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

# FORM 10-Q

**(Mark One)**

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

**For the quarterly period ended March 31, 2017**

**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 001-37687**

# EDITAS MEDICINE, INC.
**(Exact name of registrant as specified in its charter)**

| **Delaware**<br>**(State or other jurisdiction of incorporation or organization)** | **46-4097528**<br>**(I.R.S. Employer Identification No.)** |
|---|---|
| **11 Hurley Street**<br>**Cambridge, Massachusetts**<br>**(Address of principal executive offices)** | **02141**<br>**(Zip Code)** |

**(617) 401-9000**
**(Registrant's telephone number, including area code)**

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | | | |
|---|---|---|---|
| Large accelerated filer | ☐ | Accelerated filer | ☐ |
| Non-accelerated filer | ☒ (Do not check if a smaller reporting company) | Smaller reporting company | ☐ |
| | | Emerging growth company | ☒ |

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

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

The number of shares of the Common Stock outstanding as of May 5, 2017 was 41,348,448.

**Editas Medicine, Inc.**
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## PART I. FINANCIAL INFORMATION

### Item 1. Financial Statements.

**Editas Medicine, Inc.**
**Condensed Consolidated Balance Sheets**
**(unaudited)**
**(amounts in thousands, except share and per share data)**

| | March 31, 2017 | December 31, 2016 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 351,552 | $ 185,323 |
| Accounts receivable | 945 | 88 |
| Prepaid expenses and other current assets | 1,289 | 1,772 |
| Total current assets | 353,786 | 187,183 |
| Property and equipment, net | 39,636 | 40,378 |
| Restricted cash and other non-current assets | 1,619 | 1,621 |
| Total assets | $ 395,041 | $ 229,182 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities: | | |
| Accounts payable | $ 15,233 | $ 4,640 |
| Accrued expenses | 6,769 | 17,439 |
| Notes payable | 15,000 | 10,000 |
| Other current liabilities | 13,285 | 1,004 |
| Total current liabilities | 50,287 | 33,083 |
| Deferred revenue, net of current portion | 104,033 | 26,000 |
| Construction financing lease obligation, net of current portion | 33,929 | 35,096 |
| Other non-current liabilities | 331 | 396 |
| Total liabilities | 188,580 | 94,575 |
| Commitments and contingencies (see note 6) | | |
| Stockholders' equity | | |
| Preferred stock, $0.0001 par value per share: 5,000,000 shares authorized; no shares issued or outstanding | — | — |
| Common stock, $0.0001 par value per share: 195,000,000 shares authorized; 41,344,250 and 36,662,724 shares issued, and 40,712,296 and 35,818,131 shares outstanding at March 31, 2017 and December 31, 2016, respectively | 4 | 4 |
| Additional paid-in capital | 423,080 | 320,129 |
| Accumulated deficit | (216,623) | (185,526) |
| Total stockholders' equity | 206,461 | 134,607 |
| Total liabilities and stockholders' equity | $ 395,041 | $ 229,182 |

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

**Editas Medicine, Inc.**
**Condensed Consolidated Statements of Operations and Comprehensive Loss**
**(unaudited)**
**(amounts in thousands, except per share and share data)**

| | Three Months Ended March 31, | |
|---|---|---|
| | 2017 | 2016 |
| Collaboration and other research and development revenues | $ 682 | $ 805 |
| Operating expenses: | | |
| Research and development | 19,021 | 8,882 |
| General and administrative | 12,288 | 9,762 |
| Total operating expenses | 31,309 | 18,644 |
| Operating loss | (30,627) | (17,839) |
| Other income (expense), net: | | |
| Other income (expense), net | 140 | (30) |
| Interest income (expense), net | (610) | 124 |
| Total other income (expense), net | (470) | 94 |
| Net loss and comprehensive loss | $ (31,097) | $ (17,745) |
| Reconciliation of net loss to net loss attributable to common stockholders: | | |
| Net loss | $ (31,097) | $ (17,745) |
| Accretion of redeemable convertible preferred stock to redemption value | — | (47) |
| Net loss attributable to common stockholders | $ (31,097) | $ (17,792) |
| Net loss per share attributable to common stockholders, basic and diluted | $ (0.85) | $ (0.80) |
| Weighted-average common shares outstanding, basic and diluted | 36,485,421 | 22,280,797 |

