our product candidates, may differ by country.

Third parties may assert that we infringe their patents or that we are otherwise employing their proprietary technology without authorization, and may sue us. There may be third-party patents of which we are currently unaware with claims to compositions, formulations, methods of manufacture or methods of use or treatment that cover product candidates we discover and develop. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies or the manufacture, use or sale of our product candidates infringes upon these patents. If any such third-party patents were held by a court of competent jurisdiction to cover our technologies or product candidates, the holders of any such patents may be able to block our ability to commercialize the applicable product candidate 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 were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing, manufacturing or importing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing one or more of our product candidates, force us to redesign our infringing products or force us to cease some or all of our business operations, any of which could materially harm our business and could prevent us from further developing and commercializing our proposed future product candidates thereby causing us significant harm. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Third parties may seek to claim intellectual property rights that encompass or overlap with intellectual property that we own or license from them or others. Legal proceedings may be initiated to determine the scope and ownership of these rights, and could result in our loss of rights, including injunctions or other equitable relief that could effectively block our ability to further develop and commercialize our product candidates. For example, through the Caribou License, we sublicense the rights of the Regents of the University of California and the University of Vienna (collectively, "UC/Vienna") to a worldwide patent portfolio that covers methods of use and compositions relating to engineered CRISPR/Cas9 systems for, among other things, cleaving or editing DNA and altering gene product expression in various organisms, including eukaryotic cells. We sublicense the UC/Vienna rights to this portfolio for human therapeutic, prophylactic and palliative uses, including companion diagnostics, except for anti-fungal and anti-microbial uses. This patent portfolio to-date includes, for example, multiple granted, allowed, and/or allowable patent applications in the U.S., as well as granted patents from the European Patent Office, the United Kingdom's Intellectual Property Office, the German Patent and Trade Mark Office, Australia's Intellectual Property agency and China's Intellectual Property Office, among others. Because UC/Vienna co-own this portfolio with Dr. Emmanuelle Charpentier (from whom we do not have sublicense rights), we refer to this co-owned worldwide patent portfolio as the UC/Vienna/Charpentier patent family. UC/Vienna could challenge Caribou's rights under their license agreement, including Caribou's right to sublicense its rights to others, such as Intellia, and on what terms such a sublicense would be granted, each of which could adversely impact our rights under our license agreement with Caribou.

Similarly, on October 17, 2018, we initiated an arbitration proceeding with JAMS against Caribou asserting that Caribou violated the terms and conditions of the Caribou License, as well as other contractual and legal rights, by using and seeking to license to third parties technology covered by two patent families (described in, for instance, PCT No. PCT/US2016/015145 and PCT No. PCT/US2016/064860, and related patents and applications) relating to specific structural or chemical modifications of guide RNAs, that were purportedly invented or controlled by Caribou, in our exclusive human therapeutic field. Caribou asserted that the two families of IP are outside our exclusive license rights under the Caribou License.

On September 26, 2019, we announced that the arbitration panel issued an interim award concluding that both the structural and chemical guide RNAs modification technologies were exclusively licensed to us by Caribou under the Caribou License. After concluding that the chemical modification technology was within the scope of our exclusive license from Caribou, the arbitration panel nevertheless noted that its decision could delay or otherwise adversely impact the development of these modified guide RNAs as human therapeutics. It also noted that we currently are not using these modified guide RNAs in any of our active programs. Thus, solely with respect to the particular modified guide RNAs, the arbitration panel stated that it will declare that Caribou has an equitable "leaseback," which it described as exclusive, perpetual and worldwide (the "Caribou Award"). The panel instructed the parties to negotiate the terms of the Caribou Award, including Caribou's future payments to us for the same.

On February 6, 2020, after considering additional submissions from the parties, the panel clarified that the Caribou Award is limited to a particular on-going Caribou program, which seeks to develop a CAR-T cell product directed at CD19. The panel instructed the parties to seek to negotiate terms based on this scope. Accordingly, the Caribou Award will be subject to terms, including Caribou's future payments to us to be negotiated by the parties or, if unsuccessful, adjudicated in additional arbitration or judicial proceedings.

Pursuant to the September 2019 interim award, the Caribou Award by the panel does not include the structural guide modifications intellectual property at issue in the arbitration, any other intellectual property exclusively licensed or sublicensed by Caribou to us under the Caribou License (including but not limited to the foundational CRISPR/Cas9 intellectual property co-owned by University of California, University of Vienna and Dr. Emmanuelle Charpentier), or any other of our intellectual property.

Upon, and subject to the terms of, a final award, which will follow further arbitration or legal proceedings, Caribou could be able to use the modified guide RNAs at issue for CAR-T cell human therapeutics directed at CD19. Either we or Caribou may challenge the arbitration panel's decisions under limited circumstances. The additional time and legal costs associated with negotiating or arbitrating the terms of the Caribou Award, as well as its final terms, could adversely impact our exclusive right to use the particular modified guide RNAs in dispute and enable Caribou's ability to compete with us (or our licensees) in the development of CAR-T cell human therapeutics directed at CD19, each of which may adversely affect our business.

Third parties could assert that UC/Vienna/Charpentier do not have rights to the CRISPR/Cas9 technology, including inventorship and ownership rights to currently issued or allowable patents, or that any rights owned by UC/Vienna/Charpentier are limited. If such third parties were found to have rights to the CRISPR/Cas9 technology, we could be required to obtain rights from such parties or cease our development and commercialization efforts. For example, under our sublicense from Caribou, we have rights to patent applications owned by UC/Vienna Charpentier covering certain aspects of CRISPR/Cas9 systems to edit genes in eukaryotic cells, including human cells (collectively, the "UC/Vienna/Charpentier eukaryotic patent family"). The Broad Institute, Massachusetts Institute of Technology, the President and Fellows of Harvard College and the Rockefeller University (collectively, the "Broad Institute") co-own patents and patent applications that also claim CRISPR/Cas9 systems to edit genes in eukaryotic cells (collectively, the "Broad Institute patent family"). Because the respective owners of various UC/Vienna/Charpentier patent applications and the Broad Institute patent family both allege owning intellectual property claiming overlapping aspects of CRISPR/Cas9 systems and methods to edit genes in eukaryotic cells, including human cells, our ability to market and sell CRISPR/Cas9-based human therapeutics may be adversely impacted depending on the scope and actual ownership over the inventions claimed in the competing patent portfolios. On June 25, 2019, the Patent Trial and Appeal Board ("PTAB") of the U.S. Patent and Trademark Office ("USPTO") declared an interference between the UC/Vienna/Charpentier eukaryotic patent family and the Broad Institute patent family to determine which research group first invented the use of the CRISPR/Cas9 technology in eukaryotic cells and, therefore, is entitled to the patents covering the invention. On August 26, 2019, the PTAB redeclared the interference to include additional UC/Vienna/Charpentier patent applications covering the invention that had also been found allowable by the USPTO. On September 10, 2020, the PTAB issued an order that, among other matters, advanced the proceeding to the priority phase, where both UC/Vienna/Charpentier, which will have the burden of proof, and the Broad Institute will present their respective evidence seeking to prove that they, invented first. As of March 31, 2021, the interference involves 14 allowable patent applications from the UC/Vienna/Charpentier eukaryotic patent family and 13 patents and one patent application from the Broad Institute patent family.

On December 14, 2020, the PTAB declared an additional interference between the same 14 allowable patent applications in the UC/Vienna/Charpentier portfolio, and one patent application owned by ToolGen, Inc., that also purports to cover the use of CRISPR/Cas9 for gene editing in eukaryotic cells, seeking to determine between the two groups which one invented first and is entitled to the resulting patents. This interference is still in its motion phase where the PTAB may consider, among other matters, which party will have the burden of proof in the priority phase. If either the Broad or ToolGen were to succeed in their respective interference, the prevailing party or parties could seek to assert its issued patents against us based on our CRISPR/Cas9-based activities, including commercialization.

In addition, other third parties, such as Vilnius University, MilliporeSigma (a subsidiary of Merck KGaA) and Harvard University, filed patent applications claiming CRISPR/Cas9-related inventions around or within a year after the UC/Vienna/Charpentier application was filed and allege (or may allege) that they invented one or more of the inventions claimed by UC/Vienna/Charpentier before UC/Vienna/Charpentier. If the USPTO deems the scope of the claims of one or more of these parties to sufficiently overlap with the allowable claims from the UC/Vienna/Charpentier application, the USPTO could declare other interference proceedings to determine the actual inventor of such claims. If these third-parties were to prevail in their inventorship claims or obtain patent claims that cover our product candidates or related activities through these various legal proceedings, then we could be prevented from utilizing the intellectual property we have licensed from Caribou, as well as from developing and commercializing all or some of our products candidates unless we can obtain rights to the third-parties' intellectual property, or avoid or invalidate it.

Further, these third-parties, and others, have also filed patent applications and obtained patents covering aspects of the CRISPR/Cas9 technology in other key jurisdictions, including the European Union members, the U.K., China and Japan. If these patents are deemed valid and cover our product candidates or related activities, we could be prevented from developing and commercializing all or some of our product candidates unless we license the relevant intellectual property or avoid it.

Defense of any potential infringement claims, regardless of their merit, would involve substantial litigation expense, 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 have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. In that event, we could be unable to further develop and commercialize our product candidates, which could harm our business significantly.

We depend on intellectual property licensed from third parties and termination or modification of any of these licenses could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others, including Caribou, Novartis and Ospedale San Raffaele ("OSR"). Any termination of these licenses, loss by our licensors of the rights they receive from others, diminution of our rights or those of our licensors, or a finding that such intellectual property lacks legal effect, could result in the loss of significant rights and could harm our ability to commercialize any product candidates. For example, UC/Vienna could challenge Caribou's rights under their agreement, including Caribou's right to sublicense its rights to others, such as Intellia, and on what terms such a sublicense would be granted, each of which could adversely impact our rights under our agreement with Caribou. Similarly, Caribou or other licensors, or other third parties from which we derive rights, could challenge the scope of our licensed rights or fields under our license agreement, which could adversely impact our exclusive rights to use CRISPR/Cas9 technology in our human therapeutics field.

For example, as discussed above**,** on September 26, 2019, we announced that an arbitration panel had issued an interim award concluding that both the structural and chemical guide RNAs modification technologies were exclusively licensed to us by Caribou pursuant to the Caribou License. After concluding that the chemical modification technology was within the scope of our exclusive license with Caribou, the arbitration panel noted that its decision could delay or otherwise adversely impact the development of these modified guide RNAs as human therapeutics. Thus, solely with respect to the particular modified guide RNAs, the arbitration panel stated that it will declare that Caribou has an equitable award, which it described as exclusive, perpetual and worldwide. Upon, and subject to the terms of, a final award, which will follow further legal proceedings between the parties, Caribou could be able to use the modified guide RNAs at issue for certain human therapeutics. Although the interim award has no effect on our rights or current programs nor on Caribou's obligations under the Caribou License, we cannot predict the potential implications and impact the interim award may have on our business.

Disputes have and may arise between us and our licensors, our licensors and their licensors, or us and third parties that co-own intellectual property with our licensors or their licensors, regarding intellectual property subject to a license agreement, including those relating to:

- the scope of rights, if any, granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology, products and processes infringe on, or derive from, intellectual property of the licensor that is not subject to the license agreement;
- whether our licensor or its licensor had the right to grant the license agreement, or whether they are compliant with their contractual obligations to their respective licensor(s);
- whether third parties are entitled to compensation or equitable relief, such as an injunction, for our use of the intellectual property without their authorization;
- our right to sublicense patent and other rights to third parties, including those under collaborative development relationships;
- whether we are complying with our obligations with respect to the use of the licensed technology in relation to our development and commercialization of product candidates;
- our involvement in the prosecution, defense and enforcement of the licensed patents and our licensors' overall patent strategy;
- the allocation of ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and by us and our partners; and
- the amounts of royalties, milestones or other payments due under the license agreement.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, or are insufficient to provide us the necessary rights to use the intellectual property, we may be unable to successfully develop and commercialize the affected product candidates. If we or any such licensors fail to adequately protect this intellectual property, our ability to commercialize our products could suffer.

We depend, in part, on our licensors to file, prosecute, maintain, defend and enforce patents and patent applications that are material to our business.

Patents relating to our product candidates are controlled by certain of our licensors or their respective licensors. Each of our licensors or their licensors generally has rights to file, prosecute, maintain and defend the patents we have licensed from such licensor. If these licensors or any future licensees and in some cases, co-owners from which we do not yet have licenses, having rights to file, prosecute, maintain, and defend our patent rights fail to adequately conduct these activities for patents or patent applications covering any of our product candidates, our ability to develop and commercialize those product candidates may be adversely affected and we may not be able to prevent competitors from making, using or selling competing products. We cannot be certain that such activities by our licensors or their respective licensors have been or will be conducted in compliance with applicable laws and regulations or in our best interests, or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with our licensors, the licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and, even if we are permitted to pursue such enforcement or defense, we cannot ensure the cooperation of our licensors or, in some cases, other necessary parties, such as the co-owners of the intellectual property from which we have not yet obtained a license. We cannot be certain that our licensors or their licensors, and in some cases, their respective co-owners, will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. For example, with respect to our sublicensed rights from Caribou to UC/Vienna/Charpentier intellectual property, UC retained the right to control the prosecution, enforcement and defense of this intellectual property in its license agreement with Caribou and, pursuant to an Invention Management Agreement, shares these responsibilities with CRISPR Therapeutics AG and, under certain circumstances, ERS Genomics, Ltd., as the designated managers of the intellectual property. For these reasons, UC may be unable or unwilling to prosecute certain patent claims that would be best for our product candidates, or enforce its patent rights against infringers of the UC/Vienna/Charpentier patent family.

Even if we are not a party to legal actions or other disputes involving our licensed intellectual property, an adverse outcome could harm our business because it might prevent us from continuing to license intellectual property that we may need to operate our business. In addition, even when we have the right to control patent prosecution of licensed patents and patent applications, enforcement of licensed patents, or defense of claims asserting the invalidity of those patents, we may still be adversely affected or prejudiced by actions or inactions of our licensors and their counsel that took place prior to or after our assuming control.

We may not be successful in obtaining or maintaining necessary rights to product components and processes or other technology for our product development pipeline.

The growth of our business will likely depend in part on our ability to acquire or in-license additional proprietary rights. For example, our programs may involve additional product candidates, delivery systems or technologies that may require the use of additional proprietary rights held by third parties, including competitors. Our ultimate product candidates may also require specific modifications or formulations to work effectively and efficiently. These modifications or formulations may be covered by intellectual property rights held by others, including competitors. We may be unable to acquire or in-license any relevant third-party intellectual property rights that we identify as necessary or important to our business operations.

Additionally, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. Typically, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license 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 other parties, potentially blocking our ability to pursue our program.

The licensing and acquisition of third-party intellectual property rights is a competitive practice 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 product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

If we are unable to successfully obtain rights to valid third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of such program and our business and financial condition could suffer.

We may be required to pay certain milestones and royalties under our license agreements with third-party licensors.

Under our current and future license agreements, we may be required to pay milestones and royalties based on our revenues, including sales revenues of our products, utilizing the technologies licensed or sublicensed from third parties, including Caribou, Novartis, Regeneron and OSR, and these milestones and royalty payments could adversely affect our ability to research, develop and obtain approval of product candidates, as well as the overall profitability for us of any products that we may seek to commercialize. In order to maintain our license rights under these license agreements, we will need to meet certain specified milestones, subject to certain cure provisions, in the development of our product candidates. Further, our licensors (or their licensors) or licensees may dispute the terms, including amounts, that we are required to pay under the respective license agreements. If these claims were to result in a material increase in the amounts that we are required to pay to our licensors, or in a claim of breach of the license, our ability to research, develop and obtain approval of product candidates, or to commercialize products, could be significantly impaired.

In addition, these agreements contain diligence milestones and we may not be successful in meeting all of the milestones in the future on a timely basis or at all. We will need to outsource and rely on third parties for many aspects of the clinical development, sales and marketing of our products covered under our license agreements. Delay or failure by these third parties could adversely affect the continuation of our license agreements with their third-party licensors.

Risks Related to Patents and Trademarks

We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our products or product candidates, or asserting and defending our intellectual property rights that protect our products and technologies.

We anticipate that we will file additional patent applications both in the U.S. and in other countries, as appropriate. However, we cannot predict:

- if and when any patents will issue;
- the scope, degree and range of protection any issued patents will afford us against competitors, including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether others will apply for or obtain patents claiming aspects similar to those covered by our patents and patent applications;
- whether certain governments will appropriate our intellectual property rights and allow competitors to use them; or
- whether we will need to initiate litigation or administrative proceedings to assert or defend our patent rights, which may be costly whether we win or lose.

Composition of matter patents for biological and pharmaceutical products are generally considered to be the strongest form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain, however, that any claims in our pending or future patent applications covering the composition of matter of our product candidates will be considered patentable by the USPTO or by patent offices in foreign countries, or that the claims in any of our ultimately issued patents will be considered valid and enforceable by courts in the U.S. or foreign countries. Method of use patents protect the use of a product for the specified method, for example a method of treating a certain indication using a product. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products “off-label” for those uses that are covered by our method of use patents. Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field can be uncertain, and evaluating the scope of such patents involves complex legal and scientific analyses. The patent applications that we own or in-license may fail to result in issued patents with claims that cover any product candidates or uses thereof in the U.S. or in other foreign countries.

Further, the patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost, in a timely manner, or in all jurisdictions. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we do not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties. We may also require the cooperation of our licensors or other necessary parties, such as the co-owners of the intellectual property from which we have not yet obtained a license, in order to enforce the licensed patent rights, and such cooperation may not be provided. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

The laws of foreign countries may not protect our rights to the same extent as the laws of the U.S. and we may fail to seek or obtain patent protection in all major markets. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U.S. and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we will be unable to know with certainty whether we were the first to make any inventions claimed in any patents or patent applications, or that we were the first to file for patent protection of such inventions, nor can we know whether those from whom we license patents were the first to make the inventions claimed or were the first to file.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the U.S. and abroad. There is a substantial amount of litigation as well as administrative proceedings for challenging patents, including interference, derivation, reexamination, and other post-grant proceedings before the USPTO and oppositions and other comparable proceedings in foreign jurisdictions, involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, and we expect this to be true for the CRISPR/Cas9 space as well. Indeed, a number of third parties have filed oppositions challenging the validity, and seeking the revocation, of several CRISPR/Cas9 genome editing patents granted to UC/Vienna/Charpentier by the European Patent Office ("EPO"). To date, UC/Vienna/Charpentier have successfully defended before the EPO's opposition division the validity of their first European patent, which covers compositions comprising Cas9 and single guide RNA molecules, as well as methods of editing DNA *in vitro* or *ex vivo* using Cas9 and single guide RNAs. The opponents to this patent have appealed the decision of the EPO's opposition division. If UC/Vienna/Charpentier fail in defending the validity of its first European patent, we may lose valuable intellectual property rights, such as the right to exclude others from using such intellectual property. Such an outcome could have a material adverse effect on our business in Europe. Similarly, third parties are opposing the other patents issued by the EPO to UC/Vienna/Charpentier, including their second European patent that was recently revoked by the EPO's opposition division, a decision that UC/Vienna/Charpentier have appealed. Although the claims of these other patents are more limited in scope compared to the first European patent, the inability to defend their respective validity could result in loss of valuable rights. In addition, since the passage of the America Invents Act in 2013, U.S. law also provides for other procedures to challenge patents, including *inter partes* reviews and post-grant reviews, that add uncertainty to the possibility of challenge to our developed or licensed patents and patent applications in the future. Furthermore, for U.S. applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the USPTO to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. See the above risk factor titled "*Third-party claims of intellectual property infringement against us, our licensors or our collaborators may prevent or delay our product discovery and development efforts*."

Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to practice the invention or stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patent applications we hold is threatened, this could dissuade companies from collaborating with us to develop, and could threaten our ability to commercialize, product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market product candidates under patent protection would be reduced. Because patent applications in the U.S. and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates.

Our pending and future patent applications or the patent applications that we obtain rights to through in-licensing arrangements may not result in patents being issued which protect our technology or future product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the U.S. and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Litigation or other administrative proceedings challenging our intellectual property, including interferences, derivation, reexamination, *inter partes* reviews and post-grant reviews, may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. Furthermore, there could be public announcement of the results of hearings, motions or other interim proceedings or developments in any proceeding challenging the issuance, scope, validity and enforceability of our developed or licensed intellectual property. 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.

Any of these potential negative developments could impact the scope, validity, enforceability or commercial value of our patent rights and, as a result, have material adverse effect on our business, financial condition, results of operations or prospects.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

We may in the future be subject to claims that former employees, collaborators or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor or other claims challenging the inventorship of our patents or ownership of our intellectual property (including patents and intellectual property that we in-license). For example, the UC/Vienna/Charpentier patent family that is covered by our license agreement with Caribou is co-owned by UC/Vienna and Dr. Charpentier, and our sublicense rights are derived from the first two co-owners and not from Dr. Charpentier. Therefore, our rights to these patents are not exclusive and third parties, including competitors, may have access to intellectual property that is important to our business. In addition, we may have inventorship disputes arise from conflicting obligations of collaborators, consultants or others who are involved in developing our technology and product candidates. Litigation or other legal proceedings may be necessary to defend against these and other claims challenging inventorship. If we 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, valuable intellectual property. 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 management and other employees.

We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world.

We have limited intellectual property rights outside the U.S. Filing, prosecuting, maintaining and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the U.S. can have a different scope and strength than do those in the U.S. In addition, the laws of some foreign countries, such as China, Brazil, Russia, India and South Africa, do not protect intellectual property rights to the same extent as federal and state laws in the U.S. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U.S., or from selling or importing products made using our inventions in and into the U.S. or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as those in the U.S. These products may compete with our products and our patents or other intellectual property rights may not be effective or adequate to prevent them from competing. In addition, in jurisdictions outside the U.S., a license may not be enforceable unless all the owners of the intellectual property agree or consent to the license. Further, patients may choose to travel to countries in which we do not have intellectual property rights or which do not enforce these rights to obtain the products or treatment from competitors in such countries.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, such as China, Brazil, Russia, India and South Africa, do not favor the enforcement of patents, trade secrets and other intellectual property, particularly those relating to biopharmaceutical products, which could make it difficult in those jurisdictions for us to stop the infringement or misappropriation of our patents or other intellectual property rights, or the marketing of competing products in violation of our proprietary rights. Proceedings to enforce our 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. Furthermore, such proceedings could put our patents at risk of being invalidated, held unenforceable, or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims of infringement or misappropriation against us. We may not prevail in any lawsuits that we initiate and 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.

We may be involved in lawsuits to protect or enforce our patents, the patents of our licensors or our licenses, which could be expensive, time-consuming, and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To cease such infringement or unauthorized use, we may be required to file patent infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding or a declaratory judgment action against us, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Interference or derivation proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to, or the correct inventorship of, our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation, interference or derivation proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees.

Further, if a party to our licenses, either a licensee or licensor, were to breach or challenge our rights under the relevant license agreement (or if one of our licensor's own licensors were to challenge our licensor's rights), we may have to initiate or participate in a legal proceeding to enforce our rights. Any such legal proceeding could be expensive and time-consuming. In addition, if a court or other tribunal were to rule against us, we could lose key intellectual property and financial rights. Pursuing or defending against these legal claims, regardless of merits, would involve substantial legal expense and would be a substantial diversion of employee resources from our business. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or contractual litigation there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or proceeding. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. 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. For example, as discussed above**,** on September 26, 2019, we announced that an arbitration panel had issued an interim award concluding that both the structural and chemical guide RNAs modification technologies were exclusively licensed to us by Caribou pursuant to the Caribou License. Nevertheless, the arbitration panel noted that its decision could delay or otherwise adversely impact the development of these modified guide RNAs as human therapeutics. Thus, solely with respect to the particular modified guide RNAs, the arbitration panel stated that it will declare that Caribou has an equitable award, which it described as exclusive, perpetual and worldwide. Upon, and subject to the terms of, a final award, which will follow further legal proceedings between the parties, Caribou could be able to use the modified guide RNAs at issue to develop engineered CAR-T cells directed at CD19 as human therapeutics. Although the interim award has no effect on our rights or current programs nor on Caribou's obligations under the Caribou License, we cannot predict the potential implications and impact the interim award may have.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or before the USPTO or comparable foreign authority.

If we or one of our licensing partners initiate legal proceedings against a third-party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid or unenforceable. In patent litigation in the U.S., defendant counterclaims alleging invalidity or unenforceability are commonplace, and there are numerous grounds upon which a third-party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the U.S. or other jurisdictions, even outside the context of litigation. Such mechanisms include re-examination, *inter partes* review, post-grant review and equivalent proceedings in foreign jurisdictions, such as opposition or derivation proceedings. Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover and protect our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity of our patents, for example, we cannot be certain that there is no invalidating prior art of which we, our patent counsel, and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity, unpatentability and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. For example, as highlighted in the above risk factor entitled "*We could be unsuccessful in obtaining or maintaining adequate patent*

protection for one or more of our products or product candidates, or asserting and defending our intellectual property rights that protect our products and technologies", various third parties have filed challenges to the validity of UC/Vienna/Charpentier's European patents, which cover compositions comprising Cas9 and guide RNA ("gRNA") molecules, as well as methods of editing DNA *in vitro* or *ex vivo* using Cas9 and gRNAs. If UC/Vienna/Charpentier fail in defending the validity of these patents, we may lose valuable intellectual property rights, such as the exclusive right to use such intellectual property. Such an outcome could have a material adverse effect on our business in Europe.

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

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. Although an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees, and failure to properly legalize and submit formal documents. In any such event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

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.

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 unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. 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 future, potential customers in our markets of interest. At times, competitors 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 unregistered trademarks or trade names. Over the long term, if we are unable to successfully register our trademarks and trade names and 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 secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

Risks Related to Confidentiality

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we seek to rely on trade secret protection and confidentiality agreements to protect our proprietary and confidential information. We also utilize proprietary processes for which it would be difficult to enforce patents. In addition, other elements of our product discovery and development processes involve proprietary know-how, information, or technology that is not covered by patents. Trade secrets, however, may be difficult to protect. We seek to protect our proprietary processes, in part, by entering into confidentiality agreements with our employees, consultants, outside scientific advisors, contractors, and collaborators, and we also rely on national and state laws requiring our directors, employees, contractors and collaborators to protect our proprietary information. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, outside scientific advisors, contractors, and collaborators might intentionally or inadvertently disclose our trade secret information to competitors. In addition, competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the U.S. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the U.S. and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, or misappropriation of our intellectual property by third parties, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results, and financial condition.

We may be subject to claims that our employees, directors, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies as well as academic research institutions. We may be subject to claims that we or our employees, directors, consultants, or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims, which could result in money damages or a judicial order prohibiting the use of certain intellectual property. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to Our Common Stock

Risks Related to Investment in Securities

An active trading market for our common stock may not be sustained.

If an active market for our common stock does not continue, it may be difficult for our stockholders to sell their shares without depressing the market price for the shares or sell their shares at or above the prices at which they acquired their shares or sell their shares at the time they would like to sell. Any inactive trading market for our common stock may also impair our ability to raise capital to continue to fund our operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

The price of our common stock historically has been volatile, which may affect the price at which you could sell any shares of our common stock.

The market price for our common stock historically has been highly volatile and could continue to be subject to wide fluctuations in response to various factors. This volatility may affect the price at which you could sell the shares of our common stock, and the sale of substantial amounts of our common stock could adversely affect the price of our common stock. Our stock price is likely to continue to be volatile and subject to significant price and volume fluctuations in response to market and other factors, including:

- the success of our or competing products or technologies;
- results of clinical trials of our product candidates or those of our competitors;
- regulatory or legal developments in the U.S. and other countries;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- public perception of the safety of genome editing based therapeutics;
- the level of expenses related to any of our product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or products;
- developments or disputes concerning patent applications, issued patents or other intellectual property rights;
- the recruitment or departure of key personnel;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or the financial results of companies that are perceived to be similar to us;
- sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares;
- general economic, industry and market conditions; and
- the other factors summarized and described in this *Risk Factors* section.

In addition, companies trading in the stock market in general, and in the Nasdaq Global Market 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 the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend, in part, on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts may not publish an adequate amount of research on us, which may negatively impact the trading price for our stock. In addition, if one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. Further, if our operating results fail to meet the forecasts 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, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Risk Related to Ownership Generally

Our principal stockholders and management own a significant percentage of our stock and, if they choose to act together, will be able to control or exercise significant influence over matters subject to stockholder approval.

As of December 31, 2020, our executive officers, directors, 5% or greater stockholders and their affiliates beneficially owned approximately 51.4% of our outstanding voting stock. These stockholders may have the ability to influence us through their ownership positions. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders, acting together, may be able to control elections of directors 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 you may believe are in your best interest as one of our stockholders.

We have broad discretion over the use of our cash and cash equivalents and may not use them effectively.

Our management has broad discretion to use our cash and cash equivalents to fund our operations and could spend these funds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending our use to fund operations, we may invest our cash and cash equivalents in a manner that does not produce income or that loses value.

We incur significant costs as a result of operating as a public company, and our management is required to devote substantial time to compliance initiatives and corporate governance practices.

As a public company, and particularly since we are no longer an "emerging growth company" under applicable SEC regulations, we incur significant legal, accounting and other expenses. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the Nasdaq Global Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel devote a substantial amount of time to these compliance initiatives.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 ("Section 404"), we are required to furnish a report by our management on our internal control over financial reporting, including an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. We conduct a process each year to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we dedicate internal resources, engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that neither we nor our independent registered public accounting firm will be able to conclude that our internal control over financial reporting is effective as required by Section 404. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

Risks Related to Future Financial Condition

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

We will need additional capital in the future to continue our planned operations in addition to the proceeds we received from our initial public offering ("IPO") in May 2016 and follow-on public offerings in November 2017, June 2020, and December 2020. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. 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 in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

On August 23, 2019, we filed a Registration Statement on Form S-3, as amended (the "2019 Shelf") with the SEC, which was declared effective on September 12, 2019 (File No. 333-233448) in relation to the registration of common stock, preferred stock, debt securities, warrants and units of any combination thereof. We also simultaneously entered into an Open Market Sale Agreement (the "2019 Sales Agreement") with the Sales Agent, to provide for the offering, issuance and sale of up to an aggregate amount of $150.0 million of our common stock from time to time in "at-the-market" offerings under the 2019 Shelf and subject to the limitations thereof. We will pay to the Sales Agent cash commissions of 3.0% of the gross proceeds of sales of common stock under the 2019 Sales Agreement. In December 2019, we issued 287,231 shares of our common stock at an average price of $16.48 per share in accordance with the 2019 Sales Agreement for aggregate net proceeds of $4.4 million, after payment of cash commissions to the Sales Agent and approximately $0.2 million related to legal, accounting and other fees in connection with the sales. During the year ended December 31, 2020, we issued 2,270,161 shares of our common stock in a series of sales at an average price of $22.53 per share in accordance with the 2019 Sales Agreement, for aggregate net proceeds of $49.5 million after payment of cash commissions to the Sales Agent and legal, accounting and other fees in connection with the sales. During the three months ended March 31, 2021, we issued 641,709 shares of our common stock in a series of sales at an average price of $72.79 per share in accordance with the 2019 Sales Agreement, for aggregate net proceeds of $45.3 million after payment of cash commissions to Jefferies and approximately $0.1 million related to legal, accounting and other fees in connection with the sales. In June 2020, we issued 6,301,370 shares of our common stock, including the exercise in full by the underwriters of their option to purchase an additional 821,917 shares, at the public offering price of $18.25 per share pursuant to the 2019 Shelf for aggregate cash consideration of $107.7 million, after payment of commissions and fees and approximately $0.4 million related to legal, accounting and other fees in connection with the sales. In June 2020 we also issued 925,218 shares of our common stock to Regeneron in a private placement for an aggregate cash consideration of $30.0 million, or $32.42 per share, representing a 100% premium over the volume-weighted average trading price of the Company's common stock during the 30-day period prior to the closing. In December 2020, we issued 5,513,699 shares of our common stock, including the exercise in full by the underwriters of their option to purchase an additional 719,178 shares, at the public offering price of $36.50 per share pursuant to the 2019 Shelf for aggregate cash consideration of $188.9 million, after deducting the underwriting discount, commissions and offering expenses. In addition, sales of a substantial number of shares of our outstanding common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. Persons who were our stockholders prior to our IPO continue to hold a substantial number of shares of our common stock that many of them are now able to sell in the public market. Significant portions of these shares are held by a relatively small number of stockholders. Sales by our stockholders of a substantial number of shares, or the expectation that such sales may occur, could significantly reduce the market price of our common stock.

Risks Related to our Charter and Bylaws

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us difficult, limit attempts by our stockholders to replace or remove our current management and adversely affect our stock price.

Provisions of our certificate of incorporation and by-laws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our stock. Among other things, the certificate of incorporation and by-laws:

- permit the board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;
- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide the board of directors into three classes;
- provide that a director may only be removed from the board of directors by the stockholders for cause;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders, and may not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and meet specific requirements as to the form and content of a stockholder's notice;
- prevent cumulative voting rights (therefore allowing the holders of a plurality of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- require that, to the fullest extent permitted by law, a stockholder reimburse us for all fees, costs and expenses incurred by us in connection with a proceeding initiated by such stockholder in which such stockholder does not obtain a judgment on the merits that substantially achieves the full remedy sought;
- provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officer (or president, in the absence of a chief executive officer) or by the board of directors; and
- provide that stockholders will be permitted to amend the bylaws only upon receiving at least two-thirds of the total votes entitled to be cast by holders of all outstanding shares then entitled to vote generally in the election of directors, voting together as a single class.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder.

Our certificate of incorporation and by-laws designate certain courts as the sole and exclusive forums for certain disputes between us and 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 certificate of incorporation and by-laws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any state law claims for any derivative action or proceeding brought on our behalf alleging state law claims, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our by-laws, any action to interpret, apply, enforce, or determine the validity of our certificate of incorporation or bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine (the "Delaware Forum Provision"). The Delaware Forum Provision does not apply to claims arising under the Exchange Act or the Securities Act. Our by-laws further provide that the U.S. District Court for the District of Massachusetts will be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act (the "Federal Forum Provision"). We have chosen the U.S. District Court for the District of Massachusetts as the exclusive forum for such Securities Act causes of action because our principal executive offices are located in Cambridge, Massachusetts. Our by-laws provide that any person or entity purchasing or otherwise acquiring any interest in any shares of our common stock is deemed to have notice of and consented to the foregoing Delaware Forum Provision and the Federal Forum Provision.

The Delaware Forum Provision and the Federal Forum Provision may impose additional litigation costs on stockholders in pursuing the claims identified above, particularly if the stockholders do not reside in or near the State of Delaware or the Commonwealth of Massachusetts. Additionally, the Delaware Forum Provision and the Federal Forum Provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the Delaware Forum Provision and the Federal Forum Provision to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition. The Court of Chancery of the State of Delaware or the U.S. District Court for the District of Massachusetts 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.

Risks Related to Tax Matters

Changes in tax law may adversely affect our business and financial condition.

The laws and rules dealing with U.S. federal, state and local income taxation are routinely being reviewed and modified by governmental bodies, officials and regulatory agencies, including the Internal Revenue Service and the U.S. Treasury Department. Since we were founded in 2014, many such changes have been made and changes are likely to continue to occur in the future. It cannot be predicted whether, when, in what form, or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or issued, that could result in an increase in our or our stockholders' tax liability.

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

We have incurred substantial losses during our history and do not expect to become profitable in the near future, and we may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire. As of December 31, 2020, we had federal and state NOLs of $372.5 million and $373.1 million, respectively, some of which begin to expire in 2034. Federal and certain state NOLs generated in taxable years ending after December 31, 2017 are not subject to expiration. As of December 31, 2020, we had federal and state research and development and other credit carryforwards of approximately $15.0 million and $10.3 million, which begin to expire in 2034 and 2029, respectively. Under Sections 382 and 383 of the Code, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change NOLs, and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. We may have experienced ownership changes in the past and may experience ownership changes in the future as a result of our initial public offering in May of 2016, follow-on offerings and/or subsequent shifts in our stock ownership (some of which shifts are outside our control). As a result, if we earn net taxable income, our ability to use our pre-change NOLs and research and development tax credits to offset such taxable income and income tax, respectively, could be subject to limitations. Similar provisions of state tax law may also apply. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes.

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

None.

Item 6. Exhibits

The following exhibits are incorporated by reference or filed as part of this report.

10.1 †	License Agreement dated as of July 16, 2014 by and between Registrant (as successor in interest of Intellia Therapeutics, LLC) and Caribou Biosciences, Inc. (1)
10.2 †	License and Collaborative Research Agreement dated as of December 18, 2014 by and between Registrant and Novartis Institutes for BioMedical Research, Inc. (1)
10.3	Fourth Amended and Restated Non-Employee Director Compensation Policy (1)
31.1	Certification of the Chief Executive Officer pursuant to Rules 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (1)
31.2	Certification of the Chief Financial Officer pursuant to Rules 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (1)
32.1	Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002, by John M. Leonard, M.D., President and Chief Executive Officer of the Company, and Glenn Goddard, Executive Vice President, Chief Financial Officer of the Company. (2)
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. (1)
101.SCH	Inline XBRL Taxonomy Extension Schema Document. (1)
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document. (1)
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document. (1)
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document. (1)
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document. (1)
104	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*) (1)

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to Item 601(b)(10) of Regulation S-K.

(1) Filed with this Quarterly Report on Form 10-Q.

(2) The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or 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, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: May 6, 2021

INTELLIA THERAPEUTICS, INC.

By: /s/ John M. Leonard
John M. Leonard, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Glenn G. Goddard
Glenn G. Goddard
Executive Vice President, Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 10.1

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

Execution Copy

LICENSE AGREEMENT

This License Agreement (this "Agreement"), dated as of July 16, 2014 (the "Effective Date"), is made by and between Caribou Biosciences, Inc., a Delaware corporation ("Caribou") and Intellia, LLC, a Delaware limited liability company ("Intellia"). Each of Caribou and Intellia may be referred to herein as a "Party" or together as the "Parties."

WHEREAS, Caribou owns and has rights to certain Patents and technology relating to researching, developing and commercializing cellular engineering technologies, including CRISPR/Cas9 Technology (as such capitalized terms are defined hereinafter);

WHEREAS, Atlas Ventures or its Affiliates and other investors are willing to invest in an entity to Exploit Product Candidates and Products in the Intellia Field and Atlas Ventures and Caribou have cooperated to form Intellia as such an entity to do so (such creation of Intellia, the series of transactions by which the ownership interest in Intellia will be contributed to Intellia Therapeutics, Inc., a wholly-owned subsidiary of Intellia Therapeutics, LLC, the merger of Intellia with Intellia Therapeutics, Inc. in which Intellia Therapeutics, Inc. will be the surviving entity, and the investment in Intellia Therapeutics, LLC, the "Spinout Transaction"); and

WHEREAS, the Parties desire to enter into an agreement pursuant to which Caribou will grant an exclusive, worldwide license to Intellia under the Caribou IP to Exploit Product Candidates and Products in the Intellia Field and Intellia will grant an exclusive, worldwide license to Caribou under the Intellia IP to Exploit Intellia IP in the Caribou Field (as such capitalized terms are defined hereinafter), all on the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the amount and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. Definitions. The following terms and their correlatives when capitalized will have the meanings set forth below:

1.1 "Affiliate" of a Person means any other Person which (directly or indirectly) is controlled by, controls or is under common control with such Person, but only for so long as such entity is controlled by, controls or is under common control with such Person. For purposes of this definition, "control" (including the terms "controlled by" and "under common control with"), with respect to the relationship between or among two or more Persons, shall mean (a) with respect to a corporate entity direct or indirect ownership of fifty percent (50%) or more (or, if less than fifty percent (50%), the maximum ownership interest permitted by applicable Law) of the stock or shares having the right to vote for the election of directors of such corporate entity or (b) with respect to an entity that is not a corporation the power to direct or cause the direction of the affairs or management of a Person, whether through the ownership of voting securities, as trustee, personal representative or executor, by contract or otherwise, including, without limitation, the ownership, directly or indirectly, of securities having the power to elect a majority of the board of directors or similar body governing the affairs of such Person; provided however that, pursuant to a Caribou and Intellia written agreement, "Affiliate" may also include joint ventures, whether corporations or not, between a Party and one or more other Persons formed to Exploit one or more Products or Product Candidates (and related activities) [***].

1.2 “Bankruptcy Event” means, with respect to a Party:

(a) the entry by a court of competent jurisdiction of: (i) a decree or order for relief in respect of a Party in an involuntary case or proceeding under any Bankruptcy Law or (ii) a decree or order (A) adjudging a Party bankrupt or insolvent, (B) approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of, or in respect of, a Party under any Bankruptcy Law, (C) appointing a custodian of a Party or of any substantial part of the property of a Party, or (D) ordering the winding-up or liquidation of the affairs of a Party, and in each case, the continuance of any such decree or order for relief or any such other decree or order remains unstayed and in effect for a period of [***] days; or

(b) (i) the commencement by a Party of a voluntary case or proceeding under any Bankruptcy Law or of any other case or proceeding to be adjudicated as bankrupt or insolvent, (ii) the consent by a Party to the entry of a decree or order for relief in respect of such Party in an involuntary case or proceeding under any Bankruptcy Law or to the commencement of any bankruptcy or insolvency case or proceeding against such Party, (iii) the filing by a Party of a petition or answer or consent seeking reorganization or relief under any Bankruptcy Law, (iv) the consent by a Party to the filing of such petition or to the appointment of or taking possession by a custodian of such Party or of any substantial part of the property of such Party, (v) the making by a Party of an assignment for the benefit of creditors, (vi) the admission by a Party in writing of its inability to pay its debts generally as they become due, or (vii) the approval by stockholders of a Party of any plan or proposal for the liquidation or dissolution of such Party.

1.3 “Bankruptcy Law” means Title 7 or Title 11, U.S. Code, or any similar federal, state or foreign law for the relief of debtors.

1.4 “BLA” means a Biologics License Application filed with the FDA or an equivalent application to any Regulatory Authority (including an NDA or its foreign equivalent) requesting Regulatory Approval for a new therapeutic product, including for a Product.

1.5 “Breached In-License” has the meaning set forth in Section 7.2.

1.6 “Caribou Field” means any and all uses and applications outside of the Intellia Field.

1.7 “Caribou In-Licenses” means, collectively, the Caribou Pre-Existing In-Licenses and the Caribou Included In-Licenses.

1.8 “Caribou Included In-License” has the meaning set forth in Section 2.7(a).

1.9 “Caribou Indemnitees” has the meaning set forth in Section 6.6(a).

1.10 “Caribou IP” means all Patents (including those set forth on Exhibit B) and Know-How Controlled by Caribou or any of its Affiliates (including pursuant to Caribou In-Licenses) as of the Effective Date or at any time during the Term prior to the IP Cutoff Date, directed to or comprising site-specific genome engineering using CRISPR/Cas9 Technology that are necessary or useful to Develop, Manufacture or Commercialize Products and/or Product Candidates in the Intellia Field and (b) any and all Technology (as defined under the Service Agreement) developed by Caribou under the Services Agreement (including such Patents and Know-How).

1.11 “Caribou New In-Licenses” means a New In-License between Caribou or any of its Affiliates and a Third Party.

1.12 “Caribou Patents” means all Patents within the Caribou IP.

1.13 “Caribou Pre-Existing In-Licenses” means the agreements set forth on Exhibit A, as such agreements may be amended or restated.

1.14 “Cas9 Protein” means [***].

1.15 “Change of Control” means, with respect to a Party: (a) the sale of all or substantially all of such Party’s assets or business (in one transaction or a series of related transactions); (b) a merger, reorganization or consolidation involving such Party in which the stockholders of the Party, immediately prior to the merger, reorganization or consolidation, would not, immediately after the merger, reorganization or consolidation, “beneficially own” (as such term is defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended), directly or indirectly, shares representing in the aggregate more than fifty percent (50%) of the combined voting power of the entity issuing cash or securities in the merger, reorganization or consolidation (or of its ultimate parent entity, if any); or (c) a person or entity becomes the “beneficial owner” (as defined above) of more than fifty percent (50%) of the voting securities of such Party, other than directly from such Party [***].

1.16 “Commercialize” or “Commercialization” means [***].

1.17 “Confidential Information” has the meaning set forth in Section 5.1.

1.18 “Control” or “Controlled” means, with respect to any Know-How or Patent, the possession (whether by ownership or license or sublicense) by a Party of the ability to use or practice such Know-How or Patent to grant to the other Party a license or access as provided herein to such item, without violating the terms of any agreement or other arrangement with, or the rights of, any Third Party. [***].

1.19 “CRISPR/Cas9 Technology” means [***].

1.20 “Cross-Licensed Patents” means the Caribou Patents and the Intellia Patents. A Party’s Cross-Licensed Patents are, for Caribou, the Caribou Patents and, for Intellia, the Intellia Patents.

1.21 “Develop” or “Development” means any and all research and preclinical and clinical drug development activities, including: research, test method development and stability testing, toxicology, formulation, optimization, modification, enhancement, improvement, process development, qualification and validation, Manufacture scale-up, development-stage Manufacturing, quality assurance/quality control, clinical studies, statistical analysis and report writing, the preparation and submission of Regulatory Filings, regulatory affairs with respect to the foregoing and all other activities necessary or useful or otherwise requested or required by a Regulatory Authority as a condition or in support of obtaining or maintaining a Regulatory Approval.

1.22 “Disclosing Party” has the meaning set forth in Section 5.1.

1.23 “Disputes” has the meaning set forth in Section 8.1.

1.24 “EMA” means the Regulatory Authority known as either the European Medicines Agency or the European Agency for the Evaluation of Medicinal Products and any successor agency thereto.

1.25 “Executive Officer” means [***]. Either Party may change its Executive Officer upon written notice to the other Party [***].

1.26 “Exploit” means, with respect to any subject matter, to make, have made, import, use, sell, offer for sale, Develop, Manufacture, Commercialize and otherwise exploit such subject matter.

1.27 “Extensions” has the meaning set forth in Section 4.1(f).

1.28 “FDA” means the United States Food and Drug Administration and any successor agency thereto.

1.29 “Governmental Authority” means any United States federal, state or local or any foreign government, or political subdivision thereof, or any multinational organization or authority or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), or any governmental arbitrator or arbitral body.

1.30 “IP Cutoff Date” means [***].

1.31 “Included In-License Addendum” has the meaning set forth in Section 2.7(a).

1.32 “In-License Addendum” has the meaning set forth in Section 2.7(d).

1.33 “In-License Election Notice” has the meaning set forth in Section 2.7(a).

1.34 “In-License Sublicensee Party” has the meaning set forth in Section 2.7(a).

1.35 “In-Licensing Party” has the meaning set forth in Section 2.7(a).

1.36 “Intellia Field” means any and all therapeutic, prophylactic and palliative uses and applications for [***] diseases and conditions in humans using CRISPR/Cas9 Technology [***], and companion diagnostics for Product or Product Candidates. [***].

1.37 “Intellia Included In-Licenses” has the meaning set forth in Section 2.7(a).

1.38 “Intellia Indemnitees” has the meaning set forth in Section 6.6(b).

1.39 “Intellia IP” means all Patents and Know-How Controlled by Intellia or any of its Affiliates (including pursuant to Intellia Included In-Licenses) as of the Effective Date or at any time during the Term prior to the IP Cutoff Date, in each case, directed to or comprising site-specific genome engineering using CRISPR/Cas9 Technology that are necessary or useful to Develop, Manufacture or Commercialize products in the Caribou Field.

1.40 “Intellia Molecular Target” means any and all Molecular Targets [***].

1.41 “Intellia New In-Licenses” means a New In-License between Intellia or any of its Affiliates and a Third Party.

1.42 “Intellia Patents” means all Patents within the Intellia IP.

1.43 “Issuing Party” has the meaning set forth in Section 5.5(c).

1.44 “Know-How” means all inventions, discoveries, commercial, technical, scientific and other know-how and information, trade secrets, knowledge, technology, methods, processes, practices, formulae, instructions, skills, techniques, procedures, experiences, ideas, designs, drawings, assembly procedures, computer programs, assays and biological methodology, specifications, data and results (including biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, laboratory, preclinical, clinical, safety, Manufacturing and quality control data and know-how, including regulatory data, study designs, protocols, laboratory notes and notebooks) in written, electronic or any other tangible form now known or hereafter developed, in all cases, whether or not confidential, proprietary, patented or patentable.

1.45 “Law” or “Laws” means all laws, statutes, rules, regulations, orders, judgments, or ordinances having the effect of law of any federal, national, multinational, state, provincial, county, city or other political subdivision.

1.46 “Losses” has the meaning set forth in Section 6.6(a).

1.47 “Manufacture” or Manufacturing” means all activities related to the production, manufacture, processing, filling, finishing, packaging, labeling, shipping and holding of product or any intermediate thereof, including process development, process qualification and validation, scale-up, commercial manufacture and analytic development, product characterization, stability testing, quality assurance and quality control. “Manufacturing” refers to both pre-clinical and clinical Manufacturing for Development, and Manufacturing for Commercialization.

1.48 “Material Adverse Effect” means a material adverse effect on the business, assets (including intangible assets), liabilities, financial condition, property, prospects or results of operations of Caribou or any of its subsidiaries, taken as a whole.

1.49 “Materials” means any tangible chemical or biological material [***], along with any tangible chemical or biological material embodying any Know-How.

1.50 “Modulate” or “Modulation” means, with respect to a Molecular Target, modulation or modification of the expression of a product of such Molecular Target [***].

1.51 “Molecular Target” means [***].

1.52 “New In-License” means any agreement entered into by a Party or any of its Affiliates and one or more Third Parties [***].

1.53 “NDA” means a New Drug Application or Supplemental New Drug Application filed with the FDA (including amendments and supplements thereto).

1.54 “Paragraph IV Certification” has the meaning set forth in Section 4.1(f)(iii).

1.55 “Patent” means (a) a patent or a patent application, (b) any additions, divisions, continuations, and continuations-in-part of any of the foregoing, and (c) all patents issuing on any of the foregoing patent applications, together with all invention certificates, substitutions, reissues, reexaminations, registrations, supplementary protection certificates, confirmations, renewals and extensions of any of (a), (b) or (c), and foreign counterparts of any of the foregoing.

1.56 “Patent Costs” means the reasonable, documented, out-of-pocket costs and expenses paid to outside legal counsel, and filing and maintenance expenses, actually and reasonably incurred by a Party in the Prosecution of Patents.

1.57 “Peptide” means any single amino acid or polypeptide [***].

1.58 “Person” means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, governmental authority or agency, or any other entity not specifically listed herein.

1.59 “Product” means any product [***] for use in the Intellia Field.

1.60 “Product Candidate” means [***] for use in the Intellia Field.

1.61 “Prosecute” or “Prosecution” means in relation to any Patents, (a) to prepare and file patent applications, including re-examinations or re-issues thereof, and represent applicants or assignees before relevant patent offices or other relevant Governmental Authorities during examination, re-examination and re-issue thereof, in appeal processes and interferences, or any equivalent proceedings [***], (b) to defend all such applications against Third Party oppositions or other challenges, (c) to secure the grant of any patents arising from such patent application, (d) to maintain in force any issued patent (including through payment of any relevant maintenance fees), (e) to obtain and maintain patent term extensions or supplemental protection certificates or their equivalents, and (f) to make all decisions with regard to any of the foregoing activities.

1.62 “Receiving Party” has the meaning set forth in Section 5.1.

1.63 “Regulatory Approval” means, with respect to a country or extra-national territory, any and all approvals (including NDAs and BLAs), licenses, registrations or authorizations of any Regulatory Authority necessary in order to commercially distribute, sell or market a product in such country or some or all of such extra-national territory, but not including any pricing or reimbursement approvals.

1.64 "Regulatory Authority" means any national (*e.g.*, the FDA), supra-national (*e.g.*, the EMA), regional, state or local regulatory agency, department, bureau, commission, council or other governmental entity, in any jurisdiction in the world, involved in the granting of Regulatory Approval.

1.65 "Regulatory Filings" means any submission to a Regulatory Authority of any appropriate regulatory application together with any related correspondence and documentation, and will include any submission to a regulatory advisory board, marketing authorization application, and any supplement or amendment thereto.

1.66 "Related Party" means, with respect to a Party, any Person which (directly or indirectly) owns, is owned by or has common ownership with such Party, when such ownership interest is [***]% or more of the stock, shares, membership or other similar interest in or by such Person.

1.67 "Related Party Sublicense" has the meaning set forth in Section 2.3(d).

1.68 "Release" has the meaning set forth in Section 5.5(c).

1.69 "Required In-License Provisions" has the meaning set forth in Section 2.7(d).

1.70 "Research License" has the meaning set forth in Section 2.1.

1.71 "Reviewing Party" has the meaning set forth in Section 5.5(c).

1.72 "SEC" has the meaning set forth in Section 5.5(b).

1.73 "Spinout Transaction" has the meaning set forth in the Recitals of this Agreement.

1.74 "Sublicensee" means any Person that is granted a sublicense as permitted by Section 2.3 either (a) directly by a Party or (b) indirectly by any Person granted rights by a Party pursuant to sub-clause (a).

1.75 "Therapeutic License" has the meaning set forth in Section 2.1.

1.76 "Term" has the meaning set forth in Section 7.1.

1.77 "Territory" means [***].

1.78 "Third Party" means any Person other than Caribou, Intellia and their respective Affiliates.

1.79 "Third Party Claims" has the meaning set forth in Section 6.6(a).

1.80 [***].

1.81 "Third Party Licenses" means the Caribou In-Licenses and the Intellia Included In-Licenses. A Party's Third Party Licenses are, for Caribou, the Caribou In-Licenses and, for Intellia, the Intellia Included In-License.

1.82 "United States" or "U.S." means the United States of America, including its territories and possessions, the District of Columbia and Puerto Rico.

2. License Grants and Obligations.

2.1 Caribou License Grant. Subject to the terms and conditions of this Agreement, Caribou hereby grants to Intellia (i) an exclusive (even as to Caribou), worldwide license, with the right to grant sublicenses [***] solely as described in Section 2.3, under the Caribou IP to Exploit Products in the Intellia Field in the Territory ("Therapeutic License") and (ii) a non-exclusive, worldwide license, with the right to grant sublicenses [***] solely as described in Section 2.3, under the Caribou IP to conduct research and Development on Product Candidates and Products [***] ("Research License"). [***]

2.2 Intellia License Grant. Subject to the terms and conditions of this Agreement, Intellia hereby grants to Caribou an exclusive (even as to Intellia), worldwide license, with the right to grant sublicenses [***] solely as described in Section 2.3, under the Intellia IP to Exploit [***] products and/or services in the Caribou Field.

2.3 Sublicensing Rights.

(a) The license(s) granted to Intellia in Section 2.1 and to Caribou in Section 2.2 may be sublicensed, in full or in part, by Intellia and Caribou, respectively, (each, the "Sublicensing Party") by a written agreement to its Affiliates and Third Parties (with the further right to sublicense [***] provided that the following shall likewise apply with respect to sublicenses granted by a Sublicensee), provided, that:

(i) the Sublicensing Party will provide to the other Party a copy of any sublicense agreement with a Sublicensee within [***] days of execution thereof, which sublicense agreement may be redacted as necessary to protect commercially sensitive information to the extent such information is not reasonably necessary to determine compliance with this Agreement or to determine the rights granted under any of the Caribou IP or Intellia IP, as applicable (together with an accurate English translation of such sublicense, if applicable) provided that if such agreement is with a Related Party the Sublicensing Party shall provide an unredacted copy thereof;

(ii) the Sublicensing Party will be responsible for any and all obligations of such Sublicensee as if such Sublicensee were "Intellia" or "Caribou", as applicable, hereunder;

(iii) any such Sublicensee will agree in writing to be bound by identical obligations as the Sublicensing Party hereunder with respect to the activities of such Sublicensee hereunder;

(iv) to the extent that the Sublicensing Party or any Sublicensee grants a sublicense under any intellectual property subject to a Caribou In-License or Intellia Included In-License, as applicable, such sublicense (and such further sublicensee) will be subject to the terms of such Caribou In-License or Intellia Included In-License, including such sublicensee's compliance with the Required In-License Provisions [***].

2.4 No Implied Rights. No license, sublicense or other right is or will be created or granted hereunder by implication, estoppel or otherwise. Any licenses, sublicenses or rights will be granted only as expressly provided in this License Agreement and each Party retains all other rights under its intellectual property. Intellia agrees that neither it, nor any of its Affiliates or sublicensees, will use or otherwise exploit the Caribou IP, except as expressly licensed and permitted in this Agreement. Caribou agrees that neither it, nor any of its Affiliates or sublicensees, will use or otherwise exploit the Intellia IP, except as expressly licensed and permitted in this Agreement.

2.5 Parties' Activities. As of and after the Effective Date, as between the Parties, except as expressly provided herein or otherwise agreed in writing by the Parties, each Party will be solely responsible for, and will bear all of the costs and expenses of, all its activities within its respective field (i.e., the Caribou Field with respect to Caribou and the Intellia Field with respect to Intellia), including all Development, Manufacturing and Commercialization activities.

2.6 Technical Assistance.

(a) From time to time during the Term, Caribou will reasonably cooperate with Intellia to transfer to Intellia a copy of any Know-How licensed to Intellia under Section 2.1 that has not been previously transferred to Intellia.