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

**Editas Medicine, Inc.**
**Condensed Consolidated Statements of Cash Flows**
**(unaudited)**
**(amounts in thousands)**

| | Three Months Ended March 31, | |
|---|---|---|
| | 2017 | 2016 |
| **Cash flow from operating activities** | | |
| Net loss | $ (31,097) | $ (17,745) |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: | | |
| Stock-based compensation expense | 5,804 | 4,210 |
| Depreciation | 631 | 187 |
| Non-cash research and development expenses | 5,000 | — |
| Re-measurement of warrant to purchase redeemable securities | — | 87 |
| Other non-cash items, net | 69 | 45 |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | (857) | (89) |
| Prepaid expenses and other current assets | 486 | (1,088) |
| Other non-current assets | 2 | 2,248 |
| Accounts payable | 10,078 | 544 |
| Accrued expenses | (10,539) | 1,814 |
| Deferred revenue | 90,214 | 158 |
| Net cash provided by (used in) operating activities | 69,791 | (9,629) |
| **Cash flow from investing activities** | | |
| Purchases of property and equipment | (656) | (943) |
| Changes in restricted cash | — | (1,619) |
| Net cash used in investing activities | (656) | (2,562) |
| **Cash flow from financing activities** | | |
| Proceeds from public offering of common stock, net of issuance costs | 97,102 | 98,182 |
| Proceeds from exercise of stock options | 435 | 33 |
| Payments on construction financing lease obligation | (443) | — |
| Net cash provided by financing activities | 97,094 | 98,215 |
| Net increase in cash and cash equivalents | 166,229 | 86,024 |
| Cash and cash equivalents, beginning of period | 185,323 | 143,180 |
| Cash and cash equivalents, end of period | $ 351,552 | $ 229,204 |
| **Supplemental disclosure of cash and non-cash activities:** | | |
| Accretion of redeemable convertible preferred stock to redemption value | $ — | $ 47 |
| Fixed asset additions included in accounts payable and accrued expenses | 7 | 526 |
| Reclassification of warrants to additional paid in capital | — | 376 |
| Conversion of preferred stock to common stock upon closing of the initial public offering | — | 199,915 |
| Reclassification of liability for common stock subject to repurchase | 3 | 3 |
| Offering costs incurred but unpaid at period end | 397 | 497 |

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

**Editas Medicine, Inc.**
**Notes to Condensed Consolidated Financial Statements**
**(unaudited)**

## 1. Nature of business

Editas Medicine, Inc. (the "Company") is a research stage company dedicated to treating patients with genetically defined diseases by correcting their disease-causing genes. The Company was incorporated in the state of Delaware in September 2013. Its principal offices are in Cambridge, Massachusetts.

Since its inception, the Company has devoted substantially all of its efforts to business planning, research and development, recruiting management and technical staff, and raising capital. The Company has financed its operations through various equity and debt financings, including the initial public offering of its common stock (the "IPO"), its follow-on public offering of its common stock in March 2017 and private placements of preferred stock, from upfront, milestone and research and development fees paid under a research collaboration with Juno Therapeutics, Inc. ("Juno Therapeutics"), and from an upfront payment paid under a strategic alliance and option agreement with Allergan Pharmaceuticals International Limited ("Allergan").

The Company is subject to risks common to companies in the biotechnology industry, including but not limited to, risks of failure of preclinical studies and clinical trials, the need to obtain marketing approval for any drug product candidate that it may identify and develop, the need to successfully commercialize and gain market acceptance of its product candidates, dependence on key personnel, protection of proprietary technology, compliance with government regulations, development by competitors of technological innovations and ability to transition from pilot-scale manufacturing to large-scale production of products.

***Liquidity***

In February 2016, the Company completed its IPO whereby the Company sold 6,785,000 shares of its common stock, inclusive of 885,000 shares of common stock sold by the Company pursuant to the full exercise of an overallotment option granted to the underwriters in connection with the offering, at a price to the public of $16.00 per share. The shares began trading on the NASDAQ Global Select Market on February 3, 2016. The aggregate net proceeds received by the Company from the offering were $97.5 million, after deducting underwriting discounts and commissions and other offering expenses payable by the Company.

In March 2017, the Company completed a follow-on offering whereby the Company sold 4,600,000 shares of its common stock, inclusive of 600,000 shares of common stock sold by the Company pursuant to the full exercise of an option granted to the underwriters in connection with the offering, at a price to the public of $22.50 per share (the "March Offering"). The aggregate net proceeds received by the Company from the March Offering were $96.7 million, after deducting underwriting discounts and commissions and other offering expenses payable by the Company. The significant increase in shares outstanding in the first quarter of 2017 as a result of the March Offering is expected to impact the year-over-year comparability of the Company's net loss per share calculations for the next twelve months. As of March 31, 2017, there were 40,712,296 shares of common stock outstanding.

The Company has incurred annual net operating losses in every year since its inception. The Company expects that its existing cash and cash equivalents at March 31, 2017, anticipated interest income, anticipated research support under the Company's collaboration agreement with Juno Therapeutics and anticipated payments from the Cystic Fibrosis Foundation Therapeutics, Inc. ("CFFT") will enable it to fund its operating expenses and capital expenditure requirements for at least the next 24 months. The Company had an accumulated deficit of $216.6 million at March 31, 2017, and will require substantial additional capital to fund its operations. The Company has not generated any product revenues and has financed its operations primarily through public offerings, private placements of its equity securities, an equipment loan, and funding from its collaboration with Juno Therapeutics and its strategic alliance with Allergan. There can be no assurance that the Company will be able to obtain additional debt or equity financing or generate

product revenue or revenues from collaborative partners, on terms acceptable to the Company, on a timely basis or at all. The failure of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's business, results of operations, and financial condition.

**2. Summary of significant accounting policies**

***Unaudited interim financial information***

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 (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America 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 for the fiscal year ended December 31, 2016 (the "Annual Report").

The unaudited condensed consolidated financial statements include the accounts of Editas Medicine, Inc. and its wholly owned subsidiary, Editas Securities Corporation. All intercompany transactions and balances of the subsidiary have been eliminated in consolidation. 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 three months ended March 31, 2017 and 2016 are referred to as the first quarter of 2017 and 2016, respectively. 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.

***Use of Estimates***

The preparation of condensed consolidated financial statements in conformity with United States generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. On an ongoing basis, the Company's management evaluates its estimates, which include, but are not limited to, estimates related to revenue recognition, accrued expenses, stock-based compensation expense, deferred tax valuation allowances and sub-license fees due to certain of our licensors. The Company bases its estimates on historical experience and other market-specific or relevant assumptions that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

***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. There have been no material changes to the significant accounting policies previously disclosed in the Annual Report.

***Recent accounting pronouncements***

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), which supersedes the revenue recognition requirements in Accounts Standards Codification ("ASC") 605, *Revenue Recognition*, and most industry-specific guidance. The new standard requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The update also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017 and should be applied retrospectively to each

prior reporting period presented or retrospectively with the cumulative effect of initially applying this update recognized at the date of initial application. Early adoption is permitted beginning after December 15, 2016, including interim reporting periods within those years. In April 2016, the FASB issued ASU No. 2016-10, *Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing* ("ASU 2016-10"), which clarifies certain aspects of identifying performance obligations and licensing implementation guidance. In May 2016, the FASB issued ASU No. 2016-12, *Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients* ("ASU 2016-12"), related to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers. These standards have the same effective date and transition date as ASU 2014-09. The Company has three revenue arrangements, its license and collaboration with Juno Therapeutics, its award arrangement with the CFFT, and its strategic research alliance with Allergan, and pursuant to which it has recognized since inception a total of $8.0 million, $0.3 million, and $0.0 million, respectively, through March 31, 2017. The Company is analyzing the potential impact that ASU 2014-09, ASU 2016-10 and ASU 2016-12 may have on its historical revenue recognition under these three arrangements. This analysis includes, but is not limited to, reviewing variable consideration as it relates to its agreements, reviewing the method and timing of recognition of the license payment, research funding and the $2.5 million milestone received from Juno Therapeutics, assessing potential disclosures and evaluating the impact of each potential method of adoption on the Company's consolidated financial statements. The Company will adopt the new standard effective January 1, 2018. The adoption of ASU 2014-09 may have a material impact on revenue recognition and notes to consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASU 2016-02"), which applies to all leases and will require lessees to record most leases on the balance sheet, but recognize expense in a manner similar to the current standard. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018 and interim periods within those years. Entities are required to use a modified retrospective approach of adoption for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. Full retrospective application is prohibited. The Company does not expect this standard to have a material impact on the consolidated financial statements.