(b) From time to time during the Term, Intellia will reasonably cooperate with Caribou to transfer to Caribou a copy of any Know-How licensed to Caribou under Section 2.2 that has not been previously transferred to Caribou.

2.7 Third-Party Licenses.

(a) New In-Licenses. Each Party may independently negotiate one or more New In-Licenses. In which case, the Party that enters into such New In-License ("In-Licensing Party") will notify in writing the other Party ("In-License Sublicensee Party") of such agreement. In the event such notice is given, such In-License Sublicensee Party may

elect at any time within [***] days after receipt of such notice to take the benefit of such New In-License ("In-License Opt-In Period") by sending written notice of such election ("In-License Election Notice") to such In-Licensing Party and, in such case the Parties shall enter into an addendum ("Included In-License Addendum") setting forth the material terms and conditions with which the In-License Sublicensee Party and its Affiliates and any Sublicensee thereunder must comply with or are applicable with respect to such New In-License. From the date of execution by each Party of such Included In-License Addendum and subject to Section 2.7(b)(ii) and compliance with the terms of such Included In-License Addendum, [***] such New In-License will be either (A) in the case of a Caribou New In-License that Intellia so elects to take, a "Caribou Included In-License," or (B) in the case of an Intellia New In-License that Caribou so elects to take, an "Intellia Included In-License." Either Party may instead elect not to take the benefit of a New In-License either by not responding to the In-Licensing Party's original notice within such In-License Opt-In Period or by expressly notifying the In-Licensing Party of such rejection by return written notice at any time during such In-License Opt-In Period [***].

(b) Payments for Third Party Licenses.

(i) Caribou Pre-Existing In-Licenses. With respect to any Caribou Pre-Existing In-License, Caribou will be responsible for all payments required to be paid to the licensor under such Caribou Pre-Existing In-License [***].

(ii) Caribou Included In-Licenses and Intellia Included In-Licenses. With respect to each Caribou Included In-License and Caribou as In-Licensing Party thereunder and each Intellia Included In-License and Intellia as In-Licensing Party thereunder, the In-Licensing Party will be responsible for all payments required to be paid to the licensor under such Caribou Included In-License or Intellia Included In-License, as applicable [***].

(iii) At any time during the Term, (A) Intellia may request of Caribou the status of any payments owed by Caribou to any licensor under any of the Caribou In-Licenses, and (B) Caribou may request of Intellia the status of any payments owed by Intellia to any licensor under any of the Intellia Included In-Licenses.

(c) Maintenance of Third Party Licenses; Stand-By License.

(i) Caribou.

(A) Subject to Intellia paying all amounts due hereunder and complying with the Required In-License Provisions with respect to Caribou In-Licenses, Caribou (1) will duly perform and observe all of its obligations under each of the Caribou In-Licenses in all material respects and maintain in full force and effect each of the Caribou In-Licenses, including payment of royalties and other amounts to the counterparty of any such Caribou In-License, and (2) will not, without Intellia's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), (x) amend, modify, restate, cancel, supplement or waive any provision of any Caribou In-License, or grant any consent thereunder, or agree to do any of the foregoing, in each case in a manner that would materially adversely affect Intellia's rights hereunder, and in any event without giving Intellia at least [***] prior written notice of any amendment, modification, restatement, cancellation, supplement or waiver of any provision of any of the Caribou In-Licenses in each case in a manner that would materially adversely affect Intellia's rights hereunder, or (y) exercise any right to terminate any of the Caribou In-Licenses in a manner that would materially adversely affect Intellia's rights hereunder. Caribou will provide Intellia with written notice as promptly as practicable (and in any event within [***]) after becoming aware of any of the following: (I) any material breach or default by Caribou or any of its Affiliates of any covenant, agreement or other provision of a Caribou In-License, (II) any notice or claim from the counterparty to a Caribou In-License terminating or providing notice of termination of such Caribou In-License, or (III) any notice or claim alleging any breach of default under any Caribou In-License. [***]. Caribou's obligations under this Section 2.7(c)(i)(A) shall continue on a Caribou In-License-by-Caribou In-License basis for the term of such Caribou In-License.

[***]

(ii) Intellia.

(A) Subject to Caribou paying all amounts due hereunder and complying with the Required In-License Provisions with respect to Intellia's Included In-Licenses, Intellia (1) will duly perform and observe all of its obligations under each of the Intellia Included In-Licenses in all material respects and maintain in full force and effect each of the Intellia Included In-Licenses, including payment of royalties and other amounts to the counterparty of any such Intellia Included In-License, and (2) will not, without Caribou's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), (x) amend, modify, restate, cancel, supplement or waive any provision of any Intellia Included In-License, or grant any consent thereunder, or agree to do any of the foregoing, in each case in a manner that would materially adversely affect Caribou's rights hereunder, and in any event without giving Caribou at least [***] prior written notice of any amendment, modification, restatement, cancellation, supplement or waiver of any provision of any of the Intellia Included In-Licenses in each case in a manner that would materially adversely affect Caribou's rights hereunder, or (y) exercise any right to terminate any of the Intellia Included In-Licenses in a manner that would materially adversely affect Caribou's rights hereunder. Intellia will provide Caribou with written notice as promptly as practicable (and in any event within [***]) after becoming aware of any of the following: (I) any material breach or default by Intellia or any of its Affiliates of any covenant, agreement or other provision of an Intellia Included In-License, (II) any notice or claim from the counterparty to an Intellia Included In-License terminating or providing notice of termination of such Intellia Included In-License, or (III) any notice or claim alleging any breach of default under any Intellia Included In-License. [***]. Intellia's obligations under this Section 2.7(c)(ii)(A) shall continue on an Intellia Included In-License-by-Intellia Included In-License basis for the term of such Intellia Included In-License.

[***]

(d) Compliance with Third Party Licenses. It is understood that the Third Party Licenses may require that Sublicensees comply with certain terms of such Third Party Licenses or that certain terms and conditions are applicable with respect to such Third Party Licenses ("Required In-License Provisions"). Each Party shall comply, and shall cause its Sublicensees to comply, with the Required In-License Provisions of the other Party's Third Party Licenses as a sublicensee thereunder and such Required In-License Provisions are deemed incorporated by reference into this Agreement. Without limiting the generality of the foregoing, the Required In-License Provisions of each Third Party License existing as of the Effective Date are those set forth in an addendum on Exhibit D (each such addendum and each Included In-License Addendum, an "In-License Addendum"). Without limiting the foregoing, the applicable terms and conditions herein (including Articles 2 and 4) applicable to the Patents and Know-How subject to a Caribou In-License or Intellia Included In-License, as applicable, are subject to and limited by the applicable terms and conditions of such Caribou In-License or Intellia Included In-License, as applicable, including as set forth on the corresponding In-License Addendum.

2.8 [***].

2.9 Section 365(n) of the Bankruptcy Code. All rights and licenses granted pursuant to any Section of this Agreement are, and will be deemed to be, rights and licenses to "intellectual property" (as defined in Section 101(35A) of title 11 of the United States Code and of any similar provisions of applicable Laws under any other jurisdiction (the "Bankruptcy Code")). Each Party agrees that the other Party, as a licensee of rights and licenses under this Agreement, will retain and may fully exercise all of its rights and elections under the Bankruptcy Code. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against a Party under the Bankruptcy Code or analogous provisions of applicable Laws outside the United States, the other Party will be entitled to a complete duplicate of (or complete access to, as appropriate) any intellectual property licensed to such Party and all embodiments of such intellectual property, which, if not already in such Party's possession, will be promptly delivered to it (a) upon any such commencement of a bankruptcy proceeding upon such Party's written request therefor, unless the Party in the bankruptcy proceeding elects to continue to perform all of its obligations under this License Agreement or (b) if not delivered under clause (a), following the rejection of this License Agreement in the bankruptcy proceeding, upon written request therefor by the other Party. The Parties further agree that, upon the occurrence of a Bankruptcy Event with respect to a Party, each Party shall have the right to retain and enforce their rights under this Agreement, subject to Section 7.5.

3. Diligence.

Intellia shall use commercially reasonable and diligent efforts to research, Develop, Manufacture and Commercialize at least [***] Product in the Territory. Intellia shall keep Caribou reasonably informed as to its (and its Affiliates' and Sublicensees') Development, Manufacture and Commercialization activities related to Product in the Territory, but no more frequently than [***].

4. Patent Prosecution, Infringement and Extensions.

4.1 Prosecution and Maintenance.

(a) Each Party shall control the Prosecution of its Cross-Licensed Patents. Each Party shall: (i) keep the other Party reasonably informed regarding its activities with respect to the Prosecution of its Cross-Licensed Patents, including by providing to the other Party for its review copies of draft applications of such Patents and substantive responses and other correspondence between patent offices and such Party pertaining to such Patents reasonably in advance of the deadline for filing; (ii) provide the other Party an opportunity to timely comment on such draft applications, responses and other correspondence pertaining to such Patents; and (iii) consider in good faith any reasonable comments thereon timely provided to such Party, provided that such Party shall implement the other Party's timely comments regarding claims of such Patents directed to the other Party's respective field [***].

(b) Intellia will be responsible for thirty percent (30%) of the Patent Costs incurred and paid by Caribou in connection with Prosecution activities relating to the Caribou Patents [***]. Caribou will be responsible for thirty percent (30%) of the Patent Costs incurred and paid by Intellia in connection with Prosecution activities relating to the Intellia Patents [***].

(c) [***]

(d) Either Party may at any time send a written notice to the other identifying any Patent within the Caribou Patents or the Intellia Patents, as applicable, that such Party no longer wishes to be kept informed and provide comments with respect to the Prosecution thereof pursuant to Section 4.1(a), and, in such case and from the date of such notice such Party's payment obligation of any Patent Costs incurred in connection with Prosecution activities relating to such Patent pursuant to Section 4.1(b) shall cease and the other Party's obligations under Section 4.1(a) with respect to such Patent shall terminate.

(e) Solely by a Party. If either Party determines to abandon any Patent, within [***] such Party shall provide the other Party with written notice of such decision at least [***] days prior to the date on which such abandonment would become effective. In such event, the other Party, at its sole expense, may assume control of the Prosecution of any such Patent [***].

(f) Patent Extensions; Orange Book Listings; Patent Certifications.

(i) Patent Term Extension. Each Party will have the sole right to obtain patent term extensions or supplemental protection certificates or their equivalents in any country ("Extensions") for its Cross-Licensed Patents [***].

(ii) Data Exclusivity and Orange Book Listings. With respect to data exclusivity periods (such as those periods listed in the Orange Book (including any available pediatric extensions), periods provided for under 42 U.S.C. §262 (including any available pediatric extensions), or periods under national implementations of Article 10.1(a)(iii) of Directive 2001/EC/83 (including pediatric extensions and supplementary protection certificates) , and all equivalents in any country), [***] will seek and maintain all such data exclusivity periods that may be available for any Products. [***] will determine which Caribou Patents or Intellia Patents, if any, will be listed in the Orange Book, listed pursuant to Section 262(l) of the Biologics Price Competition and Innovation Act of 2010 ("Biosimilar Act"), or included in any similar patent listing in any country with respect to Products. [***].

(iii) Notification of Patent Certification. Each Party will [***] notify, and provide the other Party with copies of any allegations of alleged patent invalidity, unenforceability or non-infringement of a Caribou Patent or Intellia Patent,

as the case may be, pursuant to a Paragraph IV Patent Certification by a Third Party filing an Abbreviated New Drug Application or an application under §505(b)(2) of the United States Federal Food, Drug, and Cosmetic Act (as amended or any replacement thereof), in relation to an application under Section 262(k) of the Biosimilar Act, or any other similar patent certification by a Third Party, and any foreign equivalent thereof ("Paragraph IV Certification"). Such notification and copies will be provided to such other Party within [***] days after Caribou or Intellia, as applicable, receives such certification, and will be sent to the address set forth in Section 8.13.

(g) Cooperation. Each Party will reasonably cooperate with the other Party in the Prosecution of the Caribou Patents and the Intellia Patents. Such cooperation includes promptly executing all documents, or requiring inventors, subcontractors, employees and consultants and agents of such Party and its Affiliates and its Sublicensees, to execute all documents, as reasonable and appropriate so as to enable the Prosecution of any such Caribou Patents or Intellia Patents, as applicable, in any country.

(h) Third Party Rights.

(i) To the extent that a Third Party licensor of Caribou has retained any right to Prosecute any Caribou Patent licensed to Caribou pursuant to a Caribou In-License or to otherwise be involved in such activities, Caribou will use commercially reasonable efforts to cause such Third Party licensor to take the actions specified by this Section 4.1, but Caribou will not be deemed to be in breach of its obligations under this Section 4.1 if, after using such commercially reasonable efforts, it is unable to comply with such obligations because of actions taken or not taken by such Third Party licensor.

(ii) To the extent that a Third Party licensor of Intellia has retained any right to Prosecute any Intellia Patent licensed to Intellia pursuant to an Intellia Included In-License or to otherwise be involved in such activities, Intellia will use commercially reasonable efforts to cause such Third Party licensor to take the actions specified by this Section 4.1, but Intellia will not be deemed to be in breach of its obligations under this Section 4.1 if, after using such commercially reasonable efforts, it is unable to comply with such obligations because of actions taken or not taken by such Third Party licensor.

4.2 Enforcement.

(a) Notice. Each of Caribou and Intellia (i) will [***] notify, in writing, the other Party upon learning of (A) any infringement or threatened infringement by a Third Party of the Caribou Patents or the Intellia Patents [***], or (B) any infringement or threatened infringement by a Third Party of the Caribou Patents or the Intellia Patents [***], and (ii) will, along with such notice, supply such other Party with any evidence in its possession pertaining thereto.

(b) Generally.

(i) For any judicial or arbitration action initiated or related to a Paragraph IV Certification or a patent listed in the Orange Book for a Product, Intellia shall, as between the Parties, have the sole right, but not the obligation, using counsel of its choosing and at its sole cost and expense, to institute enforcement actions (or take other appropriate legal action) and defend against declaratory judgments.

(ii) Except as otherwise expressly provided in this Section 4.2 [***] as between the Parties, (x) Caribou shall have the sole right, but not the obligation, using counsel of its choosing and at its sole cost and expense, to institute enforcement actions (or take other appropriate legal action) and defend against declaratory judgments with respect to Patents in the Caribou Patents and (y) Intellia shall have the sole right, but not the obligation, using counsel of its choosing and at its sole cost and expense, to institute enforcement actions (or take other appropriate legal action) and defend against declaratory judgments with respect to Patents in the Intellia Patents.

(c) Intellia Competitive Infringement. In the event Caribou does not institute enforcement action under a Patent within the Caribou Patents against Intellia Competitive Infringement (or has not otherwise abated such infringement) within [***] days after a written request by Intellia to do so, Intellia will have the right, but not the obligation, using counsel of its choosing and at its sole cost and expense, to take action to enforce such Patent against such Third Party for such Intellia Competitive Infringement [***]. Intellia will keep Caribou reasonably

informed of all developments in the prosecution or settlement of such suit or action, including by providing copies of all documents received or filed in connection with any such suit or action, which information and documents will be subject to Section 5.

(d) Caribou Competitive Infringement. In the event Intellia does not institute enforcement action under a Patent within the Intellia Patents against Caribou Competitive Infringement (or has not otherwise abated such infringement) within [***] days after a written request by Caribou to do so, Caribou will have the right, but not the obligation, using counsel of its choosing and at its sole cost and expense, to take action to enforce such Patent against such Third Party for such Caribou Competitive Infringement [***]. Caribou will keep Intellia reasonably informed of all developments in the prosecution or settlement of such suit or action, including by providing copies of all documents received or filed in connection with any such suit or action, which information and documents will be subject to Section 5.

(e) Cooperation. With respect to any suit or action brought by Intellia pursuant to Section 4.2(b) and Section 4.2(c), Caribou will cooperate, and, with respect to any suit or action brought by Caribou pursuant to Section 4.2(b) and 4.2(d), Intellia will cooperate, with such enforcing Party (as may be reasonably requested by such enforcing Party and at such enforcing Party's expense), including by (i) providing access to relevant documents and other evidence, (ii) making its and its Affiliates and licensees and Sublicensees and all of their respective employees, subcontractors, consultants and agents (to the extent such non-enforcing Party is able with respect to licensees and Sublicensees) available at reasonable business hours and for reasonable periods of time, but only to the extent relevant to such suit or action, and (iii) if necessary, by being joined as a party, subject to, for this clause (iii), the enforcing Party agreeing to indemnify such non-enforcing Party for its involvement as a named party in such suit or action and paying those Patent Costs incurred by such Party in connection with such joinder.

(f) Settlement; Damages. Neither Intellia, with respect to any suit or action brought by Intellia pursuant to Section 4.2(c), nor Caribou, with respect to any suit or action brought by Caribou pursuant to Section 4.2(d), will settle or consent to an adverse judgment, or make any admissions or assert any position in a manner that would adversely affect the rights or interests of the other Party (including by making any admission or assertion of any position that would adversely affect the scope, validity or enforceability of any Patents within the Caribou Patents or Intellia Patents, as applicable) in any such suit or action without the prior written consent of the other Party (such consent not to be unreasonably withheld, conditioned or delayed). [***]. Intellia, with respect to any suit or action brought by Intellia [***], and Caribou, with respect to any suit or action brought by Caribou [***], will have the right to retain in full any damages or other sums recovered in such suit or action or in the settlement thereof after reimbursement of each Parties' costs and expenses (including attorneys' and professional fees) incurred in connection with such action (and not previously reimbursed).

(g) Third Party Rights.

(i) To the extent that a Third Party licensor of Caribou has retained with respect to any Patent within the Caribou Patents licensed to Caribou pursuant to a Caribou In-License any right to abate any Intellia Competitive Infringement of such Patent or take any other actions described in Section 4.2(c) for such Patent or to otherwise be involved in such activities, Caribou will use commercially reasonable efforts to cause such Third Party licensor to take the actions specified by Sections 4.2(c), (e) and (f) in a manner consistent with such Caribou In-License [***].

(ii) To the extent that a Third Party licensor of Intellia has retained with respect to any Patent within the Intellia Patents licensed to Intellia pursuant to an Intellia Included In-License any right to abate any Caribou Competitive Infringement of such Patent or take any other actions described in Section 4.2(d) for such Patent or to otherwise be involved in such activities, Intellia will use commercially reasonable efforts to cause such Third Party licensor to take the actions specified by Sections 4.2(d), (e) and (f) in a manner consistent with such Intellia Included In-License [***].

4.3 Patent Challenges.

(a) Each Party will [***] notify the other in the event that any Third Party [***] (any such Third Party action, a "Patent Challenge").

(b) [***]. Upon the controlling Party's request and at controlling Party's reasonable expense, the other Party agrees to join in any such effort and, in any event, to cooperate with the controlling Party. The non-controlling Party will have the right, at its own cost and expense and by counsel of its choice, to be represented in any such effort, subject to the controlling Party's right to control such effort. If an initially controlling Party does not take steps to defend a Patent Challenge within a commercially reasonable time, or elects not to continue any such defense, then such Party shall timely advise the other Party in writing (in any event no less than [***] days prior to the date on which the initial mandatory notice is due under 37 C.F.R. §42.8, as applicable or equivalent thereof) and the other Party will have the right, but not the obligation, to bring and control any effort in defense of such Patent Challenge at its sole cost and expense.

5. Confidentiality.

5.1 Confidential Information. Each Party ("Disclosing Party") may have disclosed or will disclose to the other Party ("Receiving Party"), and Receiving Party may acquire during the course and conduct of activities under this Agreement, certain proprietary or confidential information of Disclosing Party. The term "Confidential Information" means (a) all Materials and (b) all ideas and information of any kind, whether in written, oral, graphical, machine-readable or other form, whether or not marked as confidential or proprietary, which are transferred, disclosed or made available to Receiving Party by Disclosing Party or at the request of Receiving Party, including any of the foregoing of Third Parties.

5.2 Restrictions. Receiving Party will, and will cause its Affiliates and their respective officers, directors, employees and agents to, keep all Disclosing Party's Confidential Information (including any Confidential Information that constitutes a trade secret) in confidence with the same degree of care with which Receiving Party holds its own confidential information (though no less than reasonable care). Except as expressly provided herein, Receiving Party will not use or disclose, and will cause its Affiliates and their respective officers, directors, employees and agents not to use or disclose, during the Term and for a period of [***] years thereafter, Disclosing Party's Confidential Information, except as provided in Section 5.4.

5.3 Exceptions. Receiving Party's obligation of nondisclosure and the limitations upon the right to use the Disclosing Party's Confidential Information set forth in Section 5.2 will not apply to the extent that Receiving Party can demonstrate that the Disclosing Party's Confidential Information: (a) was known to Receiving Party or any of its Affiliates prior to the time of disclosure other than under an obligation of confidentiality; (b) is or becomes public knowledge through no fault or omission of Receiving Party or any of its Affiliates; (c) is obtained by Receiving Party or any of its Affiliates without an accompanying obligation of confidentiality from a Third Party under no obligation of confidentiality to Disclosing Party; or (d) has been independently developed by employees, subcontractors, consultants or agents of Receiving Party or any of its Affiliates without the aid, application or use of Disclosing Party's Confidential Information, as evidenced by contemporaneous written records.

5.4 Permitted Use and Disclosures. Receiving Party may use and disclose Disclosing Party's Confidential Information to the extent (and only to the extent) such disclosure is reasonably necessary in the following instances:

(a) in order to comply with applicable Law or with a legal or administrative proceeding (including responding to a valid order of a court of competent jurisdiction or other competent authority);

(b) in connection with prosecuting or defending litigation or for Prosecuting Patents;

(c) in connection with obtaining Regulatory Approval of a Product to the extent such disclosure is made to a Regulatory Authority; and

(d) to its Affiliates and potential and actual contractors, Sublicensees and collaborators, potential and actual acquirers or assignees, potential and actual bankers, investors and lenders, and attorneys, accountants and other advisors in order to perform its obligations or to exercise any license or other rights under this Agreement.

In the case of a disclosure pursuant to (i) Sections 5.4(a) or 5.4(b), where reasonably possible, Receiving Party will notify Disclosing Party of Receiving Party's intent to make any disclosure pursuant thereto sufficiently prior to

making such disclosure so as to allow Disclosing Party adequate time to take whatever action it may deem appropriate to protect the confidentiality of the information to be disclosed, and (ii) with respect to Sections 5.4(c) or 5.4(d), each of those named people and entities are required to comply with restrictions on use and disclosure at least as restrictive as those in Section 5.2 (other than potential and actual acquirers, assignees, bankers, investors and lenders, which must be bound prior to disclosure by commercially reasonable obligations of confidentiality). Notwithstanding the foregoing, Receiving Party assumes responsibility for those Persons maintaining Disclosing Party's Confidential Information in confidence and using the same only for the purposes described herein.

5.5 Terms of this Agreement; Publicity.

(a) Restrictions. The Parties agree that the terms of this Agreement will be treated as Confidential Information of both Parties and may be disclosed only as permitted by Sections 5.4, 5.5(b) and 5.5(c).

(b) Securities Filings. Each Party acknowledges and agrees that the other Party may submit this Agreement (including for clarity, the Exhibits attached hereto) to the United States Securities and Exchange Commission (the "SEC") or any other securities exchange and if a Party does submit this Agreement to the SEC or any other securities exchange, such Party agrees to consult with the other Party with respect to the preparation and submission of a confidential treatment request for this Agreement. If a Party is required by Law to make a disclosure of the terms of this Agreement in a filing with or other submission to the SEC or any other securities exchange, and (i) such Party has provided copies of the disclosure to the other Party as far in advance of such filing or other disclosure as is reasonably practicable under the circumstances, (ii) such Party has promptly notified the other Party in writing of such requirement and any respective timing constraints, and (iii) such Party has given the other Party a reasonable time under the circumstances from the date of notice by such Party of the required disclosure to comment upon, request confidential treatment or approve such disclosure, then such Party will have the right to make such public disclosure at the time and in the manner reasonably determined by its counsel to be required by Law. Notwithstanding anything to the contrary herein, it is hereby understood and agreed that if a Party is seeking to make a disclosure as set forth in this Section 5.5(b), and the other Party provides comments within the respective time periods or constraints specified herein or within the respective notice, the Party seeking to make such disclosure or its counsel, as the case may be, will in good faith (A) consider incorporating such comments and (B) use reasonable efforts to incorporate such comments, limit disclosure or obtain confidential treatment to the extent reasonably requested by the other Party.

(c) Press Releases. The Parties agree to issue a mutually agreed joint press release (the "Initial Press Release") at a mutually agreed time following the closing of the Spinout Transaction. Except as required by applicable Law, neither Party may issue any additional press release or make any other public announcement or statement concerning this Agreement, the transactions contemplated hereby or the terms hereof, without the prior written consent of the other Party (such consent not to be unreasonably withheld, conditioned or delayed). In the event either Party (the "Issuing Party") desires to issue a press release or other public statement disclosing information relating to this Agreement, the transactions contemplated hereby or the terms hereof, the Issuing Party will provide the other Party (the "Reviewing Party") with a copy of the proposed press release or public statement (the "Release") and seek the Reviewing Party's prior written consent; provided, that to the extent the press release or a public statement is to be made under the circumstances described in Section 5.4(a), the Reviewing Party may not withhold, condition or delay its consent. The Issuing Party will specify with each such Release, taking into account the urgency of the matter being disclosed, a reasonable period of time within which the Receiving Party may provide any comments on such Release and if the Receiving Party fails to provide any comments during the response period called for by the Issuing Party, the Reviewing Party will be deemed to have consented to the issuance of such Release. If the Receiving Party provides any comments, the Parties will consult on such Release and work in good faith to prepare a mutually acceptable Release. Either Party may subsequently publicly disclose any information previously contained in either the Initial Press Release or any such Release so consented to.

6. Warranties; Limitations of Liability; Indemnification.

6.1 Mutual Representations and Warranties. Each Party represents and warrants to the other as of the Effective Date that it has the legal right and power to enter into this Agreement, to extend the rights and licenses granted or to be granted to the other in this Agreement, and to fully perform its obligations hereunder.

[***]

(b) Attached hereto as Exhibit B is a complete and accurate list of all patent applications and patents owned by Caribou as of the Effective Date and attached hereto as Exhibit B is, to Caribou's knowledge, a complete and accurate list of all patent applications and patents exclusively in-licensed by Caribou as of the Effective Date.

[***].

6.3 Disclaimers. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, THE PARTIES MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO ANY PATENTS, KNOW-HOW, MATERIALS, PRODUCT CANDIDATES OR PRODUCTS, INCLUDING WARRANTIES OF VALIDITY OR ENFORCEABILITY OF ANY CARIBOU PATENTS OR Intellia PATENTS, TITLE, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE OR PURPOSE, PERFORMANCE, AND NONINFRINGEMENT OF ANY THIRD PARTY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS.

[***].

6.6 Indemnification.

(a) Indemnification by Intellia. Intellia will indemnify Caribou, its Affiliates and their respective directors, officers, employees and agents, and their respective successors, heirs and assigns (collectively, "Caribou Indemnitees"), and defend and save each of them harmless, from and against any and all losses, damages, liabilities, costs and expenses (including reasonable attorneys' fees and expenses) (collectively, "Losses") in connection with any and all suits, proceedings, causes of action, claims or demands of any Third Party (collectively, "Third Party Claims") arising from or occurring as a result of: (i) the breach by Intellia of any term of this Agreement; (ii) any gross negligence or willful misconduct on the part of Intellia; or (iii) the Development, Manufacture or Commercialization by or under the authority of Intellia or any of its Affiliates or Sublicensees of Product Candidates or Products in the Intellia Field or other exercise of the licenses or other rights granted hereunder by or under the authority of Intellia, except in each case for those Losses attributable to a cause or event for which Caribou has an obligation to indemnify Intellia pursuant to Section 6.6(b), as to which Losses each Party will indemnify the other to the extent of their respective liability; provided, however, that Intellia will not be obligated to indemnify the Caribou Indemnitees for any Losses to the extent that such Losses arise as a result of gross negligence or willful misconduct on the part of a Caribou Indemnitee.

(b) Indemnification by Caribou. Caribou will indemnify Intellia, its Affiliates and their respective directors, officers, employees and agents, and their respective successors, heirs and assigns (collectively, "Intellia Indemnitees"), and defend and save each of them harmless, from and against any and all Losses in connection with any and all Third Party Claims arising from or occurring as a result of: (i) the breach by Caribou of any term of this Agreement; (ii) any gross negligence or willful misconduct on the part of Caribou; or (iii) the Development, Manufacture or Commercialization by or under the authority of Caribou (not including by or under the authority of Intellia) or any of its Affiliates or Sublicensees of products in the Caribou Field or other exercise of the licenses or other rights granted hereunder by or under the authority of Caribou (not including by or under the authority of Intellia), except in each case for those Losses attributable to a cause or event for which Intellia has an obligation to indemnify Caribou pursuant to Section 6.6(a), as to which Losses each Party will indemnify the other to the extent of their respective liability for the Losses; provided, however, that Caribou will not be obligated to indemnify Intellia Indemnitees for any Losses to the extent that such Losses arise as a result of gross negligence or willful misconduct on the part of an Intellia Indemnitee.

(c) Indemnification Procedure. A claim to which indemnification applies under Section 6.6(a) or Section 6.6(b) will be referred to herein as a "Claim". If any Party (each, an "Indemnified Party") intends to claim indemnification under this Section 6.6, the Indemnified Party will notify the other Party (the "Indemnifying Party") in writing promptly upon becoming aware of any claim that may be a Claim (it being understood and agreed, however, that the failure by an Indemnified Party to give such notice will not relieve the Indemnifying Party of its indemnification

obligation under this Agreement except and only to the extent that the Indemnifying Party is actually prejudiced as a result of such failure to give notice). The Indemnifying Party will have the right to assume and control the defense of such Claim at its own expense with counsel selected by the Indemnifying Party and reasonably acceptable to the Indemnified Party. The Indemnified Party will have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnified Party, if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential conflict of interests between such counsel and any other Party represented by such counsel in such proceedings. If the Indemnifying Party does not assume the defense of such Claim as aforesaid, the Indemnified Party may defend such Claim but will have no obligation to do so. The Indemnified Party will not settle or compromise any Claim without the prior written consent of the Indemnifying Party, and the Indemnifying Party will not settle or compromise any Claim in any manner which would have an adverse effect on the Indemnified Party's interests, without the prior written consent of the Indemnified Party, which consent, in each case, will not be unreasonably withheld, conditioned or delayed. The Indemnified Party will reasonably cooperate with the Indemnifying Party, at the Indemnifying Party's expense, and will make available to the Indemnifying Party all pertinent information under the control of the Indemnified Party, which information will be subject to Section 5.

7. Term and Termination.

7.1 Term of the Agreement. The term of this Agreement, unless earlier terminated in accordance with this Article 7, shall be for the life of the Patents under which the licenses set forth in Sections 2.1 and 2.2 are granted ("Term").

7.2 Termination for Breach of In-Licenses. In the event Caribou breaches its obligations [***] with respect to one or more Intellia Included In-Licenses or Intellia breaches its obligations [***] with respect to one or more Caribou In-Licenses ("Breached In-License"), the non-breaching Party shall have the right to terminate this Agreement with respect to the rights and (sub)licenses granted to the breaching Party under such Breached In-License upon delivery of written notice to the breaching Party, provided that such termination will not be effective if such breach has been repaired within [***] days (or such other shorter period of time set forth in the In-License Addendum for such Breached In-License) after written notice thereof is given by the non-breaching Party; further provided that, to the extent permitted by the Breached In-License, the breaching party shall have up to an additional [***] days to cure the breach if, within [***] days of receiving the written notice required by this provision, the breaching Party in writing stipulates that it breached, sets forth its plan to cure the breach [***], and explains the need for additional time to cure the breach. [***].

[***].

7.4 Breach; Consequences of Breach. In the event a Party materially breaches this Agreement (a "Default"), and if after written notice thereof from the non-defaulting Party, the defaulting Party fails to cure such Default in full within [***] days after receipt of such notice, this Agreement shall [***].

7.5 Bankruptcy Event. In the case of a Bankruptcy Event of either Party during the Term, this Agreement shall automatically be modified effective upon the date of such Bankruptcy Event to provide that [***].

8. General Provisions.

8.1 Disputes Resolution.

(a) Generally. Disputes of any nature arising under, relating to, or in connection with this Agreement ("Disputes") will be resolved pursuant to this Section 8.1.

(b) Dispute Escalation. In the event of a Dispute between the Parties, the Parties will first attempt in good faith to resolve such dispute by negotiation and consultation between themselves. In the event that such dispute is not resolved on an informal basis within [***] days from receipt of the written notice of a Dispute, any Party may, by written notice to the other, have such dispute referred to the Executive Officers (or their designees, which designee is required to have decision-making authority on behalf of such Party), who will attempt in good faith to resolve such Dispute by negotiation and consultation for a [***] day period following receipt of such written notice.

(c) Full Arbitration. In the event the Parties have not resolved such Dispute within [***] days of receipt of the written notice referring such Dispute to the Executive Officers, either Party may at any time after such [***] day period submit such Dispute to be finally settled by arbitration administered in accordance with the rules of Judicial Administration and Arbitration Services ("JAMS") in effect at the time of submission, as modified by this Section 8.1. The arbitration will be governed by the Laws of the State of New York. The arbitration will be heard and determined by [***] arbitrators who are retired judges or attorneys with at least [***] years of relevant experience in the pharmaceutical and biotechnology industry, each of whom will be impartial and independent. Each Party will appoint one arbitrator and the third arbitrator will be selected by the two Party-appointed arbitrators, or, failing agreement within thirty (30) days following appointment of the second arbitrator, by JAMS. Such arbitration will take place in Alameda County, California. The arbitration award so given will be a final and binding determination of the Dispute, will be fully enforceable in any court of competent jurisdiction, and will not include any damages expressly prohibited by Section 6.4. Fees, costs and expenses of arbitration will be divided by the Parties in the following manner: Intellia will pay for the arbitrator it chooses, Caribou will pay for the arbitrator it chooses, and the Parties will share payment for the third arbitrator. Except in a proceeding to enforce the results of the arbitration or as otherwise required by Law, neither Party nor any arbitrator may disclose the existence, content or results of any arbitration hereunder without the prior written consent of both Parties (each such consent not to be unreasonably withheld, conditioned or delayed).

(d) Injunctive Relief. Notwithstanding the dispute resolution procedures set forth in this Section 8.1, in the event of an actual or threatened breach of this Agreement, the aggrieved Party may seek equitable relief (including restraining orders, specific performance or other injunctive relief) in any court or other forum, without first submitting to any dispute resolution procedures hereunder.

(e) Tolling. The Parties agree that all applicable statutes of limitation and time-based defenses (such as estoppel and laches) will be tolled while the dispute resolution procedures set forth in this Section 8.1 are pending, and the Parties will cooperate in taking all actions reasonably necessary to achieve such a result. In addition, during the pendency of any Dispute under this Agreement, this Agreement, including all licenses, sublicenses, rights and obligations, will remain in full force and effect, provided that, with respect to any Dispute in connection with a notice of termination pursuant to Section 7.2 or Section 7.4, notice of such Dispute is provided within [***] days (or such other shorter period of time set forth in the In-License Addendum for such Breached In-License, if applicable) after written notice of termination or default is given by the non-breaching Party.

8.2 Cumulative Remedies and Irreparable Harm. All rights and remedies of the Parties hereunder will be cumulative and in addition to all other rights and remedies provided hereunder or available by agreement, at law or otherwise. Further, each Party acknowledges and agrees that breach of any of the terms or conditions of this Agreement would cause irreparable harm and damage to the other and that such damage may not be ascertainable in money damages and that as a result thereof the non-breaching Party would be entitled to seek from a court equitable or injunctive relief restraining any breach or future violation of the terms contained herein by the breaching Party without the necessity of proving actual damages or posting bond. Such right to equitable relief is in addition to whatever remedies either Party may be entitled to as a matter of law or equity, including money damages.

8.3 Change of Control. Upon the occurrence of a Change of Control of either Party during the Term [***].

8.4 Relationship of Parties. Nothing in this Agreement is intended or will be deemed to constitute a partnership, agency, employer-employee or joint venture relationship between the Parties. No Party will incur any debts or make any commitments for the other, except to the extent, if at all, specifically provided therein. Except under Section 6.6(a) and 6.6(b), there are no express or implied third party beneficiaries hereunder.

8.5 Compliance with Law. Each Party will perform or cause to be performed any and all of its obligations or the exercise of any and all of its rights hereunder in good scientific manner and in compliance with all applicable Law.

8.6 Governing Law. This Agreement will be governed by and construed in accordance with the Laws of the State of New York, without respect to its conflict of laws rules or principles that might otherwise refer construction or interpretation of this Agreement to the substantive Law of another jurisdiction; provided, however, that any dispute relating to the scope, validity, enforceability or infringement of any Patents will be governed by, and construed and enforced in accordance with, the substantive Laws of the jurisdiction in which such Patents apply. The Parties agree

to exclude the application to this Agreement of the United Nations Convention on Contracts for the International Sale of Goods.

8.7 Counterparts; Facsimiles. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, and all of which together will be deemed to be one and the same instrument. Facsimile or PDF execution and delivery of this Agreement by either Party will constitute a legal, valid and binding execution and delivery of this Agreement by such Party.

8.8 Headings. All headings in this Agreement are for convenience only and will not affect the meaning of any provision hereof.

8.9 Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement will be construed against the drafting party will not apply.

8.10 Interpretation. Whenever any provision of this Agreement uses the term "including" (or "includes"), such term will be deemed to mean "including without limitation" (or "includes without limitations"). "Herein," "hereby," "hereunder," "hereof" and other equivalent words refer to this Agreement as an entirety and not solely to the particular portion of this Agreement in which any such word is used. Except where the context otherwise requires, whenever used, the singular will include the plural, the plural the singular, the use of any gender will be applicable to all genders and the word "or" is used in the inclusive sense "and/or." Unless otherwise provided, all references to Sections, Exhibits and Schedules in this Agreement are to Sections, Exhibits and Schedules of this Agreement. References to any Sections include Sections and subsections that are part of the related Section (*e.g.*, a section numbered "Section 2.1" would be part of "Section 2", and references to "Section 2.1" would also refer to material contained in the subsection described as "Section 2.1(a)").

8.11 Binding Effect. This Agreement will inure to the benefit of and be binding upon the Parties, their Affiliates, and their respective lawful successors and assigns.

8.12 Assignment. This Agreement may not be assigned by either Party, nor may either Party delegate its obligations or otherwise transfer any rights created by this Agreement, except as expressly permitted hereunder, without the prior written consent of the other Party, which consent will not be unreasonably withheld, conditioned or delayed with respect to assignment to such Party's Affiliate; provided that either Party may assign this Agreement to such Party's successor in connection with the merger, consolidation, sale of all or substantially all of its assets or that portion of its business pertaining to the subject matter of this Agreement [***]. The rights and obligations of the Parties under this Agreement will be binding upon and inure to the benefit of the successors and permitted assigns of the Parties, and the name of a Party appearing herein will be deemed to include the name of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Section 8.12.

8.13 Notices. Except as otherwise provided herein, all notices under this Agreement will be sent by certified mail or by overnight courier service, postage prepaid, to the following addresses of the respective Parties:

If to Intellia, to:	Intellia c/o Atlas Venture 25 First St., Suite 303 Cambridge, MA 02141 Attention: President
With a required copy to:	Goodwin Procter LLP 53 State Street Boston, MA 02109 Attention: Kingsley L. Taft, Esq. & Arthur R. McGivern

If to Caribou, to:	Caribou Biosciences, Inc. 2929 7th Street, Suite 120 Berkeley, CA 94710 Attention: President
With a required copy to:	Wilson Sonsini Goodrich & Rosati 650 Page Mill Road Palo Alto, CA 94304 Attention: Ian B. Edvalson, Esq.

or to such address as each Party may hereafter designate by notice to the other Party. A notice will be deemed to have been given on the date it is received by all required recipients for the noticed Party.

8.14 Amendment and Waiver. This Agreement may be amended, supplemented, or otherwise modified only by means of a written instrument signed by both Parties; provided that any waiver made by one Party in favor of the other will be enforceable if undertaken in a writing signed by the Party to be charged with the waiver. Any waiver of any rights or failure to act in a specific instance will relate only to such instance and will not be construed as an agreement to waive any rights or fail to act in any other instance, whether or not similar.

8.15 Severability. In the event that any provision of this Agreement will, for any reason, be held to be invalid or unenforceable in any respect, and if the rights or obligations of either Party under this Agreement will not be materially and adversely affected thereby, (a) such provision will be given no effect by the Parties and will not form part of this Agreement, (b) all other provisions of this Agreement will remain in full force and effect, and (c) the Parties will negotiate in good faith to modify this Agreement to preserve (to the extent possible) their original intent.

8.16 Entire Agreement. This Agreement (along with the Exhibits and Schedules) contains the entire understanding of the Parties with respect to the subject matter hereof and supersedes and replaces any and all previous arrangements and understandings, whether oral or written, between the Parties with respect to the subject matter hereof.

[*Remainder of this Page Intentionally Left Blank*]

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

CARIBOU BIOSCIENCES, INC.

By: /s/ Rachel E. Haurwitz
(Signature)

Name: Rachel E. Haurwitz
Title: President & CEO

INTELLIA, LLC
By: Caribou Biosciences, Inc.
Its: Sole Member

By: /s/ Rachel E. Haurwitz
(Signature)

Name: Rachel E. Haurwitz
Title: President & CEO

Signature Page to License Agreement

Exhibit A

Caribou Pre-Existing In-Licenses

Exclusive Assignment Agreement by and between Wageningen Universiteit ("Wageningen") and Caribou Biosciences, Inc., dated February 13, 2014, in the form provided by Caribou to Intellia as of the Effective Date (the "Wageningen Agreement").

Exclusive License between Caribou Biosciences, Inc. and the University of Vienna and the Regents of the University of California, dated April 16, 2013, as amended on April 17, 2013, in the form provided by Caribou to Intellia as of the Effective Date (the "UC/Vienna License").

Exhibit B

Caribou Patents

Title	**Application No.**	**Filing date**	**Assignee**	**Applicable License Agreement if not owned by Company**
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
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[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
Methods and Compositions for RNA-Directed Site-Specific DNA Modification	61/652,086	May 25, 2012	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]

Title	Application No.	Filing date	Assignee	Applicable License Agreement if not owned by Company
Methods and Compositions for RNA-Directed Site-Specific DNA Modification	61/716,256	October, 19, 2012	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]
Methods and Compositions for RNA-Directed Site-Specific DNA Modification	61/757,640	January 28, 2013	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]
Compositions and Methods for Modulating Transcription	61/765,576	February 15, 2013	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]
Methods and Compositions for RNA-Directed Target DNA Modification and for RNA-Directed Modulation of Transcription	PCT/US2013/032589	March 15, 2013	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]
Methods and Compositions for RNA-Directed Target DNA Modification and for RNA-Directed Modulation of Transcription	13/842,859	March 15, 2013	UC Berkeley/UCSF/ U Vienna/ E. Charpentier [***]	[***]
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	

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Title	Application No.	Filing date	Assignee	Applicable License Agreement if not owned by Company
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	
[***]	[***]	[***]	[***]	

Exhibit C

Intellia Payments Under Caribou Pre-Existing In-License

As set forth in further detail in the Wageningen Agreement and where any asterisked term used below is as defined therein:

- Intellia will owe a royalty on Net Sales* of Products covered by the Assigned Patents* in the Intellia Field as follows:
  - [***] of Net Sales* up to [***] in any calendar year and [***] thereafter, in each case subject to third party royalty stacking, and to the royalty payment suspension provision as set forth in the Wageningen Agreement.
- Beginning on [***] Intellia will owe [***] of the minimum annual royalty of [***] owed by Caribou to Wageningen as set forth in the Wageningen Agreement. Any such payment by Intellia will be credited against the royalty due by Intellia pursuant to the above in this Exhibit C for the annual period in which the minimum payment is due.

As set forth in further detail in the UC/Vienna License:

- Intellia will owe a royalty on Net Sales* of Products covered by the Licensed Patent Rights* in the Intellia Field at the rate of:
  - [***] of Net Sales* until such time as the Net Sales* of Products exceed [***] in each Annual Period* in the Intellia Field, and [***] thereafter in such Annual Period* in the Intellia Field
  - [***] of Net Sales* of companion diagnostics for Products in the Intellia Field until such time as the Net Sales* of such companion diagnostic exceed [***] in each Annual Period* in the Intellia Field, and [***] thereafter in such Annual Period* in the Intellia Field

in each of the above cases subject to third party royalty stacking, and to the royalty payment suspension provision of the UC/Vienna License.

- Intellia will pay the following milestones triggered by an activity of Intellia, its Affiliates or its Sublicensees with respect to a Product, unless the requirements of Section 5.1.4 of the UC/Vienna License have been previously satisfied by Caribou or any other party:

[***]

- Intellia will owe [***] of the [***] annual maintenance fee beginning on [***] the UC/Vienna License and ending on [***] the first sale of a Licensed Product* or Licensed Service*.
- Beginning on [***] the first sale of a Licensed Product* or Licensed Service*, Intellia will owe [***] of the minimum annual royalty of [***] owed by Caribou to The Regents as set forth in the UC/Vienna License. Any such payment by Intellia will be credited against the royalty due by Intellia pursuant to the above in this Exhibit C for the annual period in which the minimum payment is due.

Exhibit D

In-License Addendum

See Exhibit C

[***]

Exhibit 10.2

Certain identified information has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential. Information that was omitted has been noted in this document with a placeholder identified by the mark "[***]".

EXECUTION VERSION

License and Collaborative Research Agreement

License and Collaborative Research Agreement ("Agreement"), effective December 18, 2014 ("Effective Date"), by and between Novartis Institutes for BioMedical Research, Inc., a Delaware corporation with its principal place of business at 250 Massachusetts Avenue, Cambridge, MA 02139 USA ("Novartis"), and Intellia Therapeutics, Inc., a Delaware corporation with its principal place of business at 130 Brookline Street, Suite 201, Cambridge, MA 02139 USA ("Intellia"). Novartis and Intellia are each separately referred to as a "Party" and are collectively referred to as the "Parties".

Whereas, Intellia is a biopharmaceutical company that has licensed and is developing a CRISPR System that permits genomic editing for the research, Development and Commercialization of therapeutic, prophylactic, and palliative applications;

Whereas, Novartis possesses expertise in discovering, developing, manufacturing, marketing, and selling pharmaceutical products worldwide; and

Whereas, the Parties wish to further develop Intellia's platform and discover therapeutic, prophylactic, and palliative products and services generated through the use of that technology.

In consideration of the respective representations, warranties, covenants, and agreements contained herein, and for other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE I
CERTAIN DEFINITIONS; RULES OF INTERPRETATION

Section 1.1 Certain Definitions.

For the purpose of this Agreement, the following terms, whether used in singular or plural form, will have the meanings set forth below:

"Accounting Standards" means, with respect to Novartis, the International Financial Reporting Standards ("IFRS") and, with respect to Intellia, US Generally Accepted Accounting Principles ("US GAAP"), in each case, as generally and consistently applied throughout the Party's organization.

"Additional Selected HSC Product" means an HSC Product directed to an Additional Selected HSC Target that is researched, Developed, or Commercialized by Novartis, its Affiliates, or their sublicensees.

"Additional Selected HSC Target" has the meaning set forth in Section 2.2.4(a).

"Advanced CART Product" means a CART Product directed to a CART Therapeutic Target and a certain Advanced CART Target that Novartis, its Affiliates, or their sublicensees is researching, Developing, or Commercializing.

"Advanced CART Target" means [***] that a specified CART Product is directed toward. [***]

"Affiliate" means, with respect to a specified Person, a Person that directly or indirectly controls, is controlled by, or is under common control with such Person. For the purpose of this definition, "control" or "controlled" means direct or indirect ownership of 50% or more of the shares of stock entitled to vote for the election of directors in the case of a corporation, ownership of 50% or more of the equity interest in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby the Person controls or has the right to control the board of directors or equivalent governing body of a corporation or other entity or the ability to otherwise cause the direction of the management or policies of the corporation or other entity. The Parties acknowledge that, in the case of entities organized under the Applicable Laws of certain countries where the maximum percentage ownership permitted by Applicable Law for a foreign investor is less than 50%, such lower percentage will be substituted in the preceding sentence; *provided*, that such foreign investor has the power to direct the management and policies of such entity. "Affiliate" shall not include any investment fund or any other Person or entity controlled by such investment fund [***].

"Agreement" has the meaning set forth in the preamble, and will include, for the avoidance of doubt, all Exhibits attached hereto.

"Agreement Term" has the meaning set forth in Section 11.1.

"Alliance Manager" has the meaning set forth in Section 3.4.

"Annual Net Sales" means, with respect to a Product, the Net Sales of such Product during a Calendar Year.

"Applicable Law" means any applicable national, supranational, federal, state, local or foreign law, statute, ordinance, principle of common law, or any rule, regulation, standard, judgment, order, writ, injunction, decree, arbitration award, agency requirement, license, or permit of any Governmental Authority, including any rules, regulations, guidelines, or other requirements of Regulatory Authorities.

"Approval Milestone" has the meaning set forth in Section 7.3.3.

"Approved Internalized Target" has the meaning set forth in Section 6.4.

"Auditor" has the meaning set forth in Section 7.8.2.

"Business Day" means a day other than a Saturday, Sunday, or public holiday during which banks are authorized to be closed in Cambridge, Massachusetts.

"Calendar Quarter" means each calendar quarter ending on March 31, June 30, September 30, or December 31.

"Calendar Year" means each calendar year ending on December 31.

"Caribou" means Caribou Biosciences, Inc., a Delaware corporation.

"Caribou-Berkeley-Vienna Agreement" means the Exclusive License by and among Caribou, the Regents of the University of California, and the University of Vienna, dated April 16, 2013 and amended April 17, 2013, as amended from time to time.

"Caribou-Intellia License Agreement" means the License Agreement by and between Caribou and Intellia, dated July 16, 2014, as amended from time to time.

"Caribou-Wageningen Agreement" means the Exclusive Assignment Agreement, by and between Caribou and Wageningen Universiteit, dated February 13, 2014, as amended from time to time.

"Chimeric Antigen Receptor" or "CAR" means [***].

"CART" means an engineered CAR-modified T-cell.

"CART Budget" has the meaning set forth in Section 2.3.

"CART CRISPR Target" means the [***].

"CART Field" means the *ex vivo* use of CARTs [***], as a therapeutic, prophylactic, or palliative of any human disease. By *ex vivo*, it is meant that the modification of cells occurs *ex vivo*, and the CART is then administered to patients. [***].

[***]

"CART Product" means a product or service that Novartis, its Affiliates, or their sublicensees is researching, Developing, or Commercializing for use in the CART Field the research, development, manufacture, use, sale or import of which Practices Intellia Intellectual Property or Collaboration Intellectual Property.

"CART Program" has the meaning set forth in Section 2.1.1.

"CART Program Target" means the [***]

"CART Research Plan" has the meaning set forth in Section 2.3.

"CART Steering Committee" has the meaning set forth in Section 3.1.2.

"CART Target Product" means and includes any and all Advanced CART Products directed to [***].

"CART Therapeutic Target" means the [***].

[***].

"Co-Chair" has the meaning set forth in Section 3.2.3.

"Co-Detailing Agreement" has the meaning set forth in Section 3.8.2(c).

"Collaboration" has the meaning set forth in Section 2.1.1.

"Collaboration Intellectual Property" means all Intellectual Property Rights created, conceived of, or reduced to practice by either of or jointly by the Parties, their Affiliates, or its or their employees, agents or subcontractors during the Research Term in the conduct of the Collaboration. Collaboration Intellectual Property will consist of Collaboration Platform Intellectual Property and Collaboration Product Intellectual Property. [***]

"Collaboration Platform Intellectual Property" means all Collaboration Intellectual Property relating to **(a)** [***]; or **(b)** any and all improvements or modifications to [***].

"Collaboration Product" means an HSC Product, CART Product, and/or In Vivo Product.

"Collaboration Product Intellectual Property" means all Collaboration Intellectual Property other than Collaboration Platform Intellectual Property.

"Commercialization" or "Commercialize" means any and all activities directed to manufacturing, marketing, promoting, detailing, distributing, importing, exporting, selling, or offering to sell a pharmaceutical product or service.

"Commercially Reasonable Efforts" means those efforts and resources consistent with the usual practices of the relevant Party in pursuing the research, Development, or Commercialization of a similarly situated pharmaceutical product or service at a similar stage of Development or Commercialization [***].

"Committee" has the meaning set forth in Section 3.2.1.

[***]

"Confidential Information" means all Know How or other information, including proprietary information and materials (whether or not patentable) regarding a Party's technology, products, services, business information, or objectives, that is treated as confidential by the disclosing Party in the regular course of business or is otherwise designated as confidential by the disclosing Party, whether existing before or after the Effective Date. For the avoidance of doubt, **(a)** [***] provided by Novartis will be deemed to be Novartis' Confidential Information; **(b)** [***] provided by Intellia, will be deemed to be Intellia's Confidential Information; and **(c)** the terms of this Agreement will be deemed to be the Confidential Information of both Parties.

"Confidentiality Agreement" means [***].

"Contract Year" means each successive twelve month period following the Effective Date.

"Control" or "Controlled" means, with respect to any Intellectual Property Right the possession by a Party (whether by ownership, license or otherwise) of the ability to grant access to, or a license or sublicense of, such rights or property, without **(i)** violating the terms of any agreement or other arrangement with any Third Party in existence, or **(ii)** having an obligation to pay any royalties or other consideration therefor that the other contracting Party declines to assume pursuant to the election procedures of Section 7.6.2(a) or Section 7.6.2(c), as applicable, at the time such Party would first be required hereunder to grant the other Party such access, license or sublicense.

"CRISPR" means clustered regularly interspaced short palindromic repeats.

"CRISPR System" means [***].

"Detail" means [***]. When used as a verb, the terms "Detail" or Detailing means to perform a Detail.

"Develop" or "Development" means any and all preclinical and clinical drug development activities, including test method development and stability testing, toxicology, animal efficacy studies, formulation, quality assurance/quality control development, statistical analysis, clinical studies, clinical trials and testing, regulatory affairs, product and service approval and registration, chemical development and development manufacturing, packaging development and manufacturing, and documentation efforts in support of development activities.

"Development Milestone" has the meaning set forth in Section 7.3.3.

"Diligence Package" has the meaning set forth in Section 2.2.5.

"directed," "directed to," "directed toward" means, with respect to any specific Product, that the Product derives its, therapeutic, prophylactic or palliative benefit from [***].

"Disclaiming Party" has the meaning set forth in Section 5.2.3(c).

"Effective Date" has the meaning set forth in the preamble.

"EMA" means the European Medicines Agency or any successor agency thereto.

"Equity Agreements" means that Unit Purchase Agreement, dated September 17, 2014, by and among Intellia Therapeutics, LLC, Atlas Venture Fund IX, L.P. and Novartis, and that Amended and Restated Operating Agreement of Intellia Therapeutics, LLC, dated as of September 17, 2014, each as amended, waived or superseded from time to time.

"EU" means the European Union, as its membership may be constituted from time to time, and any successor thereto [***].

"Excluded Intellia New In-Licensed Intellectual Property" has the meaning set forth in Section 7.6.2(a).

[***]

"Excluded In Vivo Targets" has the meaning set forth in Section 2.4.2(b).

"Excluded Novartis New In-Licensed Platform Intellectual Property" has the meaning set forth in Section 7.6.2(c).

"Expert" has the meaning set forth in Section 12.2.2(b)(i).

"Extensions" has the meaning set forth in Section 5.2.3(b).

"FDA" means the United States Food and Drug Administration or any successor agency thereto.

"First Commercial Sale" means the first arm's length sale of a Product by Novartis, its Affiliates, or their licensees to a Third Party (or an Intellia HSC Product by Intellia, its Affiliates, or their licensees to a Third Party) in a country following Regulatory Approval of such Product (or the Intellia HSC Product, as applicable) in that country or, if no such Regulatory Approval is required for the sale of a Product (or Intellia HSC Product) in a country, the date upon which such Product (or Intellia HSC Product) is first commercially launched in such country.

"FTE Rate" means a rate of [***] per FTE (as defined herein) per annum based on the yearly time of [***] full-time equivalent Qualified Scientific Employee during the Research Term, consisting of a total of [***] hours per annum ("FTE"), to be pro-rated on a daily basis if necessary (per annum amount to be divided by [***] to produce the rate per whole day consisting of [***] hours), such rate to be restricted to scientific work. For the purpose of this definition, a "Qualified Scientific Employee" means a scientist with adequate scientific knowledge, training, and experience to conduct the work assigned to him or her.

"FPFD" means, with respect to a clinical trial, the first dosing of the first patient in such clinical trial.

"Generic Equivalent" means, with respect to a particular Product in a country, any product that **(a)** has Regulatory Approval for use in such country pursuant to a regulatory process governing approval of generic, interchangeable or biosimilar pharmaceutical or biological product based on the then-current standards for regulatory approval in such country, where such regulatory approval relied on or incorporated clinical data generated by either Party pursuant to this Agreement or was obtained using an abbreviated, expedited or other similar process; **(b)** during the Agreement Term, is not owned or licensed by Novartis (in the case of Products Commercialized by Novartis, its Affiliates, or their sublicensees) or by Intellia (in the case of Intellia Products Commercialized by Intellia, its Affiliates, or their sublicensees) under this Agreement, and **(c)** is sold in the same country as the relevant Product by a Third Party that is not a sublicensee of Novartis (in the case of Products Commercialized by Novartis, its Affiliates, or their sublicensees) or by Intellia (in the case of Intellia Products Commercialized by Intellia, its Affiliates, or their sublicensees), and that did not purchase such product in a chain of distribution that included Novartis or Intellia, as applicable, or of any of their respective Affiliates or sublicensees.