In March 2016, the FASB, issued ASU No. 2016-09, *Compensation - Stock Compensation* ("ASU 2016-09"). ASU 2016-09 simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. Under this guidance, a company recognizes all excess tax benefits and tax deficiencies as income tax expense or benefit in the income statement as the awards vest or are settled. ASU 2016-09 is effective for public companies for annual reporting periods beginning after December 15, 2016, including interim periods within those annual reporting periods. Upon adoption of this standard on January 1, 2017, the Company recognized previously unrecognized excess tax benefits using the modified retrospective transition method, which resulted in a cumulative-effect increase of $179,000 to deferred tax assets which is offset by a corresponding decrease to the valuation allowance. The implementation of ASU 2016-09 does not have a material impact on stock-based compensation expense. As part of the adoption of ASU 2016-09, the Company elected to record forfeitures as they occur.

In October 2016, the FASB issued ASU No. 2016-18, *Restricted Cash* ("ASU 2016-18"), which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and restricted cash or restricted cash equivalents. Therefore, amounts described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. The Company is evaluating the potential impact that the adoption of ASU 2016-18 will have on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations* ("ASU 2017-01"), which clarified the definition of a business and provides a screen to determine when an integrated set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This new standard will be effective for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. We had adopted this new standard as of January 1, 2017, with prospective application

to any business development transactions.

**3. 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 estimates and assumptions developed by the Company, reflective of those that a market participant would use, as inputs to certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

Assets measured at fair value on a recurring basis as of March 31, 2017 were as follows (in thousands):

| Financial Assets | March 31, 2017 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
|---|---|---|---|---|
| Cash and cash equivalents | $ 351,552 | $ 351,552 | $ — | $ — |
| Money market funds, included in restricted cash | 1,619 | 1,619 | — | — |
| Total financial assets | $ 353,171 | $ 353,171 | $ — | $ — |

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2016 were as follows (in thousands):

| Financial Assets | December 31, 2016 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
|---|---|---|---|---|
| Cash and cash equivalents | $ 185,323 | $ 185,323 | $ — | $ — |
| Money market funds, included in restricted cash | 1,619 | 1,619 | — | — |
| Total financial assets | $ 186,942 | $ 186,942 | $ — | $ — |

There were no transfers between fair value measurement levels during the three months ended March 31, 2017.

***Cash and cash equivalents***

The Company considers all highly liquid securities with original final maturities of three months or less from the date of purchase to be cash equivalents. As of March 31, 2017 and December 31, 2016, cash and cash equivalents comprised funds in cash and money market accounts.

**4. Accrued expenses**

Accrued expenses consisted of the following (in thousands):

| | As of | |
|---|---|---|
| | March 31, 2017 | December 31, 2016 |
| Patent and license fees | $ 1,875 | $ 13,251 |
| Employee compensation costs | 1,645 | 2,480 |
| Professional services | 378 | 729 |
| Research and development | 2,696 | 443 |
| Other | 175 | 536 |
| Total | $ 6,769 | $ 17,439 |

**5. Property and equipment, net**

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

| | As of | |
|---|---|---|
| | March 31, 2017 | December 31, 2016 |
| Building | $ 35,167 | $ 35,941 |
| Laboratory equipment | 5,777 | 5,130 |
| Computer equipment | 392 | 392 |
| Furniture and office equipment | 170 | 170 |
| Leasehold improvements | 177 | 200 |
| Software | 116 | 101 |
| Total property and equipment | 41,799 | 41,934 |
| Less: accumulated depreciation | (2,163) | (1,556) |
| Property and equipment, net | $ 39,636 | $ 40,378 |

**6. Commitments and contingencies**

*Hurley Street Lease*

In February 2016, the Company entered into a lease agreement for approximately 59,783 square feet of office and laboratory space located on Hurley Street in Cambridge, Massachusetts. The term of the lease began on October 1, 2016. In connection with the lease and as a security deposit, the Company deposited with the landlord a letter of credit in the amount of approximately $1.6 million. Subject to the terms of the lease and certain reduction requirements specified therein, the $1.6 million security deposit may decrease over time. The letter of credit, which is collateralized by the Company with cash held in a money market account, is recorded in restricted cash in the accompanying condensed consolidated financial statements as of March 31, 2017 and December 31, 2016.