"GLP" means Good Laboratory Practices, as contemplated by 21 C.F.R. Part 58 in the United States, and the equivalent or corresponding provisions of Applicable Laws of other jurisdictions.

"GLP Toxicology" means a toxicology study that is commenced in compliance with GLP in a manner such that the resulting data would be admissible to applicable Regulatory Authorities to support an IND.

"Government Authority" means any domestic or foreign entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government, including any governmental authority, agency, department, board, commission, court, tribunal, judicial body or instrumentality of any union of nations, federation, nation, state, municipality, county, locality or other political subdivision thereof.

"HSC" means hematopoietic stem cells, [***].

"HSC Budget" has the meaning set forth in Section 2.2.2(b).

"HSC Field" means the *ex vivo* use of a CRISPR System directed to a Target to research, Develop, or Commercialize (including without limitation the provision of services, to the extent required for such Commercialization) HSC Products or services directed to a Target as a therapeutic, prophylactic, or palliative of any human disease. For the purpose of this definition, "*ex vivo*" means that the CRISPR System modification of the HSC occurs *ex vivo*, and the modified HSCs are then administered to patients.

"HSC Product" means a product or service that Novartis, its Affiliates, or their sublicensees is researching, Developing, or Commercializing for use in the HSC Field the research, development, manufacture, use, sale or import of which Practices Intellia Intellectual Property or Collaboration Intellectual Property.

"HSC Program" has the meaning set forth in Section 2.1.1.

"HSC Research Plan" has the meaning set forth in Section 2.2.2(a).

"HSC Steering Committee" has the meaning set forth in Section 3.1.2.

"HSC Target Product" means and includes any and all HSC Products directed to the [***].

"Included Intellia New In-Licensed Intellectual Property" has the meaning set forth in Section 7.6.2(a).

"Included Novartis New In-Licensed Platform Intellectual Property" has the meaning set forth in Section 7.6.2(c).

"IND" means an Investigational New Drug application in the US filed with the FDA or the corresponding application for the investigation of a Product in any other country or group of countries, as defined in the applicable laws and regulations and filed with the Regulatory Authority of such given country or group of countries.

"Indemnified Party" has the meaning set forth in Section 10.3.

"Indemnifying Party" has the meaning set forth in Section 10.3.

"Indication" means a specific disease, impairment, or medical condition that is the intended subject of a therapeutic, prophylactic, or palliative product or service. [***].

"Insolvency Event" means **(a)** a Party ceases to function as a going concern by suspending or discontinuing its business; **(b)** a Party becomes insolvent (*i.e.*, is unable to pay its debts as they become due); **(c)** a Party is the subject of voluntary or involuntary bankruptcy proceedings instituted on behalf of or against such Party (except for involuntary bankruptcy proceedings that are dismissed within [***] days); **(d)** an administrative receiver, receiver and manager, interim receiver, custodian, sequestrator, or similar officer is appointed for a Party; **(e)** a notice to convene a directors', shareholders', or creditors' meeting for the purpose of passing a resolution to wind up a Party is issued or such a resolution is passed; **(f)** a resolution will have been passed by a Party or the Party's directors to make an application for an administration order or to appoint an administrator; **(g)** a Party proposes or makes any general assignment, composition, or arrangement with or for the benefit of all or some of its creditors; or **(h)** a Party makes or suspends or threatens to suspend making payments to all or some of its creditors or submits to any type of a similar voluntary arrangement.

"Intellectual Property Rights" means Patent Rights and Know How.

[***]

[***]

[***]

"Intellia HSC Product" means a product or service in the HSC Field directed to an Intellia Selected HSC Target.

"Intellia Intellectual Property" means all Intellectual Property Rights Controlled by Intellia or its Affiliates relating to CRISPR Systems, or necessary or useful to research, Develop, manufacture or Commercialize products or services in the HSC Field, CART Field or In Vivo Field that are in existence **(a)** as of the Effective Date [***].

"Intellia Net Sales" has the meaning set forth in Section 7.4.8.

"Intellia New In-Licensed Intellectual Property" has the meaning set forth in Section 7.6.2(a).

"Intellia Platform" means Intellia's proprietary CRISPR System, as claimed by the Intellia Intellectual Property, together with all improvements thereto (including Collaboration Platform Intellectual Property).

"Intellia Selected HSC Targets" means the [***] HSC Targets selected by Intellia for its exclusive research under this Agreement in accordance with Section 2.2.3(a).

[***]

[***]

"In Vivo Budget" has the meaning set forth in Section 2.4.3.

"In Vivo Field" means the use of CRISPR System for the *in vivo* treatment or prevention of any human disease. By "*in vivo*", it is meant that the modification of the relevant Target occurs *in vivo*.

"In Vivo Product" means a product or service that Novartis, its Affiliates, or their sublicensees is researching, Developing, or Commercializing for use in the In Vivo Field the research, development, manufacture, use, sale or import of which Practices Intellia Intellectual Property or Collaboration Intellectual Property.

"In Vivo Program" has the meaning set forth in Section 2.1.1.

"In Vivo Research Plan" has the meaning set forth in Section 2.4.3.

"In Vivo Target Product" means and includes [***] In Vivo Products directed to the [***] Novartis Selected In Vivo Target.

"In Vivo Steering Committee" has the meaning set forth in Section 3.1.2.

"Invoice" means an invoice substantially in the form attached as *Exhibit A*.

"Joint Steering Committee" or "JSC" has the meaning set forth in Section 3.1.1.

"Key License Agreements" has the meaning set forth in Section 9.2(a).

"Know How" means any information, inventions, trade secrets or technology, whether or not proprietary or patentable and whether stored or transmitted in oral, documentary, electronic, or other form. Know How will include inventions, ideas, concepts, formulas, methods, procedures, designs, compositions, plans, documents, data,

discoveries, developments, techniques, protocols, specifications, works of authorship, biological materials, and any information relating to research and development plans, experiments, results, compounds, therapeutic leads, candidates and products, services and service protocols, clinical and preclinical data, clinical trial results, and manufacturing information and plans.

"Labeled Indication" means any Indication of a Product as set forth in the Product's label as approved by the relevant Regulatory Authority. "Initial Labeled Indication" means any Labeled Indication upon a Product's initial receipt of Regulatory Approval (regardless of the number of Indications described). "Additional Labeled Indication" means any Labeled Indication added to a Product's label after the Initial Labeled Indication or expanding the scope of a previous Labeled Indication, which is approved by way of a supplemental Regulatory Approval (*e.g.*, by way of sNDA or sBLA) [***].

"Loss" has the meaning set forth in Section 10.1.

"Loss of Market Exclusivity" means, with respect to any Product in any country, the Net Sales of such Product in that country in any Calendar Year are less than [***]% as compared with the Net Sales of such Product in that country in the Calendar Year immediately preceding the marketing or sale of the first Generic Equivalent of such Product.

"Materials" means any materials provided or transferred by one Party or its Affiliates to the other Party or its Affiliates in connection with the Collaboration. In the case of biological Materials, the term will encompass any medium in which the Materials are provided, any parts of the Materials [***], any modified or unmodified progeny of or descendant from the Materials [***].

"Milestone Payment" has the meaning set forth in Section 7.3.1.

"Milestones" has the meaning set forth in Section 7.3.1.

"Net Sales" means the net sales recorded by Novartis or any of its Affiliates or licensees [***]

[***]

"Nominated CART Program Target" has the meaning set forth in Section 2.3.

"Nominated HSC Target" has the meaning set forth in Section 2.2.1.

"Novartis HSC Background Intellectual Property" means the compound identified on *Exhibit B*, and any Patent Rights and Know How covering or claiming such compound, including its composition of matter, formulation, method of use or manufacture, but only with regards to such compound. For clarification purposes, Novartis HSC Background Intellectual Property does not include rights to any other compounds (including their composition of matter, formulation, method of use or manufacture) that may be covered or claimed by the same Patent Rights and Know How as those covering or claiming the compound identified on *Exhibit B*.

"Novartis New In-Licensed Platform Intellectual Property" has the meaning set forth in Section 7.6.2(c).

"Novartis Other Background Intellectual Property" means the Patent Rights and Know How identified on *Exhibit C*.

[***].

"Novartis Selected HSC Product" means an HSC Product directed to a Novartis Selected HSC Target that is researched, Developed, or Commercialized by Novartis, its Affiliates, or their sublicensees.

"Novartis Selected HSC Targets" means the [***] HSC Targets selected by Novartis for its exclusive research under this Agreement in accordance with Section 2.2.3(a).

"Novartis Selected In Vivo Product" means an In Vivo Product directed to a Novartis Selected In Vivo Target that is researched, Developed, or Commercialized by Novartis, its Affiliates, or their sublicensees.

"Novartis Selected In Vivo Target" has the meaning set forth in Section 2.4.2(a).

[***]

"Paragraph IV Certification" has the meaning set forth in Section 5.2.3(b).

"Party" and "Parties" has the meaning set forth in the preamble.

"Patent Rights" means patents and all substitutions, divisions, continuations, continuations-in-part, reissues, reexaminations, and extensions thereof and supplemental protection certificates relating thereto, and all counterparts thereof or substantial equivalents in any country (collectively, "Patents"), and any applications or provisional applications for any of the foregoing ("Patent Applications") and including the right to claim all benefits and priority rights to any Patent Applications under any applicable convention.

"Person" means any corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, governmental body, authority, bureau or agency, any other entity or body, or an individual.

"Personal Information" has the meaning set forth in Section 9.4.2.

"Phase II Trial" means a study in humans of the safety, dose ranging and efficacy of a product, as further defined in 21 C.F.R. § 312.21(b) or foreign counterparts, as may be conducted anywhere in the world.

"Phase IIa Trial" means a small scale Phase II Trial intended principally to demonstrate the proof of concept of a pharmaceutical product in humans to determine whether (and in what manner) to pursue Regulatory Approval of such product.

"Phase IIb Trial" means any controlled dose ranging Phase II Trial of a pharmaceutical product to further evaluate the efficacy and safety of the product in its target patient population and to define the product's optimal dosing regimen, as may be conducted anywhere in the world, and in any case that is designed to obtain data to select particular doses to be used in a Phase III Trial.

"Phase III Trial" means, with respect to a pharmaceutical product, a clinical trial on sufficient numbers of human patients that is designed to establish that such pharmaceutical product is safe and efficacious for its intended use, and to define warnings, precautions, and adverse reactions that are associated with such pharmaceutical product in the dosage range to be prescribed, that directly supports Regulatory Approval or label expansion of such pharmaceutical product, as described in 21 C.F.R. §312.21(c) or foreign counterparts, as may be conducted anywhere in the world.

[***]

[***]

[***]

[***]

[***]

[***]

"Practice" means, with respect to Patent Rights, to make, use, sell, offer for sale, or import (or have made, have used, have sold, have offered for sale, or have imported), and, with respect to Know How, to use, practice and disclose (or have used, practiced and disclosed).

"Prescriber" means a United States healthcare professional authorized to prescribe a pharmaceutical product or issue hospital orders for a pharmaceutical product, or those other allied professionals that are part of the treatment team and who are recognized for this purpose in the Commercialization plan, as applicable.

"Product" means, without distinction, a Collaboration Product [***].

"Program" means, without distinction, the HSC Program, the CART Program, and any In Vivo Program.

[***]

"Regulatory Approval" means, with respect to a pharmaceutical product or service in any country or jurisdiction, any approval, registration, license or authorization from a Regulatory Authority in a country or other jurisdiction that is reasonably necessary to market and sell a pharmaceutical product or to provide a service in such country or jurisdiction (including, *e.g.*, any applicable pricing and reimbursement approvals).

"Regulatory Authority" means any Governmental Authority responsible for authorizing or approving the marketing and/or sale of pharmaceutical products or services in a jurisdiction (*e.g.*, the FDA, EMA, the Japanese Ministry of Health, Labor and Welfare, and corresponding national or regional regulatory agencies or organizations).

"Regulatory Filing" means, with respect to any pharmaceutical product or service, any submission to a Regulatory Authority of any appropriate regulatory application, and will include, without limitation, any submission to a regulatory advisory board, marketing authorization application, and any supplement or amendment thereto. For the avoidance of doubt, the term Regulatory Filings will include any IND, New Drug Application, or the corresponding application in under the Applicable Law of the other jurisdictions.

"Research Plans" means, collectively and without distinction, the HSC Research Plan, the CART Research Plan, and/or any In Vivo Research Plan.

"Research Program" means, without distinction, the HSC Program, the CART Program, and/or the In Vivo Program.

"Research Term" has the meaning set forth in Section 2.1.2.

[***]

"Royalty" has the meaning set forth in Section 7.4.1.

"Royalty Term" means, with respect to each Product in each country, the period commencing on the First Commercial Sale of such Product in such country and concluding on the later of **(a)** the expiration of the last to expire Valid Claim in the relevant country; or **(b)** ten years after the date of First Commercial Sale of such Product in that country.

"Sales Milestone" has the meaning set forth in Section 7.5.

"Sales Milestone Payment" has the meaning set forth in Section 7.5.

"Senior Officers" means [***].

[***]

"Subcommittees" has the meaning set forth in Section 3.1.2.

"Target" means [***].

"Third Party" means any Person other than Intellia or Novartis and their respective Affiliates.

"Third Party HSC Collaboration" has the meaning set forth in Section 2.2.5.

"Valid Claim" means a claim of an issued and unexpired Patent included within the Intellia Intellectual Property or the Collaboration Intellectual Property [***].

Section 1.2 Rules of Interpretation.

In this Agreement, unless otherwise specified:

(a) "includes" and "including" will mean including without limitation, and "or" will mean "and/or";

(b) a reference to an Article of this Agreement includes all Sections of that Article, and a reference to a Section of this Agreement includes all subsections of that Section;

(c) "herein," "hereby," "hereunder," "hereof" and other equivalent words refer to this Agreement as an entirety and not solely to the particular portion of this Agreement in which any such word is used;

(d) a "Party" includes its permitted assignees and/or the respective successors in title to substantially the whole of its undertaking;

(e) a statute or statutory instrument or any of their provisions is to be construed as a reference to that statute or statutory instrument or such provision as the same may have been or may from time to time hereafter be amended or re-enacted;

(f) words denoting the singular will include the plural and vice versa and words denoting any gender will include all genders;

(g) except where otherwise indicated, references to a "license" will include "sublicense" and references to a "licensee" will include "sublicensee", unless the context otherwise provides;

(h) the Exhibits form part of the operative provision of this Agreement and references to this Agreement will, unless the context otherwise requires, include references to the Exhibits;

(i) the headings in this Agreement are for convenience only and will not be considered in the interpretation of this Agreement; and

(j) the terms and conditions of this Agreement are the result of negotiations between the Parties and this Agreement will not be construed in favor of or against any Party by reason of the extent to which either Party participated in the preparation of this Agreement.

ARTICLE II
COLLABORATION

Section 2.1 Overview; Research Term; Efforts.

2.1.1 Goals. The Parties will engage in collaborative research activities in accordance with the terms and conditions of this Agreement and the Research Plans. As set forth in the Research Plans, the goals of these activities are to identify and research therapeutic, prophylactic, and palliative products and services utilizing **(a)** *ex vivo* HSC applications of the Intellia Platform (as described in the HSC Research Plan and Section 2.2 of this Agreement, the "HSC Program"), **(b)** *ex vivo* CART applications of the Intellia Platform (as described in the CART Research Plan and Section 2.3 of this Agreement, the "CART Program"), and **(c)** *in vivo* applications of the Intellia Platform (as described in any In Vivo Research Plan(s) and Section 2.4 of this Agreement, the "In Vivo Program"). The CART Program, HSC Program, and In Vivo Program collectively comprise the "Collaboration". During the Research

Term, each Party shall conduct all activities relating to the HSC Field, CART Field, and, subject to Section 2.4.3, the In Vivo Field, as well as identification of Targets and the research and Development of Products directed to such Targets, under the corresponding HSC Research Plan, CART Research Plan, and, subject to Section 2.4.3, In Vivo Research Plan unless otherwise expressly provided by this Agreement.

2.1.2 Research Term. Unless terminated in accordance with Section 11.2, the Collaboration will commence on the Effective Date and expire on the fifth anniversary of the Effective Date (the "Research Term").

2.1.3 Efforts; Information Sharing Generally. During the Research Term, each Party will use Commercially Reasonable Efforts to carry out the activities assigned to it in the relevant Research Plan. Without limiting any other obligations set forth in this Agreement, at all times during the Research Term, each Party will keep the other Party reasonably and timely informed as to its Collaboration research efforts and results thereof.

Section 2.2 HSC Program.

2.2.1 HSC Program Generally. In the HSC Program, the Parties will research potential therapeutic, prophylactic, and palliative applications of the Intellia Platform in the HSC Field as provided in the HSC Research Plan. The Parties will initially conduct research activities in the HSC Field under the HSC Research Plan with respect to Targets nominated by the HSC Steering Committee (each, a "Nominated HSC Target"), and products and services directed to those Nominated HSC Targets. Selections pursuant 2.2.3 and 2.2.4 will be made from the pool of Nominated HSC Targets. [***]

2.2.2 Scope of HSC Program Activities; Research Plan.

(a) An initial research plan for the HSC Program (the "HSC Research Plan") will be agreed upon by the Parties not later than [***], and, as agreed, shall be deemed a part of this Agreement. The JSC may amend the HSC Research Plan from time to time to nominate or remove HSC Targets from the scope of the HSC Program [***] and to add, remove or modify research and Development activities assigned to either Party under the HSC Program.

(b) The HSC Steering Committee will amend the HSC Research Plan as necessary to reflect scientific developments as the HSC Program research activities progress, as well as the nomination or selection of any other Nominated HSC Targets. The HSC Research Plan will **(i)** define the scope of the HSC Program; **(ii)** describe the Parties' respective responsibilities in the HSC Program; **(iii)** describe the HSC Program's anticipated research timeline; **(iv)** include a budget for Intellia's activities in the HSC Program (the "HSC Budget"), which must be consistent with the terms of this Agreement. If a conflict between the terms of the HSC Research Plan and the terms of this Agreement arises, the provisions of this Agreement will govern.

2.2.3 Selection of Exclusive Selected HSC Targets.

(a) During the Research Term, Novartis will have the right to select up to [***] HSC Targets (the "Novartis Selected HSC Targets") for its exclusive research, and Intellia will have the right to select up to [***] HSC Targets (the "Intellia Selected HSC Targets") for its exclusive research, in each case in the following manner:

[***]

(b) The rights set forth in Section 2.2.3(a) are subject to the following:

[***]

[***]

2.2.4 Selection of Additional Targets.

(a) During the Research Term and once the HSC Targets have been selected by the Parties pursuant to Section 2.2.3(a) [***], but in any event no later than [***] days prior to the expiration of the Research Term, Novartis will have the option to select up to an additional [***] HSC Targets (other than the Intellia Selected HSC Targets) on a non-exclusive basis (each, an "Additional Selected HSC Target"), subject to the payments set forth in Section 7.1.3.

(b) For clarity, unless the Parties agree otherwise in writing, during the Research Term there will not be more than **(i)** [***] HSC Targets comprising the Novartis Selected HSC Targets; **(ii)** [***] HSC Targets comprising the Additional Novartis Selected HSC Targets; and **(iii)** [***] HSC Targets comprising the Intellia Selected HSC Targets.

2.2.5 [***]

2.2.6 Diligence Obligations. Following the selection of each Novartis Selected HSC Target and any Additional Selected HSC Target, Novartis and its Affiliates will use Commercially Reasonable Efforts to research, Develop, and Commercialize [***] Novartis Selected HSC Product directed to such Novartis Selected HSC Target and [***] Additional Selected HSC Product directed to such Additional Selected HSC Target; *provided*, *however,* that if, after the Research Term, Novartis fails to use Commercially Reasonable Efforts, on an HSC Target by HSC Target basis, to research, Develop, and Commercialize at least one HSC Product directed to the relevant HSC Target, Intellia's exclusive remedy will be to **(a)** terminate Novartis' exclusive rights set forth in Section 4.1.2 and the 5.3.1(a) with respect to that Novartis Selected HSC Target or Additional Selected HSC Product (as applicable), and **(b)** terminate Novartis' license to Intellia Intellectual Property and Collaboration Platform Intellectual Property set forth in Section 5.3.1(a) or 5.3.1(c) (as applicable) with respect to that Selected HSC Target or Additional Selected HSC Product (as applicable).

2.2.7 [***]

Section 2.3 CART Program.

An initial research plan for the CART Program (the "CART Research Plan") will be agreed upon by the Parties not later than [***], and, as agreed, shall be deemed a part of this Agreement. In the CART Program, the Parties will initially conduct research activities in the CART Field under the CART Research Plan with respect to CART Program Targets nominated by the CART Steering Committee (each, a "Nominated CART Program Target"), and products and services relating to CART Therapeutic Targets utilizing those Nominated CART Program Targets. [***]. The CART Research Plan will be revised by the JSC from time to time to reflect developments in the CART Research Program, including to add, remove or modify research and Development activities assigned to each Party under the CART Program. The CART Research Plan will **(i)** define the scope of the CART Program; **(ii)** describe the Parties' respective responsibilities in the CART Program; **(iii)** describe the CART Program's anticipated research timeline; **(iv)** include a budget for Intellia's activities in the CART Program (the "CART Budget"), which must be consistent with the terms of this Agreement. If a conflict between the terms of the CART Research Plan and the terms of this Agreement arises, the provisions of this Agreement will govern. Following the creation of each CART Product, Novartis and its Affiliates will use Commercially Reasonable Efforts to research, Develop, and Commercialize [***] CART Product directed to the relevant CART Therapeutic Target; *provided*, *however,* that if Novartis fails to use Commercially Reasonable Efforts, on a CART Therapeutic Target by CART Therapeutic Target basis, to research, Develop, and Commercialize at least one Advanced CART Product directed to such CART Therapeutic Target, Intellia's exclusive remedy will be to **(a)** terminate Novartis' exclusive rights set forth in Section 4.2 and the 5.4.2 with respect to the relevant CART Therapeutic Target, and **(b)** terminate Novartis' license to Intellia Intellectual Property and Collaboration Platform Intellectual Property set forth in Section 5.3.2 with respect to such CART Therapeutic Target.

Section 2.4 In Vivo Program.

2.4.1 In Vivo Program Generally. Subject to Sections 2.4.2 and 2.4.3, in the In Vivo Program, the Parties will research potential therapeutic, prophylactic, and palliative products and services directed to In Vivo Targets utilizing the Intellia Platform.

2.4.2 Scope of Program.

[***]

(b) Selection of Novartis Selected In Vivo Targets.

(i) Subject to Section 2.4.2(b)(ii), following the [***] (the "In Vivo Selection Period"), Novartis may select a Target that it proposes to be included in the scope of the In Vivo Program (each such Target, a "Proposed In Vivo Target"). In such event, Novartis will notify Intellia in writing of such proposal and disclose in such notice its Proposed In Vivo Target. Within [***] days after disclosure of the Proposed In Vivo Target, Intellia will review in good faith the Proposed In Vivo Target to determine if it is an Excluded In Vivo Target and, if it is not an Excluded In Vivo Target, will notify Novartis that such Proposed In Vivo Target will be included in the In Vivo Program (such Proposed In Vivo Target, a "Novartis Selected In Vivo Target"), and, if it is an Excluded In Vivo Target, will notify Novartis that such Proposed In Vivo Target cannot be included in the In Vivo Program as a Novartis Selected In Vivo Target. For purposes of this Section 2.4.2(b), an "Excluded In Vivo Target" means [***]. In the event that Novartis, acting reasonably and in good faith, believes that its Proposed In Vivo Target was wrongfully rejected by Intellia as an Excluded In Vivo Target, Novartis will have the right to submit the dispute about such determination to accelerated arbitration in accordance with the procedures of Section 12.2.2(b). If the Expert's decision finds that such Proposed In Vivo Target is an Excluded In Vivo Target, such Proposed In Vivo Target will remain excluded from the In Vivo Program hereunder, and, if the Expert's decision finds that such Proposed In Vivo Target was wrongfully characterized as an Excluded In Vivo Target, it will be deemed included in the scope of the In Vivo Program hereunder from the date of such decision.

(ii) [***]

(iii) A maximum of [***] Novartis Selected In Vivo Targets may be selected on a non-exclusive basis during the In Vivo Selection Period [***].

2.4.3 Research Plan. Following the selection of each Novartis Selected In Vivo Target, Novartis may, in its sole discretion, offer to Intellia the ability to participate with Novartis in research and Development activities for such Novartis Selected In Vivo Target and In Vivo Products directed thereto during the Research Term. If Novartis elects to ask Intellia to participate in such activities and Intellia accepts (in its sole discretion), the Parties will agree upon a research plan for such Novartis Selected In Vivo Target (each, an "In Vivo Research Plan"). Each In Vivo Research Plan will be revised by the JSC from time to time to add, remove or modify research and Development activities assigned to each Party thereunder. Each In Vivo Research Plan will **(a)** describe the Parties' respective research and Development responsibilities with respect to the relevant Novartis Selected In Vivo Target and In Vivo Products directed thereto; **(b)** describe the anticipated timeline for such activities; **(c)** include a budget for the activities to be performed by Intellia (the "In Vivo Budget"), which must include funding for Intellia's activities that is incremental to the funding under the HSC Budget and CART Budget, but in all other ways consistent with the terms of this Agreement. If a conflict between the terms of the In Vivo Research Plan and the terms of this Agreement arises, the provisions of this Agreement will govern. [***]

2.4.4 Diligence Obligation. Following the selection of each Novartis Selected In Vivo Target, Novartis and its Affiliates will use Commercially Reasonable Efforts to research, Develop, and Commercialize [***] Novartis Selected In Vivo Product directed to such Novartis Selected In Vivo Target [***].

Section 2.5 Recording of Targets.

Following the selection or identification of each Novartis Selected HSC Target [***], Additional Selected HSC Target, Advanced CART Target, Novartis Selected In Vivo Targets [***], such Target will be added a list maintained by the JSC and deemed an Exhibit to this Agreement.

Section 2.6 Subcontracting Research Activities.

Each Party may subcontract any of the research activities to be performed by it in the Collaboration to a Third Party, *provided* that such Third Party will have entered into a written agreement with such Party that includes terms and conditions protecting and limiting use and disclosure of Confidential Information, Materials and Know-How of the other Party that are at least protective of such Confidential Information, Material and Know-How as under this Agreement and requiring such Third Party and its personnel to assign to such Party all right, title and interest in and to any Patents, Know-How and Materials created, conceived of, or developed in connection with the performance of subcontracted activities to the extent required for such Party to comply with the terms and conditions of this Agreement as if such subcontracted activities were performed by the subcontracting Party (including Article IV, Article V, and Article VI).

ARTICLE III
GOVERNANCE

Section 3.1 Establishment of Joint Steering Committee and Subcommittees.

3.1.1 Joint Steering Committee. [***] the Parties will establish a Joint Steering Committee (the "Joint Steering Committee" or "JSC"). The JSC will assume a general role of leadership in the Collaboration and will have responsibility for:

(a) facilitating communications between the Parties with respect to the research activities contemplated by this Agreement;

(b) overseeing the HSC Steering Committee, the CART Steering Committee, and the In Vivo Steering Committee;

(c) reviewing and approving changes to the HSC Research Plan, CART Research Plan, and In Vivo Research Plan that are proposed by the relevant Subcommittee;

(d) reviewing staffing and personnel issues, with the goal of maintaining, when determined appropriate, the continuity of personnel on Collaboration activities and reasonably evaluating, when determined appropriate, changes to the staffing of the Collaboration;

(e) coordinating strategies relating to Patent Rights claiming Collaboration Product Intellectual Property;

(f) prioritizing the allocation of resources dedicated to the Collaboration; and

(g) informally resolving disagreements between the Parties;

(h) facilitating discussions between the Parties with respect to potential collaborations and other activities related to the CRISPR System not contemplated by this Agreement [***].

The JSC will be comprised of [***] representatives from each of Intellia and Novartis, which (unless otherwise agreed upon between the Parties), will be equal to [***] members of each Party. The JSC will meet at least [***] (or more if agreed upon) in Cambridge, Massachusetts, unless otherwise agreed by the Parties.

3.1.2 Research Program Subcommittees. Within [***] days after the initial meeting of the JSC, the JSC will appoint the members of subcommittees for the HSC Program (the "HSC Steering Committee") and CART Program (the "CART Steering Committee"). Within [***] days after the finalization of the first In Vivo Research Plan, the JSC will appoint the members of a subcommittee for the In Vivo Program (the "In Vivo Steering Committee"). The HSC Steering Committee, CART Steering Committee, and In Vivo Steering Committee are each without distinction referred to as a "Subcommittee" and are collectively referred to as the "Subcommittees". Members of any Subcommittee may be, but are not required to be, members of the JSC; *provided*, that each Subcommittee will have

[***] representatives of both Parties. The Subcommittees will provide oversight of the respective Research Programs and will have responsibility for:

(a) determining the direction and planned activities of the respective Research Programs in compliance with the Research Plans;

(b) sharing information arising in the respective Research Programs between the Parties;

(c) coordinating activities relating to filing and prosecuting of Patent Applications and Patents claiming Collaboration Product Intellectual Property;

(d) coordinating research activities in the respective Research Programs in compliance with the Research Plans; and

(e) proposing amendments to the respective Research Plans, which must be approved by the JSC.

Each Subcommittee will be comprised of [***] representatives from each of Intellia and Novartis, which (unless otherwise agreed upon between the JSC) will be equal to [***] members of each Party. Subcommittee members may be, but need not be, members of the JSC. Each Subcommittee will meet at least [***] (or more if agreed upon), in alternation at the place designated by Novartis and the place designated by Intellia, in accordance with Section 3.2.4.

Section 3.2 General Rules.

3.2.1 Powers of the Committees; Term. Each of the Joint Steering Committee, the HSC Steering Committee, the CART Steering Committee, and the In Vivo Steering Committee (each, a "Committee") will have solely the roles and responsibilities assigned to it in this Article III and as otherwise expressly set forth in this Agreement. The Committees will have no authority to amend or modify this Agreement or waive compliance with this Agreement, to make decisions that conflict with the terms and conditions of this Agreement, or to create new obligations for a Party not specified in this Agreement. Neither the Committees nor either Party exercising its final decision making pursuant to Section 3.2.5 will have authority to alter, increase, expand, modify, amend, or waive compliance with this Agreement. The Committees will terminate on the expiration of the Research Term.

3.2.2 Committee Membership. Either Party may replace its respective committee representatives at any time upon prior written notice to the other Party. If a Committee member from either Party is unable to attend or participate in a Committee meeting, the Party who designated such representative may designate a substitute representative for the meeting in its sole discretion. The Alliance Managers appointed by Intellia and Novartis pursuant to Section 3.4 will be *ex officio* members of each of the Committees. With the consent of the other Party, each Party may invite up to [***] non-voting employees, consultants, and scientific advisors to attend any Committee meeting to discuss issues arising in the Collaboration; *provided* that any such employees, consultants, or scientific advisors will be subject to restrictions regarding the confidentiality and non-use of Confidential Information no less restrictive than the provisions of Article VIII.

3.2.3 Committee Co-Chairs. Each Party will appoint one of its members in each Committee to co-chair such Committee's meetings (each, a "Co-Chair"). The Co-Chairs will **(a)** ensure the orderly conduct of the Committee's meetings, **(b)** attend each Committee meeting (either in-person, by videoconference or telephonically, unless otherwise expressly provided herein), and **(c)** prepare and issue written minutes of each meeting within [***] thereafter accurately reflecting the discussions and decisions of such meeting. If the Co-Chair from either Party is unable to attend or participate in a Committee meeting, the Party who designated such Co-Chair may designate a substitute Co-Chair for the meeting in its sole discretion.

3.2.4 Committee Meetings. All meetings will be conducted in English and may be conducted by telephone, videoconference, or in person as determined by the Co-Chairs, as appropriate; *provided* that not less than [***] prior written notice has been given to the other Party. Either Party may also call a special meeting of a Committee (by videoconference or teleconference) by at least [***] prior written notice to the other Party if such Party reasonably believes that a significant matter must be addressed prior to the next regularly scheduled meeting, and no later than [***] prior to the special meeting, such Party will provide the Committee with materials reasonably adequate to enable such Committee to make an informed decision.

3.2.5 Decision Making. Other than as set forth herein, in order to make any decision required of it hereunder, a Committee must have present (in person, by videoconference or telephonically) at least the Co-Chair of each Party (or his/her designee for such meeting). The Parties will endeavor to make decisions where required of a Committee by consensus of the Co-Chairs. If a dispute or failure to agree arises in a Subcommittee that cannot be promptly resolved, the Co-Chairs of any Subcommittee may cause such dispute or failure to agree to be referred to the Joint Steering Committee for resolution. If a dispute or failure to agree arises which cannot be promptly resolved within the Joint Steering Committee, then the matter will be referred to the Senior Officers of the Parties for discussion. The Senior Officers will attempt in good faith to resolve such dispute or failure to agree by unanimous consent. If the Senior Officers cannot resolve such dispute or failure to agree within [***] days of the matter being referred to them, then the resolution and/or course of conduct will be determined as follows:

[***]

Section 3.3 Day-to-Day Decision-Making Authority.

Each Party will have day-to-day decision-making authority with respect to the research activities assigned to it in any Research Plan.

Section 3.4 Alliance Managers.

Each of Intellia and Novartis will appoint a senior representative who possesses a general understanding of research matters to act as its alliance manager for the Collaboration (each, an "Alliance Manager"). Each Party may replace its respective Alliance Manager at any time upon written notice to the other in accordance with this Agreement. Any Alliance Manager may designate a substitute to temporarily perform the functions of that Alliance Manager. Each Alliance Manager will be charged with creating and maintaining a collaborative work environment within and among the Committees. Each Alliance Manager will also be responsible for **(a)** providing a single point of communication and facilitating the flow of information; **(b)** ensuring that the governance procedures and the rules set forth herein are complied with; **(c)** identifying and raising disputes to the relevant Committee for discussion in a timely manner; and **(d)** planning and coordinating internal and external communications in accordance with the terms of this Agreement. The Alliance Managers will be entitled to attend all Committee meetings. Each Alliance Manager may bring to the attention of the Committees any matter that the Alliance Manager reasonably believes requires the attention of the relevant Committees.

Section 3.5 Cost of Governance.

The costs incurred by each Party in connection with its participation at any meetings under this Article III will be borne solely by such Party.

Section 3.6 Development.

3.6.1 Development Generally. After the Research Term and subject to Sections 3.6.2, 5.4.1(a) and (b), 5.4.2 and 5.4.3, Novartis will be solely responsible for conducting, at its sole expense, the Development of its Products as it determines appropriate in its sole discretion.

3.6.2 Regulatory.

(a) [***].

(b) [***].

(c) [***].

(d) Novartis will have the right to disclose the existence of, and the results from, any clinical trials for any Product, conducted under this Agreement in accordance with its standard policies.

Section 3.7 Manufacturing.

3.7.1 Manufacturing Generally. Novartis or its designated sublicensee(s) will be solely responsible for the manufacture and supply of its Products being Developed or Commercialized under this Agreement.

3.7.2 Manufacturing Know-How and Assistance.

(a) During the Agreement Term, to the extent reasonably necessary, Intellia will, at Novartis' expense, provide all reasonable cooperation and assistance to Novartis or its designee [***] to enable Novartis or its designee in an efficient and timely manner to proceed with Development and manufacturing of its Products and to obtain all appropriate Regulatory Approvals for manufacturing (including qualification by the applicable Regulatory Authority of manufacturing sites).

(b) Intellia will make appropriate personnel available to assist Novartis or its designee, at Novartis' expense [***] from time to time as reasonably requested by Novartis, and will provide the appropriate personnel of Novartis or its designee with access to the personnel and manufacturing and other operations of Intellia for such periods of time and in such manner as is reasonable in order to familiarize the personnel of Novartis or its designee with Intellia Know-How (if any) relating to the Development and manufacture of the Products and the application of the same.

(c) Intellia will reasonably cooperate, at Novartis' expense, with Novartis in complying with requirements of 35 U.S.C. §§200 through 212 [***].

(d) The Parties acknowledge that this obligation may continue after the Research Term has expired.

Section 3.8 Commercialization.

3.8.1 Commercialization Generally. Except as provided in Section 3.8.2, Novartis will be solely responsible for all aspects of Commercialization of its Products (in its sole discretion) including planning and implementation, distribution, booking of sales, pricing, and reimbursement.

3.8.2 Co-Detailing Rights.

(a) Subject to this Section 3.8.2, Intellia shall have the right to co-detail in the United States [***] Collaboration Products researched or Developed under this Agreement. In that connection and until Intellia has selected such [***] Collaboration Products to co-detail, at least [***] months before the planned submission of any Regulatory Filing seeking Regulatory Approval in the United States for a Product under this Agreement, Novartis will notify Intellia [***] (the "Co-Detail Notice") and will provide Intellia with information reasonably necessary for Intellia to evaluate the Co-Detail opportunity [***]. If Intellia wishes to Co-Detail any such Product in the United States, it will provide notice in writing to Novartis of such election no later than [***] after its receipt of the Co-Detail Notice, which notice will contain the information as further described in Section 3.8.2(b)(i) and Section 3.8.2(b)(ii) (the "Co-Detail Option Exercise Notice"). Prior to giving any such notice, Intellia may request reasonable discussions with and information from Novartis regarding the expected activities, which the Parties will conduct in good faith. If Intellia does not respond within the relevant [***] period, Intellia will be deemed to have declined to exercise its rights to Co-Detail the relevant Product. If Intellia elects not to Co-Detail the relevant Product offered to it by Novartis, Intellia will have the right to elect to Co-Detail any other Product offered to Intellia by Novartis on the same terms as provided above until Intellia has selected [***] such Products for Co-Detailing, at which time Intellia's right to Co-Detail any Products hereunder will terminate; *provided, however,* that, as long as Novartis has provided the Co-Detail Notice to Intellia for all relevant Collaboration Products that could have been selected by Intellia prior to the termination of Novartis' obligation to provide such notice under this Section 3.8.2(a), even if Intellia has not selected [***] Collaboration Products for detailing, its right to make such selection and Novartis' obligation to provide the Co-Detail Notice shall expire on the date that is [***].

(b) Any Co-Detail Option Exercise Notice provided by Intellia will:

(i) specify Intellia's desired level of participation in the Co-Detail of the relevant Product in the United States on a percentage basis up to a maximum of [***] of the total projected Detailing effort for Products in the United States as specified in the Co-Detail Notice (the "Intellia Co-Detail Effort"), with such percentage calculated [***]; and

(ii) be accompanied by reasonably detailed plans outlining Intellia's sales force and sales force infrastructure to be deployed to provide the Intellia Co-Detail Effort to Novartis' reasonable satisfaction at least [***] before the First Commercial Sale of such Product in the United States.

(c) Promptly following receipt of Intellia's Co-Detail Option Exercise Notice, Novartis and Intellia will commence negotiations in good faith and enter into a more detailed co-detailing agreement (the "Co-Detailing Agreement") within [***] days of Novartis' receipt of Intellia's Co-Detail Option Exercise Notice. The Co-Detailing Agreement will contain reasonable and customary provisions for an agreement of such type [***].

(d) The Parties acknowledge that such Co-Detailing Agreement will be a separate agreement between the Parties and that a breach of that agreement by either Party that is not a breach by such Party of the other sections of this Agreement will not give rise to a right to terminate this Agreement.

[***]

3.8.3 Pharmacovigilance. To the extent required by Applicable Law, within [***], the Parties will agree upon and implement a procedure for the mutual exchange of adverse event reports and safety information associated with the Product. Details of the operating procedure relating to the adverse event reports and safety information exchange will be the subject of a mutually-agreed written pharmacovigilance agreement between the Parties which will be entered into within such [***] period.

Section 3.9 Intellia HSC Products.

Intellia will be solely responsible for **(a)** all Development of the Intellia HSC Products, **(b)** all regulatory plans and strategies for the Intellia HSC Products, and all Regulatory Filings and all Regulatory Approvals for the Intellia HSC Products to be filed, obtained and maintained throughout the world in the name of Intellia or its Affiliates or sublicensees, **(c)** all manufacture and supply for the Intellia HSC Products, and **(d)** all aspects of Commercialization of the Intellia HSC Products. [***]. Intellia will have the right to disclose the existence of, and the results from, any clinical trials for any Intellia HSC Product, conducted under this Agreement in accordance with its standard policies.

Section 3.10 Debarment.

In performing its obligations under this Agreement, neither Party nor its Affiliates will employ or use any person that has been debarred under Section 306(a) or 306(b) of the U.S. Federal Food, Drug and Cosmetic Act.

ARTICLE IV
RESTRICTIVE COVENANTS

Section 4.1 HSC.

4.1.1 During the Research Term. During the Research Term and except as expressly contemplated by this Agreement [***], the Parties and their Affiliates will not **(a)** engage in any research, Development, or Commercialization activities in the HSC Field [***] **(b)** grant to any Third Party any assignment, license, or other right to Practice Intellia Intellectual Property, Novartis HSC Background Intellectual Property, Novartis Other Background Intellectual Property or Collaboration Intellectual Property in the HSC Field [***].

4.1.2 After the Research Term.

(a) Following the Research Term and during the Agreement Term [***], Intellia and its Affiliates will not (directly or indirectly), **(i)** for themselves or on behalf of or in collaboration with any Third Party, engage in any research, Development, or Commercialization activities in the HSC Field with respect to **(1)** such Novartis Selected HSC Product, or **(2)** the Novartis Selected HSC Target that such Novartis Selected HSC Product is directed toward;

or **(ii)** grant to any Third Party any assignment, license, or other right to Practice Intellia Intellectual Property or Collaboration Intellectual Property in the HSC Field with respect to **(1)** such Novartis Selected HSC Product, or **(2)** the Novartis Selected HSC Target that such Novartis Selected HSC Product is directed toward.

(b) Following the Research Term and during the Agreement Term [***], Novartis and its Affiliates will not (directly or indirectly), **(i)** for themselves or on behalf of or in collaboration with any Third Party, engage in any research, Development, or Commercialization activities in the HSC Field with respect to (**1**) such Intellia HSC Product, or (**2**) the Intellia Selected HSC Target that such Intellia HSC Product is directed toward; or **(ii)** grant to any Third Party any assignment, license, or other right to Practice the Novartis HSC Background Intellectual Property, Novartis Other Background Intellectual Property or Collaboration Intellectual Property in the HSC Field with respect to (**1**) such Intellia HSC Product, or (**2**) the Intellia Selected HSC Target that such Intellia HSC Product is directed toward.

(c) Following the Research Term and during the Agreement Term [***], Intellia and its Affiliates will not (directly or indirectly), **(i)** for themselves or on behalf of or in collaboration with any Third Party, engage in any research, Development, or Commercialization activities in the HSC Field with respect to such Additional Selected HSC Product; or **(ii)** grant to any Third Party any assignment, license, or other right to Practice Collaboration Product Intellectual Property in the HSC Field with respect to such Additional Selected HSC Product.

(d) [***].

(e) [***].

Section 4.2 CART.

4.2.1 During the Research Term. During the Research Term and except as expressly contemplated by this Agreement [***], the Parties and their Affiliates will not **(a)** engage in any research, Development, or Commercialization activities in the CART Field [***], or **(b)** grant to any Third Party any assignment, license, or other right to Practice Intellia Intellectual Property, Novartis HSC Background Intellectual Property, Novartis Other Background Intellectual Property or Collaboration Intellectual Property in the CART Field. [***].

4.2.2 After the Research Term. Following the Research Term and during the Agreement Term [***], Intellia and its Affiliates will not (directly or indirectly), **(i)** for themselves or on behalf of or in collaboration with any Third Party, engage in any research, Development, or Commercialization activities in the CART Field [***]; or **(ii)** grant to any Third Party any assignment, license, or other right to Practice Intellia Intellectual Property or Collaboration Intellectual Property in the CART Field with respect to **(1)** such Advanced CART Product, or **(2)** the CART Therapeutic Target that such Advanced CART Product is directed toward.

4.2.3 [***]

Section 4.3 In Vivo.

[***]

Section 4.4 Permitted Third Party Arrangements.

Nothing in this Article IV will prohibit either Party from obtaining licenses, assignments, or other rights to Intellectual Property Rights from Third Parties, to the extent such Party deems that such Intellectual Property Rights are necessary or useful to the exercise of its rights or performance of its obligations under this Agreement [***].

ARTICLE V
INTELLECTUAL PROPERTY

Section 5.1 Limited Grants for Research Programs.

5.1.1 License Grant by Novartis. Novartis hereby grants to Intellia a worldwide, non-exclusive license to Practice the Novartis HSC Background Intellectual Property and Novartis Other Background Intellectual Property solely to the extent necessary for Intellia and its Affiliates to perform the activities assigned to them in the Collaboration.

5.1.2 License Grant by Intellia. Intellia hereby grants to Novartis and its Affiliates a worldwide, non-exclusive license to Practice the Intellia Intellectual Property solely to the extent necessary for Novartis and its Affiliates to perform the activities assigned to them in the Collaboration [***].

5.1.3 Sublicensing Research Program Activities. Subject to the provisions of Section 2.6, each of the Parties will have the right to grant a sublicense to the rights set forth in this Section 5.1 to Third Party vendors, service providers, and collaborators, solely for Practice in connection with goods or services provided to or on behalf of such Party for the Collaboration as specified in the HSC Research Plan, CART Research Plan, and In Vivo Research Plan.

5.1.4 Term of Research License. The licenses contemplated by Section 5.1.1, Section 5.1.2 and Sections 5.3.1(a)(i), 5.3.2(a)(i), 5.3.2(a) and 5.3.3 (a) will automatically terminate on the expiration of the Research Term.

Section 5.2 Collaboration Intellectual Property.

5.2.1 Generally. Notwithstanding inventorship, **(a)** Collaboration Product Intellectual Property will be jointly owned by the Parties; and **(b)** Collaboration Platform Intellectual Property is hereby assigned to and solely owned by Intellia.

5.2.2 Rights to Collaboration Intellectual Property. Except as provided in Article IV and the exclusive rights set forth in Section 5.4, both Parties and their Affiliates may Practice and grant licenses to Collaboration Product Intellectual Property for all purposes worldwide without the consent of or any accounting to the other Party (other than payments contemplated by Article VII).

5.2.3 Prosecution and Maintenance of Collaboration Intellectual Property Patent Rights.

(a) [***].

(b) Each Party will cooperate with the other with respect to such activities involving the Collaboration Intellectual Property, including the execution of all such documents and instruments and the performance of such acts (and causing its relevant employees to execute such documents and instruments and to perform such acts) as may be reasonably necessary in order to permit the other Party to continue any preparation, filing, prosecution, or maintenance of Patent Rights claiming the Collaboration Intellectual Property. The prosecuting Party will keep the other Party reasonably informed of all material matters relating to the preparation, filing, prosecution and maintenance of, and any post-grant proceedings on [***] the Patent Rights within the Collaboration Product Intellectual Property and [***] the Patent Rights within the Collaboration Platform Intellectual Property (including providing such other Party with copies of all material correspondence with the applicable patent offices) and will reasonably consider such other Party's comments relating to prosecution and maintenance decisions, or defenses or responses to any post-grant proceedings.

Upon either Party's request and where permitted by Applicable Law, the other Party will assist the requesting Party to obtain patent term extensions or supplemental protection certificates or their equivalents in any country ("Extensions") for Patent Rights included in the Collaboration Intellectual Property. Each Party will promptly notify and provide the other Party with copies of any allegations of alleged lack of patentability, patent invalidity, unenforceability or non-infringement, including any such allegation pursuant to a Paragraph IV Patent Certification by a Third Party filing an Abbreviated New Drug Application or an application under §505(b)(2) of the United States Federal Food, Drug, and Cosmetic Act (as amended or any replacement thereof), in relation to an application

under Section 262(k) of the Biosimilar Act, or any other similar patent certification by a Third Party, and any foreign equivalent thereof ("Paragraph IV Certification") of any Patent Rights included in the Collaboration Intellectual Property. Such notification and copies will be provided to such other Party within [***] after Novartis or Intellia, as applicable, receives such certification.

(c) If a Party (a "Disclaiming Party") elects not to file applications for, or to cease prosecution and/or maintenance of, or not to continue to pay the expenses of prosecution and/or maintenance of, any Patent Rights included in the Collaboration Intellectual Property for which it is primarily responsible pursuant to this Section 5.2.3, the Disclaiming Party will provide such notice to the other Party at least [***] prior to any filing or payment due date (or any other due date that requires action) in connection with such Patent Rights. In such event, the Disclaiming Party will permit the other Party, at its sole discretion and expense, to file or to continue prosecution or maintenance of such Patent Rights.

5.2.4 Enforcement or Defense of Collaboration Intellectual Property Patent Rights.

(a) In the event either Party becomes aware of any actual or suspected infringement of, or a claim of invalidity, lack of patentability, unenforceability or non-infringement against, the Patent Rights claiming the Collaboration Intellectual Property (any of which, a "Collaboration Patent Rights Challenge"), such Party shall provide prompt written notice thereof to the other Party; *provided* that, if the Party becomes aware of a Collaboration Patent Rights Challenge based on a notification (which is not a Paragraph IV Certification) from a Third-Party, then the Party receiving such notification will provide copies of such notification to the other Party no later than [***] after Novartis or Intellia, as applicable, receives such notification.

(b) [***]. The Party bringing the relevant suit (the "Enforcing Party") shall keep the other Party reasonably informed of all developments in the prosecution or settlement of such suit. [***]. Such other Party will provide the Enforcing Party with reasonable assistance in connection with its suit, at the Enforcing Party's expense, including by executing reasonably appropriate documents, cooperating in discovery, and joining as a party to the suit if required, in connection with any litigation commenced pursuant to this Section 5.2.4.

(c) Any recoveries resulting from such a suit will be first applied against payment of each Party's costs and expenses in connection therewith [***].

Section 5.3 Intellia Intellectual Property; Novartis HSC Background Intellectual Property; Novartis Other Background Intellectual Property.

5.3.1 Novartis Selected HSC Products; Intellia HSC Products.

(a) Novartis Selected HSC Products. Intellia hereby grants to Novartis and its Affiliates a worldwide license to Practice the Intellia Intellectual Property and Collaboration Platform Intellectual Property **(i)** during the Research Term, to research and Develop HSC Products (other than Intellia HSC Products directed at Intellia Selected HSC Targets) under the HSC Research Plan; and **(ii)** during and after the Research Term, to research, Develop, and Commercialize any Novartis Selected HSC Products and Additional Selected HSC Products in the HSC Field. [***]. Subject to Section 5.3.4 and Section 2.6, Novartis and its Affiliates will have the right to sublicense the rights [***] to Third Party vendors, service providers, and collaborators, solely for Practice in connection with the research, Development, and Commercialization of such Novartis Selected HSC Products and Additional Selected HSC Products in the HSC Field.

(b) Intellia HSC Products. Novartis hereby grants to Intellia and its Affiliates a worldwide, non-exclusive license to Practice the Novartis HSC Background Intellectual Property **(i)** during the Research Term, to research and Develop HSC Products; and **(ii)** during and after the Research Term, to research, Develop, and Commercialize any Intellia HSC Products in the HSC Field (the "Novartis HSC Background IP License"). Subject to Section 5.3.4 and Section 2.6, Intellia and its Affiliates will have the right to sublicense the Novartis HSC Background IP License [***] to Third Party vendors, service providers, and collaborators, solely for Practice in connection with the research, Development, and Commercialization of such Intellia HSC Products.

5.3.2 CART Products. Intellia hereby grants to Novartis and its Affiliates a worldwide license to Practice the Intellia Intellectual Property and Collaboration Platform Intellectual Property **(a)** during the Research Term, to research and Develop any CART Products under the CART Research Plan; and **(b)** during and after the Research

Term, to research, Develop, and Commercialize any CART Products in the CART Field. [***]. Subject to Section 5.3.4 and Section 2.6, Novartis and its Affiliates will have the right to sublicense such rights [***] to Third Party vendors, service providers, and collaborators, solely for Practice in connection with the research, Development, and Commercialization of such CART Products.

5.3.3 In Vivo Products. Intellia hereby grants to Novartis and its Affiliates a worldwide, non-exclusive license to Practice the Intellia Intellectual Property and Collaboration Platform Intellectual Property **(a)** following [***] of the Effective Date and for the remainder of the Research Term, to research and Develop In Vivo Products under any In Vivo Research Plans; and **(b)** after the Research Term, to research, Develop, and Commercialize any Novartis Selected In Vivo Products in the In Vivo Field. Subject to Section 5.3.4 and Section 2.6, Novartis and its Affiliates will have the right to sublicense such rights through multiple tiers to Third Party vendors, service providers, and collaborators, solely for Practice in connection with the research, Development, and Commercialization of such Novartis Selected In Vivo Products.

5.3.4 Sublicensing Rights. Novartis and its Affiliates may grant sublicenses of the license granted in Section 5.3.1(a), Section 5.3.2, and Section 5.3.3, and Intellia and its Affiliates may grant sublicenses of the license granted in Section 5.3.1(b), *provided* that **(a)** such sublicense **(i)** is in writing, **(ii)** is subject and subordinate to, and consistent with, the terms and conditions of this Agreement, and **(iii)** requires the applicable sublicensee to comply with all applicable terms of this Agreement [***]; **(b)** with respect to Novartis or any of its Affiliates as the sublicensing Party to the extent required by the Key License Agreements as in effect on the Effective Date or the agreements for any Included Intellia New In-Licensed Intellectual Property, Novartis promptly notifies Intellia of the grant of each sublicense and provides Intellia a copy of the final executed sublicense agreement, redacted for information not pertinent to this Agreement to the extent that such redactions do not reasonably impair Intellia's ability to ensure compliance with this Agreement, the Key License Agreements or agreements for any Included Intellia New In-Licensed Intellectual Property, as applicable, **(c)** Novartis or Intellia, as applicable, shall be responsible for the failure by its sublicensees to comply with, and Novartis or Intellia, as applicable, guarantees the compliance by each of its sublicensees with, all relevant restrictions, limitations and obligations in this Agreement, and [***].

5.3.5 Maintenance & Compliance of License Agreements.

(a) With respect to the Intellectual Property Rights that are licensed to Intellia under any license agreement comprising the Key License Agreements, **(i)** Intellia will use Commercially Reasonable Efforts to maintain the relevant license agreement in full force and effect; **(ii)** Intellia will provide prompt written notice to Novartis if it becomes aware of or receives any notice that Intellia or its licensor is in breach or default of any such license agreement, **(iii)** Intellia will use Commercially Reasonable Efforts to cure such breach or default [***], and **(iv)** Intellia will not cause the Key License Agreements to be amended or modified in any way that would reasonably be expected to have a material adverse effect on Novartis' rights under this Agreement [***]; **(v)** if Intellia becomes aware that any of its licensors has terminated or receives notice that any of its licensors intend to terminate any such license agreement or otherwise materially restrict or limit Intellia's and Novartis' rights to the relevant Intellectual Property Rights, **(A)** Intellia will provide prompt written notice to Novartis [***].

(b) The licenses granted to Novartis and its Affiliates under Sections 5.3.1(a), 5.3.2 and 5.3.3 will be subject to Novartis' and its Affiliates', and their sublicensees' compliance as of the Effective Date with the terms of the Key License Agreements [***] and the terms of the agreements for any Included Intellia New In-Licensed Intellectual Property, as applicable.

5.3.6 Novartis Other Background Intellectual Property. Novartis hereby grants to Intellia and its Affiliates a worldwide, non-exclusive, fully paid and royalty-free license to Practice the Novartis Other Background Intellectual Property to research, Develop, and Commercialize Intellia HSC Products and therapeutic, prophylactic, and/or palliative CRISPR-based *in vivo* products by or on behalf of Intellia or its Affiliates. Subject to Section 5.3.4 and Section 2.6, Intellia and its Affiliates will have the right to sublicense the license granted under this Section 5.3.6 [***] to Third Party vendors, service providers, and collaborators, solely for Practice in connection with the research, Development, and Commercialization of such Intellia HSC Products and therapeutic, prophylactic, and/or palliative CRISPR-based *in vivo* products with (*e.g.*, collaborations) or on behalf of Intellia or its Affiliates. Novartis will have the right to terminate rights [***] upon written notice to Intellia in the event that Intellia or any of its

Affiliates [***] (an "Intellia Other Patent Challenge"). In the event Intellia or any of its Affiliates intends to assert an Intellia Other Patent Challenge [***] not less than [***] days prior to making any such assertion, Intellia shall provide to Novartis a complete written disclosure of each basis known to Intellia for such assertion. Novartis must exercise its right to terminate Intellia's rights [***] within [***] days of the Novartis' receipt of service of process (or its equivalent) in the relevant administrative or legal proceeding, [***].

Section 5.4 Exclusivity.

5.4.1 HSC.

(a) [***].

(b) [***]

5.4.2 CART Program. [***].

5.4.3 In Vivo Program. [***].

Section 5.5 Licenses in Bankruptcy.

All licenses granted under or pursuant to this Agreement are intend to be licenses of intellectual property as contemplated by Section 365(n) of the United States Bankruptcy Code and equivalent or corresponding provisions of Applicable Laws of other jurisdictions. Each licensee may retain and may fully exercise all of its protections, rights, and elections under all Applicable Laws.

Section 5.6 No Implied Licenses.

The licenses set forth in this Article V are limited in scope to those expressly set forth in this Agreement, and no implied license is intended to be created by this Agreement.

ARTICLE VI
[***]

[***]

ARTICLE VII
PAYMENTS

Section 7.1 Technology Access Fee; Annual Access Fee; Equity.

7.1.1 Upfront Technology Access Fee Payment. Novartis will make a one time payment of USD$10,000,000 within [***] days after receipt of an Invoice for the same, which will be issued on or after [***].

7.1.2 Annual Access Fee. [***] Novartis will make annual payments of USD$5,000,000 each within [***] days of receipt of an Invoice for the same, with the [***] payment to be paid by Novartis to Intellia no later than [***] (provided Novartis has received an Invoice therefor at least [***] days prior to such date) and the subsequent annual payments to be invoiced on the [***]. In no events will payments pursuant to this Section 7.1.2 exceed USD$20,000,000 in the aggregate.

7.1.3 Additional Selected HSC Targets Fee. For each Additional Selected HSC Target, Novartis will make a payment of [***], which will be paid within [***] days of receipt of an Invoice for the same, to be issued upon receipt of Novartis' notice to Intellia [***].

7.1.4 Equity Investment. Novartis will have the right to make the investments set forth in the Equity Agreements.

Section 7.2 Research Funding Payments.

7.2.1 HSC Program; CART Program.

(a) [***], Novartis will make to Intellia research funding reimbursements payments ("Research Funding Payments") in the amount of [***] in the aggregate per [***] period [***] and, unless agreed upon by the Parties in writing, not to exceed USD$20,000,000 in the aggregate [***]. Specifically, Novartis will make quarterly Research Funding Payments in the amount of [***] within [***] days of Novartis' receipt of an Invoice for the same issued by Intellia upon the [***] day of the applicable such [***] period.

[***]

7.2.2 In Vivo Program. If pursuant to Section 2.4.3, if the Parties agree that Intellia will be responsible for activities under an In Vivo Research Plan, then for all such activities performed by or behalf of Intellia, Novartis will reimburse Intellia at the FTE Rate consistent with the In Vivo Budget included in any applicable In Vivo Research Plans ("In Vivo Research Funding Payments"). Novartis will make [***] In Vivo Research Funding Payments [***].

7.2.3 General. [***]

Section 7.3 Development and Approval Milestones.

7.3.1 Generally. The fees set forth in the table below (collectively, "Milestone Payments") will accrue to Intellia upon the achievement by Novartis, its Affiliates, or any of their sublicensees of the corresponding events (the "Milestones") with respect to each Product per Target that achieves such Milestone; *provided*, *however*, that:

(a) HSC Products. On a Novartis Selected HSC Target-by- Novartis Selected HSC Target basis and an Additional Selected HSC Target-by-Additional Selected HSC Target basis, as applicable, Milestones Payments shall be as follows:

[***]

(b) CART Products. On a CART Therapeutic Target-by-CART Therapeutic Target basis, Milestones Payments shall be as follows:

[***]

(c) In Vivo Products. On a Novartis Selected In Vivo Target -by- Novartis Selected In Vivo Target basis, Milestones Payments shall be as follows:

[***]

(e) [***]

(f) Example of Milestones Payment. An example of the Milestone payments and the provisions of clauses (a) through (e), above, is set forth as *Exhibit D*.

[Table Follows]

#	Milestone	Milestone Payment
1.	Filing of the IND for the Product	[***]
2.	FPFD of Phase IIa Trial of the Product	[***]
3.	FPFD of Phase IIb Trial of the Product	[***]
4.	FPFD of Phase III Trial of the Product	[***]
5.	First Regulatory Approval of the Product worldwide: (††) [***] [***]	[***]
6.	Second Regulatory approval of the Product worldwide (††) [***] [***]	[***]
7.	Regulatory Approval in the US of the Product for an Additional Labeled Indication: (†††) [***] [***]	[***]
8.	Regulatory Approval in the EU of the Product for an Additional Labeled Indication (†††) [***] [***]	[***]
[***]		

(††) For the avoidance of doubt, the total amount payable under Milestones 5 and 6 shall not exceed [***] for each Product per Target.

(†††) For the avoidance of doubt, the total amount payable under Milestones 7 and 8 shall not exceed [***] for each Product per Target.

7.3.2 Milestone Payments. Novartis will provide Intellia with written notice within [***] days after Novartis determines or is informed that the relevant Milestone has been achieved. Novartis will pay the corresponding Milestone Payment within [***] days after receipt of an Invoice for the same.

7.3.3 Skipped Milestones. [***]

Section 7.4 Royalties on Products.

7.4.1 Royalties Generally. Novartis or its Affiliate will make royalty payments to Intellia [***] on a Product by Product basis at the following marginal royalty rates ("Royalties"):

[***]	Marginal Royalty Rate
[***]	[***]
[***]	[***]
[***]	[***]

7.4.2 Royalty Duration. Royalties will be payable on a Product by Product and country by country basis during the Royalty Term. Thereafter, Novartis', its Affiliates' and their sublicensees' rights to such Product in such country will be Royalty-free.

7.4.3 Payment of Royalties. Within [***] days after the end of each Calendar Quarter during the Royalty Term, Novartis will provide Intellia with a report stating the Net Sales of Products sold by Novartis or its Affiliates [***] during that Calendar Quarter, together with the calculation of the Royalties due to Intellia. Royalty payments will be made by Novartis or its Affiliate to a bank account indicated by Intellia within [***] days after the date of receipt by Novartis of an Invoice for the indicated amount.

7.4.4 Loss of Market Exclusivity. If a Loss of Market Exclusivity for any Product occurs in any country, then for the remaining period of the Royalty Term following such Loss of Market Exclusivity, the Net Sales for such country [***] for the purpose of the calculation of Royalties due under Section 7.4.1 will be reduced by [***].

7.4.5 Know How Only Royalties. If, during the Royalty Term, the relevant Product is not covered by a Valid Claim in the applicable country, then for so long as there is no Valid Claim in such country during the Royalty Term, the Net Sales for such country [***] for the purpose of the calculation of Royalties due under Section 7.4.1 will be reduced by [***].

7.4.6 Minimum Royalties. Notwithstanding any multiple reductions that may be taken pursuant to this Article VII [***], in no event will the Royalty rates under this Agreement fall below, as applicable, the Royalty Rates of the Revised Royalty Floor set forth in Section 7.6.2(b), or [***] of the Royalty rates set forth in Section 7.4.1 in any Calendar Quarter pursuant to this Section 7.4.6. [***].

7.4.7 Sample Computations. Sample Royalty computations for Section 7.4 are set forth on *Exhibit E*.

7.4.8 Payments on Novartis HSC Background IP License.

(a) [***].

(b) [***].

(c) [***].

(d) [***].

(e) [***].

(f) [***].

Section 7.5 Sales Milestones on Products.

Novartis will make each of the following [***] payments (each, a "Sales Milestone Payment") when [***] (the "Sales Milestones"):

[***]	Sales Milestone Payment
[***]	[***]
[***]	[***]
[***]	[***]

Novartis will provide written notice to Intellia within [***] days of its determination that a Sales Milestone as contemplated by this Section 7.5 has been achieved, and will make the corresponding Sales Milestone Payment within [***] days after the date of receipt by Novartis of an Invoice for the indicated amount.

Section 7.6 Third Party Royalties.

7.6.1 Caribou. Novartis will reimburse Intellia for [***]; *provided, however*, that Novartis will not be responsible for [***]. All such reimbursement payments will be made within [***] days of receipt of an Invoice for the same [***].

7.6.2 Third Party Obligations.

(a) Except as contemplated by Section 7.6.1, Intellia will remain responsible for the payment of royalty, milestone and other payment obligations, if any, due to Third Parties under any other (*i.e.*, not identified in Section 7.6.1) Intellia Intellectual Property that has been licensed to Intellia as of the Effective Date. After the Effective Date, if

Intellia in-licenses Intellectual Property Rights of a Third Party that cover the Intellia Platform or improvements thereto ("Intellia New In-Licensed Intellectual Property"), then Intellia shall make such Intellia New In-Licensed Intellectual Property available to be included in the licenses to Novartis under this Agreement by notifying Novartis of the Intellia New In-Licensed Intellectual Property and related agreement, including any anticipated financial obligations that may arise if Novartis were to elect to take a sublicense to such Intellectual Property Rights. Within [***] days of receiving notice of any Intellia New In-Licensed Intellectual Property, Novartis may elect to add such Intellectual Property Rights to the Intellia Intellectual Property ("Included Intellia New In-Licensed Intellectual Property") [***] If Novartis fails or declines to make the election specified in this section within [***] days of receiving the notice from Intellia, such declined Intellectual Property Rights shall not be included as Intellia Intellectual Property [***] ("Excluded Intellia New In-Licensed Intellectual Property") [***]. Further, Excluded Intellia New In-Licensed Intellectual Property shall include any Intellectual Property licensed or acquired by Intellia from a Third Party after the Effective Date that is not Intellia New In-Licensed Intellectual Property.

(b) If Novartis determines that licenses or other rights to Intellectual Property Rights of a Third Party are required to Practice the Intellia Intellectual Property (other than those already in-licensed by Intellia and available to Novartis pursuant to the terms of Section 7.6.2(a) above), Novartis will have the right to negotiate and acquire such rights through a license and will be responsible for all amounts to be paid to such Third Party; *provided*, *however*, that [***].

(c) After the Effective Date, if Novartis in-licenses Intellectual Property Rights of a Third Party that cover the Intellia Platform or improvements thereto ("Novartis New In-Licensed Platform Intellectual Property"), then Novartis shall make such Novartis New In-Licensed Platform Intellectual Property available to be included in the license granted to Intellia under Section 5.3.6 by notifying Intellia of the Novartis New In-Licensed Platform Intellectual Property and related agreement, including any anticipated financial obligations that may arise if Intellia were to elect to take a sublicense to such Intellectual Property. Within [***] days of receiving notice of any Novartis New In-Licensed Platform Intellectual Property, Intellia may elect to add such Intellectual Property Rights to the Novartis Other Background Intellectual Property ("Included Novartis New In-Licensed Platform Intellectual Property") [***]. If Intellia fails or declines to make the election specified in this section within [***] days of receiving the notice from Novartis, such declined Intellectual Property Rights shall not be included as Novartis Other Background Intellectual Property [***] ("Excluded Novartis New In-Licensed Platform Intellectual Property") [***].

Section 7.7 [***]

Section 7.8 Recordkeeping and Reports.

7.8.1 Recordkeeping Generally. Each Party will keep complete, true and accurate books and records in accordance with its Accounting Standards, as applicable, in relation to this Agreement, including, in the case of Novartis, with respect to Net Sales and Royalties, and in the case of Intellia, FTEs rendered pursuant to this Agreement, and Intellia Net Sales. Each Party will keep such books and records for at least [***] following the Calendar Year to which they pertain. Each Party will promptly notify the other in advance of any changes to the Accounting Standards by which its records are maintained, it being understood that each Party may only use internationally recognized accounting principles (*e.g.*, IFRS, US GAAP, *etc.*).

7.8.2 Audit Right. Each Party may, upon written request, cause an internationally-recognized independent accounting firm (the "Auditor"), which is reasonably acceptable to the other Party, to inspect the relevant records of the other Party and its Affiliates to verify the amounts payable by the Parties and the related reports, statements and books of accounts, as applicable, referenced in Section 7.8.1 and 7.6.1. Before beginning its audit, the Auditor will execute an undertaking acceptable to the audited Party by which the Auditor agrees to keep confidential all information reviewed during the audit. The Auditor will have the right to disclose to the Party requesting the audit only its conclusions regarding any payments owed under this Agreement.

7.8.3 Inspection of Books and Records. The audited Party and its Affiliates will make their records available for inspection by the Auditor during regular business hours at such place or places where such records are customarily kept, upon receipt of reasonable advance notice from the Party requesting the audit. The records will be reviewed solely to verify the accuracy of the Parties' financial obligations corresponding to this Agreement. Such inspection

right will not be exercised more than once in any Calendar Year and not more than once with respect to records covering any specific period of time. In addition, each Party will only be entitled to audit the books and records of the other Party from the [***] prior to the Calendar Year in which the audit request is made. The Party requesting the audit will hold in strict confidence all information received and all information learned in the course of any audit or inspection, except to the extent necessary to enforce its rights under this Agreement or to the extent required to comply with any Applicable Laws.

7.8.4 Report. The Auditor will provide its audit report and basis for any determination both Parties before it is considered final. If the final result of the inspection reveals an undisputed underpayment or overpayment, then the underpaid or overpaid amount will be settled promptly. If the audited Party disagrees with the findings of the report, it will provide the other Party and the Auditor with a reasonably detailed statement of the grounds upon which it disputes such findings in the audit report and the Auditor will undertake to complete such further determination within 30 days after the dispute notice is provided, which determination will be limited to the disputed matters. The Parties will use reasonable efforts, through the participation of finance representatives of both companies, to resolve any dispute arising in relation to the audit by good faith discussion.

7.8.5 Payment for Audit. The Party requesting the audit will pay for such inspections, as well as its expenses associated with enforcing its rights with respect to any payments hereunder; *provided* that **(a)** if an underpayment of royalties of more than [***]% of the total payments due by Novartis hereunder for the applicable Calendar Year is discovered and is due to an error or omission of Novartis, the fees and expenses charged by the Auditor will be paid by Novartis; and **(b)** if an overpayment by Novartis of more than [***]% of the total payments due hereunder for the applicable Calendar Year is discovered and is due to an error or omission of Intellia, the fees and expenses charged by the Auditor will be paid by Intellia.

7.8.6 Commercially Reasonable Efforts Report. Starting on [***] and on an [***] basis thereafter during the Agreement Term, Novartis will provide Intellia a report of each Novartis Selected HSC Product, Additional Selected HSC Product, Advanced CART Product, and In Vivo Product that is then the subject of ongoing research, Development, and Commercialization activities [***]. Each such report shall detail the current status of Development of each such Product, and the anticipated date of the next milestone to be achieved by such Product.

Section 7.9 Payments; Interest.

All payments will be made in US Dollars by wire transfer in immediately available funds to a bank and account designated in writing by Intellia for payments to be made by Novartis hereunder, or designated in writing by Novartis for payments, if any, to be made by Intellia pursuant to Section 7.4.8 and 7.6.2(c). Any payments which fall due on a date that is not a Business Day will be due on the next date that is a Business Day. Any payments or portions thereof due hereunder which are not paid when due shall bear simple interest equal to the lesser of **(a)** one-month Euribor plus 200 basis points per annum, or **(b)** the maximum rate permitted by Applicable Law, calculated on the number of days such payment is delinquent.

Section 7.10 Projections.

Intellia and Novartis acknowledge that nothing in this Agreement will be construed as representing an estimate or projection of anticipated sales of any Product, and that the Milestones and Net Sales levels set forth above or elsewhere in this Agreement or that have otherwise been discussed by the Parties are merely intended to define the payments and royalty obligations to Intellia if such Milestones or Net Sales levels are achieved. *NEITHER Intellia NOR Novartis MAKES ANY REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, THAT IT WILL BE ABLE TO SUCCESSFULLY RESEARCH, DEVELOP OR COMMERCIALIZE ANY PRODUCT OR SERVICE OR, IF COMMERCIALIZED, THAT ANY PARTICULAR NET SALES LEVEL OF SUCH PRODUCT OR SERVICE WILL BE ACHIEVED.*

ARTICLE VIII
CONFIDENTIALITY

Section 8.1 Undertaking.

Subject to the other provisions of this Article VIII, all Confidential Information disclosed by a Party or its Affiliates in connection with the Collaboration or under this Agreement will be maintained in confidence and otherwise safeguarded by the recipient Party. The recipient Party may only use such Confidential Information for the purposes of this Agreement and pursuant to the rights granted to the recipient Party under this Agreement. Subject to the other provisions of this Article VIII, each Party will hold as confidential such Confidential Information of the other Party or its Affiliates in the same manner and with the same protection as such recipient Party maintains its own confidential information (but in no event will it exercise less than reasonable care with respect to such Confidential Information). Subject to the other provisions of this Article VIII, a recipient Party may only disclose Confidential Information of the other Party to employees, agents, contractors, consultants, and advisers of the recipient Party and its Affiliates, licensees and sublicensees and to Third Parties to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; *provided* that such Persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement. The Parties acknowledge that Confidential Information has been exchanged between the Parties prior to the Effective Date pursuant to the Confidentiality Agreement. The Parties agree that as of the Effective Date the Confidentiality Agreement is hereby terminated without further force and effect and is superseded by this Article VIII, and all obligations between the Parties relating to all such Confidential Information exchanged before the Effective Date will be governed by this Article VIII.

Section 8.2 Exceptions to Confidentiality.

The obligations under this Article VIII will not apply to any information to the extent the recipient Party can demonstrate by competent evidence that such information:

(a) is (at the time of disclosure) or becomes (after the time of disclosure) known to the public or part of the public domain through no breach of this Agreement by the recipient Party or its Affiliates;

(b) was known to, or was otherwise in the possession of, the recipient Party or its Affiliates prior to the time of disclosure by the disclosing Party or any of its Affiliates;

(c) is disclosed to the recipient Party or an Affiliate on a non-confidential basis by a Third Party who is entitled to disclose it without breaching any confidentiality obligation to the disclosing Party or any of its Affiliates; or

(d) is independently developed by or on behalf of the recipient Party or its Affiliates, as evidenced by its written records, without reference to the Confidential Information disclosed by the disclosing Party or its Affiliates under this Agreement.

Specific aspects or details of Confidential Information will not be deemed to be within the public domain or in the possession of the recipient Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the recipient Party. Further, any combination of Confidential Information will not be considered in the public domain or in the possession of the recipient Party

merely because individual elements of such Confidential Information are in the public domain or in the possession of the recipient Party unless the combination and its principles are in the public domain or in the possession of the recipient Party.

Section 8.3 Authorized Disclosures.

In addition to disclosures allowed under Sections 8.1 and 8.2, each Party may disclose Confidential Information belonging to the other Party or its Affiliates to the extent such disclosure is necessary in the following instances: **(a)** filing or prosecuting Patent Rights; **(b)** in connection with seeking for or obtaining Regulatory Approval; **(c)** prosecuting or defending litigation as permitted by this Agreement; **(d)** complying with applicable court orders or governmental regulations; **(e)** to any potential or actual investor, lender, financing partner, acquirer, or merger partner, or **(f)** to the extent otherwise necessary or appropriate in connection with exercising the license and other rights granted to it hereunder. If the recipient Party is required to disclose Confidential Information of the disclosing Party by Applicable Law or in connection with bona fide legal process, such disclosure will not be a breach of this Agreement; *provided* that the recipient Party **(i)** informs the disclosing Party as soon as reasonably practicable of the required disclosure; **(ii)** limits the disclosure to the required purpose; and **(iii)** at the disclosing Party's request and expense, assists in an attempt to object to or limit the required disclosure.

Section 8.4 Publicity.

8.4.1 The Parties will agree on a mutually acceptable press release to be issued within [***] following the execution of this Agreement.

8.4.2 Subject to Section 8.4.1, no public announcement concerning the existence or the terms of this Agreement or concerning the transactions described herein will be made, either directly or indirectly, by a Party or its Affiliates without first obtaining the written consent of the other Party; *provided* that either Party may disclose such information as may be required by Applicable Law, including those incident to the listing of securities on a stock exchange, without the consent of the other Party; *provided further* that the Party disclosing such information will **(a)** only disclose such information as is required by such Applicable Law; **(b)** provide reasonable advance notice to the other Party of the intended disclosure and the content of that disclosure; and **(c)** seek a confidential treatment order (or a protective or limiting order, as applicable) for all provisions of this Agreement that can be reasonably deemed to be trade secrets and will permit the non-disclosing party reasonable advance notice and the opportunity to comment on any such confidential treatment request or protective order request.

Section 8.5 Material Transfer.

[***]

ARTICLE IX
REPRESENTATIONS, WARRANTIES, AND COVENANTS

Section 9.1 Representations and Warranties of Both of the Parties.

Each Party represents and warrants to the other as of the Effective Date that: **(a)** it is a corporation duly organized, validly existing, and in good standing under the Applicable Laws of its jurisdiction of incorporation; **(b)** it has full corporate power and authority to execute, deliver, and perform this Agreement, and has taken all corporate action required by law and its organizational documents to authorize the execution and delivery of this Agreement and the consummation of the transactions contemplated by this Agreement; **(c)** this Agreement constitutes a valid and binding agreement enforceable against it in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent transfer, or other Applicable Laws affecting the rights and remedies of creditors generally and by general principles of equity; **(d)** all consents, approvals and authorizations from all governmental authorities or other Third Parties required to be obtained by such Party in connection with this Agreement have been obtained; and **(e)** the execution and delivery of this Agreement and all other instruments and documents required to be executed pursuant to this Agreement, and the consummation of the transactions contemplated hereby do not and will not **(i)** conflict with or result in a breach of

any provision of its organizational documents; **(ii)** result in a breach of any agreement to which it is a party; or **(iii)** violate any Applicable Law.

Section 9.2 Representations and Warranties of Intellia.

Intellia represents and warrants to Novartis as of the Effective Date as follows: **(a)** true and correct copies of [***] respectively, as they exist as of the Effective Date have been provided to Novartis (collectively, the "Key License Agreements"); **(b)** [***], are in full force and effect as of the Effective Date, and Intellia has no knowledge of any facts or circumstances that would constitute a breach of any of the Key License Agreements on the part of any of the parties to those agreements; **(c)** Intellia has not granted any Third Party rights that would conflict with Novartis' rights granted hereunder, and there are no agreements or arrangements to which Intellia or any of its Affiliates is a party relating to any Intellectual Property Rights, however arising, Controlled by Intellia that would limit the rights granted to Novartis under this Agreement; **(d)** to Intellia's knowledge, the Patent Applications included in the Intellia Intellectual Property on the Effective Date have been filed and prosecuted in accordance with all Applicable Laws; and **(e)** except as set forth on Schedule 9.2(e), all of Intellia's employees, officers, and consultants have executed agreements or have existing obligations under Applicable Law requiring assignment to Intellia of all inventions made during the course of and as the result of the Collaboration and obligating such individuals to maintain as confidential Intellia's Confidential Information as well as confidential information of other parties (including Novartis' and Novartis' Affiliates) that such individual may receive in the conduct of the Collaboration.

Section 9.3 Representations and Warranties of Novartis.

Novartis represents and warrants to Intellia as of the Effective Date as follows: **(a)** all of its employees, officers, and consultants have executed agreements or have existing obligations under Applicable Law requiring assignment to Novartis of all inventions made during the course of and as the result of the Collaboration and obligating the individual to maintain as confidential Novartis' Confidential Information as well as confidential information of other parties (including Intellia's) that such individual may receive in the conduct of the Collaboration; **(b)** it has not granted any Third Party rights that would conflict with Intellia's rights granted hereunder, and there are no agreements or arrangements to which Novartis or any of its Affiliates is a party relating to any Intellectual Property Rights, however arising, Controlled by Novartis that would limit the rights granted to Intellia under this Agreement; **(c)** to its knowledge, the Patent Applications included in the Novartis Intellectual Property on the Effective Date have been filed and prosecuted in accordance with all Applicable Laws; and **(d)** [***].

Section 9.4 Covenants.

9.4.1 Compliance with Applicable Law. Each of the Parties will conduct the Collaboration in compliance with all Applicable Laws, including, laws and regulations relating to health, safety and the environment, fair labor practices, anti-bribery, and unlawful discrimination.

9.4.2 Personal Information and Privacy. In the course of the performance of the Collaboration, each of the Parties may acquire the Personal Information (as defined herein) of individuals from various sources and countries. Each of the Parties will, and will cause its Affiliates and agents to, process all Personal Information it acquires under or in connection with this Agreement in compliance with all applicable data protection laws, including the data protection laws of the European Union, European Economic Area, Switzerland, the United States and various localities therein. Each of the Parties acknowledges that the requirements under such data protection laws may exceed the requirements applicable to Confidential Information set forth in Article VIII. Each of the Parties may, on reasonable prior notice, audit the other Party's compliance with such data protection laws. For this purpose, "Personal Information" means any information that can be used to identify, describe, locate or contact an individual, including **(a)** name or initials; **(b)** home or other physical address; **(c)** telephone number; **(d)** email address or online identifier associated with the individual; **(e)** social security number or other similar government identifier; **(f)** employment, financial or health information; **(g)** information specific to an individual's physical, physiological, mental, economic, racial, political, ethnic, ideological, cultural or social identity; **(h)** photographs; **(i)** dates relating to the individual (except years alone); **(j)** financial account numbers; **(k)** genetic material or information; **(l)** business contact information; and **(m)** any other information relating to an individual that, alone or in combination, with any of the above, can be used to identify an individual. Novartis will anonymize all information related to any Novartis Materials consisting of human biological samples.

9.4.3 No Conflicting Agreements. Each of the Parties covenants that it will not enter into any agreement, arrangement, or undertaking after the Effective Date that would prohibit or restrict its ability to perform its obligations as set forth in this Agreement or materially alter the other Party's rights under this Agreement.

Section 9.5 Disclaimers.

EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, THE PARTIES MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO ANY INTELLIA INTELLECTUAL PROPERTY, NOVARTIS BACKGROUND INTELLECTUAL PROPERTY, COLLABORATION INTELLECTUAL PROPERTY, TARGETS, PRODUCTS OR SERVICES, INCLUDING WARRANTIES OF VALIDITY OR ENFORCEABILITY OF ANY PATENT RIGHTS, TITLE, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE OR PURPOSE, PERFORMANCE, AND NON-INFRINGEMENT OF ANY THIRD PARTY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS.

ARTICLE X
INDEMNIFICATION

Section 10.1 Indemnification by Intellia.

Intellia will indemnify, defend, and hold Novartis, its Affiliates, and their respective employees, shareholders, officers, and directors, and the successors, heirs and assigns of each of them (the "Novartis Indemnitees"), harmless against any loss, damages, liability or expense, as well as reasonable attorneys' fees and litigation expenses (collectively, a "Loss") incurred by any Novartis Indemnitee in connection with any action, suit, proceeding, claim or demand by a Third Party, including personal injury and product liability matters (a "Third Party Claim"), to the extent that **(a)** such Loss is based on or arises out of the breach by Intellia of any of its covenants, representations, or warranties set forth in this Agreement (but excluding any such Loss that is caused by the negligent, reckless or intentional acts or omissions of Novartis or any other Novartis Indemnitee); or **(b)** such Loss relates to Intellia's, its Affiliates, or its or their licensees' or contractors' actions in connection with the research, Development, manufacture, use or Commercialization of an Intellia Selected Product.

Section 10.2 Indemnification by Novartis.

Novartis will indemnify, defend, and hold Intellia, its Affiliates, and their respective employees, shareholders, officers, and directors and the successors, heirs, and assigns of each of them (the "Intellia Indemnitees"), harmless against any Loss incurred by any Intellia Indemnitee in connection with any Third Party Claim to the extent **(a)** such Loss is based on or arises out of the breach by Novartis of any of its covenants, representations, or warranties set forth in this Agreement (but excluding any such Loss that is caused by the negligent, reckless or intentional acts or omissions of Intellia or any other Intellia Indemnitee); or **(b)** such Loss relates to Novartis', its Affiliates', or its or their licensees' or contractors' actions in connection with the research, Development, manufacture, use or Commercialization of a Product.

Section 10.3 Claims Procedures.

Each Person entitled to be indemnified by the other Party (an "Indemnified Party") pursuant to Section 10.1 or Section 10.2 will give notice to the other Party (an "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any threatened or asserted claim as to which indemnity may be sought, and will permit the Indemnifying Party to assume the sole control of the defense of any such claim or any litigation resulting therefrom; *provided*, *however*:

(a) that counsel for the Indemnifying Party who will conduct the defense of such claim or any litigation resulting therefrom will be approved by the Indemnified Party (whose approval will not unreasonably be withheld) and the Indemnified Party may participate in such defense at the Indemnified Party's expense, unless the Indemnified Party reasonably concludes that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the defense of such action, in each of which cases the Indemnifying Party will pay the reasonable fees and

expenses of one law firm serving as counsel for the Indemnified Party, which law firm will be subject to approval, not to be unreasonably withheld, by the Indemnifying Party;

(b) the failure of any Indemnified Party to give notice as provided herein will not relieve the Indemnifying Party of its obligations under this Agreement to the extent that the failure to give notice did not result in harm to the Indemnifying Party or materially compromise the defense of such claim;

(c) no Indemnifying Party, in the defense of any such claim or litigation, will consent to entry of any judgment or enter into any settlement, except with the approval of each Indemnified Party (which approval will not be unreasonably withheld), except a settlement which imposes only a monetary obligation on the Indemnifying Party and which includes as an unconditional term thereof the giving of a release from all liability in respect to such claim or litigation by the claimant or plaintiff to the Indemnified Party; and

(d) each Indemnified Party will furnish such information or reasonable assistance regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and will be reasonably required in connection with the defense of such claim and litigation resulting therefrom.

Section 10.4 Mitigation of Loss.

Each Indemnified Party will take and will procure that the other Novartis Indemnitees, where Novartis is the Indemnified Party, and the other Intellia Indemnitees, where Intellia is the Indemnified Party, take all such reasonable steps and action as are necessary or as the Indemnifying Party may reasonably require in order to mitigate any Loss (or potential Loss) under this Article X. Nothing in this Agreement will or will be deemed to relieve any Party of any common law or other duty to mitigate any losses incurred by it.

Section 10.5 Special, Indirect and Other Losses.

Neither Party nor any of its Affiliates will be liable in contract, tort, negligence, breach of statutory duty, or otherwise for any special, indirect, incidental, punitive, or consequential damages or for any economic loss or loss of profits suffered by the other Party, except to the extent such damages are required to be paid to a Third Party as a part of a Loss for which that Party is to provide indemnification under this Article X or for such Party's fraud, gross negligence or intentional misconduct.

ARTICLE XI
TERM AND TERMINATION

Section 11.1 Term.

This Agreement commenced will commence on the Effective Date and, unless terminated pursuant to Section 11.2, continue in full force and effect until the fulfillment of the later of **(a)** the expiration of Novartis' payment obligations hereunder, or **(b)** the date of expiration of the last-to-expire Patent Right that is licensed to either Party as set forth in Article V (the "Agreement Term"), subject to the survival of specified provisions of this Agreement pursuant to Section 11.3 below.

Section 11.2 Termination for Cause.

11.2.1 Breach of the Agreement. If either Party is in material breach of this Agreement, the non-breaching Party may send a written notice to the breaching Party that describes such breach in sufficient detail to permit the breaching party to cure such breach (if capable of cure). The breaching Party will have a period of [***] days to cure such breach (if capable of cure). If the breach has been timely cured, the notice of termination will be deemed null and void. If the breach has not been timely cured (or if the breach is incapable of cure), the non-breaching party will have the right to terminate the Agreement by providing written notice, and the Agreement and, if applicable, the Research Term, will terminate upon receipt of such notice, subject to a stay of termination if arbitration is pending, as set forth in Section 12.2.3.

(a) If Novartis terminates this Agreement pursuant to this Section 11.2.1, then:

(i) the following provisions will terminate as of as of the effective date of such notice: Article II (except as provided below), Article III (except as provided below), Article IV (except as provided below), Article V (except as provided below), and Article VII (except as provided below); and

(ii) the following provisions will survive such termination and continue in full force and effect thereafter: Section 2.4.2(a), Section 2.4.4, Section 2.5, Sections 3.6.2(c), Section 3.7.2(b), Section 3.7.2(c), Section 3.8.3, Section 4.1.2(a), Section 4.1.2(c), Section 4.1.2(d), Section 4.2.2, Section 4.3, Section 4.4, Section 5.2, Section 5.3.1(a), Section 5.3.2, Section 5.3.3, Section 5.3.4, Section 5.3.5, Section 5.4, Section 5.5, Section 5.6, Article VI, Section 7.3, Section 7.4 (excluding Section 7.4.8), Section 7.5, Section 7.6, Section 7.7, Section 7.8, Section 7.9 and those provisions set forth in Section 11.3.

(b) If Intellia terminates this Agreement pursuant to this Section 11.2.1, then:

(i) the following provisions will terminate as of as of the effective date of such notice: Article II, Article III (except as provided below), Article IV (except as provided below), Article V (except as provided below), Article VI, Section 7.1.2, and Section 7.2; and

(ii) the following provisions will survive such termination and continue in full force and effect thereafter: Section 3.6.2(b), Section 3.8.3, Section 3.9, Section 4.1.2(b), Section 4.1.2(e), Section 4.4, Section 5.2, Section 5.3.1(b), Section 5.3.4, Section 5.3.6, Section 5.5, Article VII (other than Sections 7.1.2 and 7.2) and those provisions set forth in Section 11.3.

(c) The Parties agree that termination pursuant to this Section 11.2.1 is a remedy to be invoked only if the breach cannot be adequately remedied through a combination of specific performance and the payment of money damages. In that regard, if the money damages payable under this Agreement by reason of a breach were materially limited by reason of Section 10.5 (for reasons other than the exclusion for punitive damages), it will be assumed that the payment of money damages was not an adequate remedy for the breach unless the breaching Party elects to waive the protections of Section 12.3 (other than with respect to punitive damages) and pay the resulting amounts.

[***]

11.2.2 Termination of Business; Insolvency. Either Party may terminate this Agreement immediately by written notice to the other Party if the other Party undergoes an Insolvency Event.

(a) If Novartis terminates this Agreement pursuant to this Section 11.2.2, then:

(i) the following provisions will terminate as of as of the effective date of such notice: Article II (except as provided below), Article III (except as provided below), Article IV (except as provided below), Article V (except as provided below), and Article VII (except as provided below); and

(ii) the following provisions will survive such termination and continue in full force and effect thereafter: Section 2.4.2(a), Section 2.4.4, Section 2.5, Sections 3.6.2(c), Section 3.7.2(b), Section 3.7.2(c), Section 3.8.3, Section 4.1.2(a), Section 4.1.2(c), Section 4.1.2(d), Section 4.2.2, Section 4.3, Section 4.4, Section 5.2, Section 5.3.1(a), Section 5.3.2, Section 5.3.3, Section 5.3.4, Section 5.3.5, Section 5.4, Section 5.5, Section 5.6, Article VI, Section 7.3, Section 7.4 (excluding Section 7.4.8), Section 7.5, Section 7.6, Section 7.7, Section 7.8, Section 7.9 and those provisions set forth in Section 11.3.

(b) If Intellia terminates this Agreement pursuant to this Section 11.2.2, then:

(i) the following provisions will terminate as of as of the effective date of such notice: Article II, Article III (except as provided below), Article IV (except as provided below), Article V (except as provided below), Article VI, Section 7.1.2, and Section 7.2; and

(ii) the following provisions will survive such termination and continue in full force and effect thereafter: Section 3.6.2(b), Section 3.8.3, Section 3.9, Section 4.1.2(b), Section 4.1.2(e), Section 4.4, Section 5.2, Section 5.3.1(b), Section 5.3.4, Section 5.3.6, Section 5.5, Article VII (other than Sections 7.1.2 and 7.2), and those provisions set forth in Section 11.3.

11.2.3 Termination for IP Challenge. Intellia will have the right to terminate this Agreement in its entirety upon written notice to Novartis in the event that Novartis or any of its Affiliates directly or indirectly challenges in a legal or administrative proceeding the patentability, enforceability or validity of any Patent Rights within the Intellia Intellectual Property or the Collaboration Platform Intellectual Property (except as a defense against a claim, action or proceeding asserted by Intellia against Novartis or its Affiliates or sublicensees) (a "Novartis Patent Challenge"); *provided* that Intellia will not have the right to terminate this Agreement under this Section 11.2.3 for any such Novartis Patent Challenge by any sublicensee if such Novartis Patent Challenge is dismissed within [***] days of Intellia's notice to Novartis under this Section 11.2.3 and not thereafter continued. The effect of any such termination by Intellia (and the provisions that survive and are terminated by such a termination) will be the same as that set forth in Section 11.2.1(b) above. [***].

11.2.4 Termination for Material Failure; Termination without Cause.

(a) Material Failure.

(i) Subject to Section 11.2.4(a)(ii), Novartis will have the right to terminate this Agreement in its entirety if any of the following events occurs:

(A) In a patent application claiming priority to U.S. Patent Application Nos. 61/652,086, 61/716,256, 61/757,640, and/or 61/765,576, neither the Regents of the University of California at Berkeley ("Berkeley") nor Emmanuelle Charpentier ("Charpentier") files claims with the United States Patent & Trademark Office ("USPTO") by June 30, 2015 sufficient under 37 C.F.R. 41.203(a) to allow the USPTO to initiate an interference with one or more of the claims of U.S. Patent No. 8,697,359 (the " '359 Patent") (the "Interference Trigger");

(B) Neither the USPTO allows, nor the European Patent Office (nor any of the patent authorities or offices in France, Germany, Italy, Spain, or the United Kingdom) grants patent claims from a patent application claiming priority to U.S. Patent Application Nos. 61/652,086, 61/716,256, 61/757,640, and/or 61/765,576 (or their European counterpart) by December 31, 2017 (the "Grant Trigger"); or

(C) The owners, or any of the licensees, of the '359 Patent brings a suit against Novartis by or before December 31, 2017 claiming that activities specifically encompassed by the Research Plans infringe an independent claim of the '359 Patent (the "Litigation Trigger"); *provided, however*, that, Novartis will not have the right to exercise the Litigation Trigger if **(i)** the owners or any of the licensees of the '359 Patent, brings an infringement suit against Novartis under the '359 Patent solely for activities Novartis is performing independently or with other Third Parties outside of the Collaboration (*e.g.*, developing CRISPR-related research tools) or **(ii)** the owners or any of the licensees of the '359 Patent bring an infringement suit against Novartis under the '359 Patent as a counterclaim or in response to a judicial or patent agency proceeding or suit initiated by Intellia and/or Novartis against them.

(ii) If any of the events described in Section 11.2.4(a)(i) has occurred and Novartis desires to terminate this Agreement, Novartis will comply with the following before such termination will be deemed effective:

(A) Novartis will send written notice to Intellia of its intent to terminate this Agreement identifying the relevant trigger within [***] days following the applicable date or event specified in Section 11.2.4(a)(i). [***].

(B) (1) Following Intellia's receipt of such termination notice [***], Novartis and Intellia will have a period of [***] days to discuss in good faith whether to continue with the Collaboration pursuant to the terms of this Agreement. If the Parties agree to continue the Collaboration, Novartis' termination notice will be deemed withdrawn and this Agreement will continue in full and effect on such terms. [***]. If the Parties decide not to continue the Collaboration, Novartis' termination notice will be deemed effective [***] days from the date of the notice.

(2) Following Intellia's receipt of such termination notice [***], Intellia will have a period of [***] days to seek to resolve [***], which period may be extended by mutual agreement of the Parties. If Intellia is successful, Novartis' termination notice will be deemed withdrawn and this Agreement will continue in full force and effect. If Intellia is not successful [***], Novartis' termination notice will be deemed effective [***] days from the date of the notice.

(iii) If Novartis terminates this Agreement as permitted pursuant to this Section 11.2.4(a), **(A)** all provisions [***] will terminate except for the following, which will survive such termination and continue in full force and effect thereafter: Section 3.6.2(b), Section 3.8.3, Section 3.9, Section 4.1.2(b), Section 4.1.2(e**)** Section 5.2, Section 5.3.1(b), Section 5.3.4, Section 5.3.6, Section 5.5, Section 7.4.8, and those provisions set forth in Section 11.3, and **(B)** Novartis will pay to Intellia all accrued financial obligations as of the date of such termination

and will continue to pay any and all of its financial obligations under Article 7 for a period of [***] days following Novartis' notice pursuant to Section 11.2.4(a)(ii)(A).

(b) Without Cause. Novartis will have the right to terminate this Agreement without cause effective upon [***] days' written notice to Intellia. If Novartis terminates this Agreement pursuant to this Section 11.2.4(b), **(i)** all provisions (other than the provisions set forth in Section 11.3) will terminate except for the following, which will survive such termination and continue in full force and effect thereafter: Section 3.6.2(b), Section 3.8.3, Section 3.9, Section 4.1.2(b), Section 4.1.2(e**)** Section 5.2, Section 5.3.1(b), Section 5.3.4, Section 5.3.6, Section 5.5, Section 7.4.8, and those provisions set forth in Section 11.3, and **(ii)** Novartis will pay to Intellia all accrued and future financial obligations as if the Research Term continued until its natural expiration (*i.e.*, five years from the Effective Date), including all Research Funding Payments as if Intellia had fully performed and without the need by Intellia to true-up its expenses under Section 7.2.1(b).

Section 11.3 Survival.

Any termination will be without prejudice to a Party's rights to seek damages in connection with any such event. Except where explicitly provided elsewhere herein, termination of this Agreement for any reason, will not affect: **(a)** obligations which have accrued as of the date of termination or expiration (including, as to Novartis, any and all payment obligations); and **(b)** obligations and rights which, expressly or from the context thereof, are intended to survive termination or expiration of this Agreement, including Article I, Article VIII, Article IX, Article X, this Article XI, and Article XII.

ARTICLE XII
MISCELLANEOUS

Section 12.1 Governing Law and Jurisdiction.

This Agreement and all claims between the Parties arising out of or relating to this Agreement, the transactions that it contemplates (including the Intellectual Property Rights described herein), and its and their validity, interpretation, construction, performance and enforcement will be exclusively governed by the substantive laws of the Commonwealth of Massachusetts without regard to its conflict of laws principles.

Section 12.2 Disputes.

12.2.1 Referral to Executives. Either Party may refer any question, difference, or dispute that may arise concerning the construction, meaning, or effect of this Agreement or concerning the rights and liabilities of the Parties hereunder, to the Senior Officers of Intellia and Novartis, who will attempt in good faith to resolve such question, difference or dispute. If the question, difference or dispute cannot be resolved within [***] days of such referral, either Party will be free to initiate the arbitration proceedings outlined in Section 12.2.2, below. For the avoidance of doubt, any difference or dispute arising from the JSC shall be resolved in accordance with Section 3.2.5.

12.2.2 Arbitration.

(a) General Arbitration. Unless Section 12.2.2(b) is applicable, any question, difference, or dispute relating to this Agreement that cannot be resolved through informal means as set forth in Section 12.2.1 will be exclusively and finally resolved by arbitration administered in accordance with the Rules of Judicial Administration and Arbitration Services ("JAMS") in effect at the time of submission. Arbitration proceedings will be conducted in Boston, Massachusetts, before one mutually acceptable arbitrator selected jointly by the Parties from a panel of persons experienced in the pharmaceutical and life sciences industries (or by JAMS in accordance with its rules if the Parties are unable to reach agreement). Each Party will have all rights of discovery as provided by the Federal Rules of Civil Procedure for any arbitral proceeding pursuant to this Section 12.2.2. Either Party may apply to the arbitrator for interim injunctive relief or may seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending resolution of the matter pursuant to this Section 12.2. The Parties will have the right to be represented by counsel. Any judgment or award rendered by the arbitrator will be final and binding on the Parties, and will be governed by the terms and conditions hereof, including

the limitation on damages set forth in Section 10.5. The Parties agree that such a judgment or award may be enforced in any court of competent jurisdiction. The Parties agree that all applicable statutes of limitation and time-based defenses (such as estoppel and laches) will be tolled while the dispute resolution procedures set forth in this Section 12.2 are pending. The non-prevailing Party will bear its and the prevailing Party's costs and expenses and attorneys' fees in the arbitration, except that the arbitrator may order instead each Party to bear its own costs and expenses and attorneys' fees in the arbitration if the arbitrator finds that the non-prevailing Party's positions on the issues in the dispute had relative merit. The Party that does not prevail in the arbitration proceeding in all instances will pay the arbitrator's fees and expenses and any administrative fees of arbitration. All proceedings and decisions of the arbitrator(s) will be deemed Confidential Information of each of the Parties, and will be subject to Article VIII.

(b) Accelerated Arbitration. To the extent the arbitration matter involves a question, difference or dispute that either Party may submit to accelerated arbitration for resolution as permitted under the other provisions of this Agreement, or any dispute regarding the proper characterization of a question, difference or dispute subject to resolution under this Section 12.2.2(b) as opposed to Section 12.2.2(a), the following procedures will also apply:

(i) [***]

12.2.3 Stay of Termination. Any purported termination of this Agreement under Section 11.2.1 will be automatically stayed during the pendency of any arbitration proceeding commenced under Section 12.2.2.

Section 12.3 Waiver.

No provision of this Agreement may be waived except in writing by both Parties hereto. No failure or delay by either Party hereto in exercising any right or remedy hereunder or under applicable law will operate as a waiver thereof, or a waiver of any right or remedy on any subsequent occasion.

Section 12.4 Severability.

Should one or more provisions of this Agreement be or become invalid, then the Parties hereto will attempt to agree upon valid provisions in substitution for the invalid provisions, which in their economic effect come so close to the invalid provisions that it can be reasonably assumed that the Parties would have accepted this Agreement with those new provisions. If the Parties are unable to agree on such valid provisions, the invalidity of such one or more provisions of this Agreement will not affect the validity of the Agreement as a whole, unless the invalid provisions are of such essential importance for this Agreement that it may be reasonably presumed that the Parties would not have entered into this Agreement without the invalid provisions.

Section 12.5 Government Acts.

If any Applicable Law should make impossible or prohibit, restrain, modify or limit any material act or obligation of the Parties under this Agreement, the Party, if any, not so affected, will have the right, at its option, to suspend or terminate this Agreement

as to such country, if good faith negotiations between the Parties to make such modifications therein as may be necessary to fairly address the impact thereof are not successful after a reasonable period of time (not to exceed [***] days) in producing mutually acceptable modifications to this Agreement.

Section 12.6 Export Controls.

This Agreement is made subject to any restrictions concerning the export of materials and technology from the United States that may be imposed upon or related to either Party to this Agreement from time to time by the government of the United States. Furthermore, each Party will not export, directly or indirectly, any technical information acquired from the other Party under this Agreement or any products or services using such technical information to any countries for which the United States government or any agency thereof at the time of export requires an export license or other governmental approval, without first obtaining the written consent to do so from

the Department of Commerce or other agency of the United States government when required by applicable statute or regulation.

Section 12.7 Assignment.

Neither Party may assign this Agreement or any of its rights under this Agreement or (except as otherwise expressly provided in this Agreement) delegate its performance under this Agreement, except to any of its Affiliates and to any Third Party successor to all or substantially all of the assets or business of such Party to which this Agreement relates, whether in a merger, sale of stock, sale of assets, reorganization or other transaction. Any purported assignment and/or delegation by a Party in contravention of this Section 12.7 will, at the option of the other Party, be null and void and of no effect. No assignment will release either Party from responsibility for the performance of any accrued obligation of such Party hereunder. This Agreement will be binding upon and enforceable against the administrators, legal representatives, and successors of the Parties.

Section 12.8 Affiliates.

Each Party may perform its obligations hereunder personally or through one or more Affiliates. Each Party will be solely responsible for the acts and omissions of its Affiliates. Neither Party will permit any of its Affiliates to commit any act (including any omission) that such Party is prohibited hereunder from committing directly. Any material breach of the terms and conditions of this Agreement by a Party's Affiliate will be construed as a material breach by such Party under this Agreement.

Section 12.9 Counterparts.

This Agreement may be executed in counterparts, each of which will be deemed to be original and both of which will constitute one and the same Agreement.

Section 12.10 No Agency.

Nothing herein contained will be deemed to create an agency, joint venture, amalgamation, partnership or similar relationship between Novartis and Intellia and their respective Affiliates. Notwithstanding any of the provisions of this Agreement, neither Party to this Agreement will at any time enter into, incur, or hold itself out to third parties as having authority to enter into or incur, on behalf of the other Party, any commitment, expense, or liability whatsoever, and all contracts, expenses and liabilities in connection with or relating to the obligations of each Party under this Agreement will be made, paid, and undertaken exclusively by such Party on its own behalf and not as an agent or representative of the other.

Section 12.11 Notice.

All notices, requests, demands and other communications between the Parties with respect to any of the provisions of this Agreement will be sent to the addresses set out below, or to such other addresses as may be designated by one Party to the other by notice pursuant hereto, by internationally recognized courier (*e.g.*, FedEx, DHL, *etc*.), with receipt signature required to the addresses set out below.

if to Novartis, at:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139
Attention: Global Head, Strategic Alliances

with a required copy to:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue

Cambridge, MA 02139
Attention: General Counsel

if to Intellia, at:

Intellia Therapeutics, Inc.
130 Brookline Street, Suite 201
Cambridge, MA 02139
Attention: Chief Executive Officer

with required copies to:

Intellia Therapeutics, Inc.
130 Brookline Street, Suite 201
Cambridge, MA 02139
Attention: General Counsel

and

Goodwin | Procter LLP
Exchange Place
53 State Street
Boston, Massachusetts 02109
Attention: Arthur R. McGivern & Karen A. Spindler

Section 12.12 [***]

[***]

Section 12.13 Securitization.[***]

Section 12.14 Third Party Beneficiaries.

The terms and conditions of this Agreement, express or implied, exist only for the benefit of the Parties and their respective successors and permitted assigns. Except under Article X, this Agreement does not confer any enforceable rights or remedies upon any Person other than the Parties.

Section 12.15 Entire Agreement; Amendment.

This Agreement, together with its Exhibits, contains the entire understanding of the Parties relating to the matters referred to herein, and may only be amended by a written document, duly executed on behalf of the respective Parties, expressly referencing this Agreement. For the avoidance of doubt, the Equity Agreements remain in full force and effect with respect to their terms; *provided* that any disclosures after the Effective Date shall be governed by the terms of this Agreement.

Section 12.16 Force Majeure.

Neither Novartis nor Intellia will be liable for failure of or delay in performing obligations set forth in this Agreement, and neither will be deemed in breach of such obligations, if such failure or delay is due to natural disasters or any causes reasonably beyond the control of Novartis or Intellia; *provided* that the Party affected will promptly notify the other of the force majeure condition and will exert all reasonable efforts to eliminate, cure or overcome any such causes and to resume performance of its obligations as soon as possible.

[Signature Page Follows]

Executed as of the Effective Date.

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.

By: /s/ Scott Brown
Name: Scott Brown
Title: VP, General Counsel

INTELLIA THERAPEUTICS, INC.

By: /s/ Nessan Bermingham
Name: Nessan Bermingham
Title: Chief Executive Officer

Exhibit A

Sample Invoice

[***] INVOICE

[***]

[***]	[***]	[***]
[***] [***]		[***]
	[***]	[***]

[***]

Exhibit B

Novartis HSC Background Intellectual Property

The compound known at Novartis as [***]

Exhibit C

Novartis Other Background Intellectual Property

Novartis Patent Family	Title
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
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[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

Exhibit D

Sample Calculation of Research Costs

Intellia/Novartis Research Year:

Name	Collaboration Program X	Collaboration Program X	Collaboration Program X	Collaboration Program X	FTE Total #	FTE Expense @ $300k/FTE
A. Smith						
B. Smith						
C. Smith						
D. Smith						
FTE Total						

Example Royalty Calculation for royalties due on Products under Section 7.4:

[***]

Example Royalty Calculation for royalties due on Products under Section 7.6.1:

[***]

Exhibit 10.3

Intellia Therapeutics, Inc.

Fourth Amended and Restated Non-Employee Director Compensation Policy

The purpose of this Fourth Amended and Restated Non-Employee Director Compensation Policy (the "Policy") of Intellia Therapeutics, Inc., a Delaware corporation (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. This Policy will become effective as of the date of adoption by our Board of Directors (the "Effective Date"). In furtherance of this purpose, all non-employee directors shall be paid compensation for services provided to the Company as set forth below:

Cash Retainers

Annual Retainer for Board Membership: An annual cash retainer for general availability and participation in meetings and conference calls of our Board of Directors (the "Board") shall be set annually by the Board and reflected on Appendix A. There shall be no additional compensation for attending individual Board meetings.

Additional Retainer for Chairperson of the Board: An annual cash retainer to acknowledge the additional responsibilities and time commitment of the Chairperson role shall be set annually by the Board and reflected on Appendix A.

Additional Annual Retainers for Committee Membership: Additional annual cash retainers for general availability and participation in meetings and conference calls of our various committees as well as an additional retainer for the chairperson of each committee shall be set annually by the Board and reflected on Appendix A. There shall be no additional compensation for attending individual committee meetings.

Cash Retainer Administration: All cash retainers will be paid quarterly, in arrears, or upon the earlier of resignation or removal of the non-employee director. Cash retainers to non-employee directors shall be approved as annualized cash retainers. With respect to non-employee directors who join the Board or a Committee during the calendar year, such amounts shall be pro-rated based on the number of calendar days served by such director in the year of their appointment.

Equity Retainers

Initial Equity Grant: A one-time equity award shall be granted to each new non-employee director upon his/her election to the Board after the Effective Date. The Value (as defined below), and form of, such initial equity grant shall be set annually by the Board based, among other factors, on the recommendation of the Compensation Committee and reflected on Appendix A.

Any initial option and/or restricted share unit ("RSU") award shall be granted by the Board upon the director's initial election to the Board. Such initial equity grant shall vest over three years as follows: 33 1/3 % of the total award shall vest one year after the date of grant and the remainder shall vest thereafter in substantially equal quarterly installments during the next two years, subject to the director's continued service on the Board through the applicable vesting date.

Annual Equity Grant: An annual equity award or awards shall be granted automatically to each non-employee director serving on the Board immediately following each annual meeting of the Company's stockholders, without further resolution by the Compensation Committee or Board. The Value, and form of, such annual equity award(s) shall be set annually by the Board based, among other factors, on the recommendation of the Compensation Committee and reflected on Appendix A.

Any annual option and/or RSU grant(s) shall fully vest on the earlier of either (i) the one-year anniversary of the grant date and (ii) the Company's next annual meeting of stockholders, subject to the director's continued service on the Board through either such date.

Value: For purposes of this Policy, "Value" means with respect to:

(i) any stock option award, the product of (A) the grant date fair value of one share of the Company's common stock, par value $0.0001 per share (the "Common Stock"), determined in accordance with the reasonable assumptions and methodologies (e.g., Black-Scholes) employed by the Company for calculating the fair value of options under Financial Accounting Standard Board ("FASB") Accounting Standards Codification ("ASC") Topic 718 and (B) the aggregate number of such shares of Common Stock underlying such award; and

(ii) any RSU award, the product of (A) the average closing market price on the Nasdaq Global Market (or such other market on which the Common Stock is then principally listed) of one share of Common Stock on the grant date, and (B) the aggregate number of shares of Common Stock underlying such award.

For purposes of awards made pursuant to this Policy, the number of shares of Common Stock subject to such award shall be determined based on the Value of the award as set forth on Appendix A and shall be rounded up to the nearest whole share.

Terms and Conditions of Equity Awards: All equity grants made to members of the Board shall be governed by the terms and conditions set forth in the Amended and Restated 2015 Stock Option and Incentive Plan (the "2015 Plan") and any applicable option and/or RSU grant agreement executed by the Company and each Director. Notwithstanding anything to the contrary in the 2015 Plan or the applicable award agreement, all equity grants made to members of the Board pursuant to this Policy will accelerate and become fully vested and exercisable or nonforfeitable upon a Sale Event (as defined in the 2015 Plan).

Expenses

The Company shall reimburse all reasonable out-of-pocket expenses incurred by non-employee directors in attending Board and committee meetings.

* * *

ADOPTED BY THE BOARD OF DIRECTORS: October 25, 2016.

AMENDED AND RESTATED BY THE BOARD OF DIRECTORS: July 24, 2017

AMENDED AND RESTATED BY THE BOARD OF DIRECTORS: December 11, 2019

AMENDED AND RESTATED BY THE BOARD OF DIRECTORS: December 10, 2020

AMENDED AND RESTATED BY THE BOARD OF DIRECTORS: April 9, 2021

Appendix A

2021 Non-Employee Director Compensation Guidelines

Cash Retainers

	Membership Retainer	Additional Retainer for Chairperson
Board of Directors	$40,000	$30,000
Audit Committee	$7,500	$7,500
Compensation Committee	$5,000	$5,000
Nominating and Governance Committee	$4,000	$4,000
Science and Technology Committee	$5,000	$5,000

Equity Retainers

	Value of option component	Value of RSU component
Initial Equity Grant	$350,000	$350,000
Annual Equity Grant	$175,000	$175,000

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a) / RULE 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, John M. Leonard, M.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Intellia 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2021

/s/ John M. Leonard
John M. Leonard, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a) / RULE 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Glenn Goddard, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Intellia 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 6, 2021

/s/ Glenn Goddard
Glenn Goddard
Executive Vice President, Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATIONS OF CEO AND CFO PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Quarterly Report on Form 10-Q of Intellia Therapeutics, Inc. (the "Company") for the period ended March 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, John M. Leonard, M.D., President and Chief Executive Officer (Principal Executive Officer) of the Company, and Glenn Goddard, Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer) of the Company, hereby certifies, pursuant to 18 U.S.C. (section) 1350, as adopted pursuant to (section) 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 6, 2021

/s/ John M. Leonard
John M. Leonard, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Glenn Goddard
Glenn Goddard
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)