In connection with this lease, the landlord provided a tenant improvement allowance for costs associated with the design, engineering, and construction of tenant improvements for the leased facility. For accounting purposes, the Company was deemed the owner of the building during the construction period due to the fact that the Company was involved in the construction project, including having responsibilities for cost overruns for planned tenant improvements that did not qualify as “normal tenant improvements” under the lease accounting guidance. Throughout the construction period, the Company recorded the project construction costs incurred as an asset, along with a corresponding facility lease obligation, on its balance sheet for the total amount of the project costs incurred whether funded by the Company or the landlord.

Construction was completed in October 2016, and the Company considered the requirements for sale-leaseback accounting treatment, which included an evaluation of whether all risks of ownership had transferred back to the

landlord, as evidenced by a lack of continuing involvement in the leased property. The Company determined that the arrangement did not qualify for sale-leaseback accounting treatment, the building asset would remain on the Company's balance sheet at its historical cost, and such asset would be depreciated over its estimated useful life of 30 years.

The Company bifurcates its future lease payments pursuant to the Hurley Street lease into (i) a portion that is allocated to the building and (ii) a portion that is allocated to the land on which the building is located, which is recorded as rental expense. Although the Company did not begin making lease payments pursuant to the Hurley Street lease until November 2016, the portion of the lease obligation allocated to the land is treated for accounting purposes as an operating lease that commenced upon execution of the Hurley Street lease in February 2016. The Company has recorded $0.3 million in deferred rent attributable to the land.

The lease will continue until October 2023. The Company has the option to extend the lease for an additional five year term at market-based rates. The Company began using this space as its headquarters in October 2016 and rental payments for this property began in November 2016. The base rent is subject to increases over the term of the lease.

***Licensor Expense Reimbursement***

The Company is obligated to reimburse The Broad Institute Inc. ("Broad") and the President and Fellows of Harvard College ("Harvard") for expenses incurred by each of them associated with the prosecution and maintenance of the patent rights that the Company licenses from them pursuant to the license agreement by and among the Company, Broad and Harvard, including the interference and opposition proceedings involving patents licensed to the Company under the license agreement. As such, the Company anticipates that it has a substantial commitment in connection with these proceedings until such time as these proceedings have been resolved, but the amount of such commitment is not determinable. The Company incurred an aggregate of $4.0 million and $4.5 million in expense for such reimbursement during the three months ended March 31, 2017 and 2016, respectively.

***Success Payments***

In 2016, the Company entered into patent license agreements with each of The General Hospital Corporation, d/b/a Massachusetts General Hospital ("MGH") and Broad (collectively, the "2016 License Agreements"). Pursuant to the terms of the 2016 License Agreements, the Company is required to make certain success payments to MGH, Broad, and Wageningen University ("Wageningen" and such payments, collectively, the "Success Payments"), payable in cash or, at the Company's election, common stock in the case of MGH or, in the case of Broad and Wageningen, promissory notes payable in cash or, at the Company's election subject to certain conditions, common stock of the Company. The Success Payments are payable, if and when, the Company's market capitalization reaches specified thresholds for a specific period of time or upon a sale of the Company for consideration in excess of those thresholds, as discussed more fully in Note 7 (collectively, the "Payment Conditions").

The Success Payments were accounted for under the provisions of FASB ASC, Topic 505-50, *Equity-Based Payments to Non-Employees.* The Company has the right to terminate any of the 2016 License Agreements at will upon written notice. Absent any of the Payment Conditions being achieved prior to termination, the Company would not be obligated to pay any Success Payments. As such, the Company will recognize the expense and liability associated with each Success Payment upon achievement of the associated Payment Conditions, if ever. The Company triggered the first Success Payment under one of the 2016 License Agreements during the first quarter of 2017 when the Company's market capitalization reached $750 million. On March 28, 2017, the Company issued promissory notes for an aggregate principal amount of $5.0 million to Broad and Wageningen, as discussed more fully within the Notes Payable section below.

***Notes Payable***

In December 2016, in connection with the Company's entry into the Cpf1 License Agreement with Broad (the "Cpf1 License Agreement"), one of the 2016 License Agreements, it issued promissory notes in an aggregate principal amount of $10.0 million to Broad and Wageningen (the "Initial Notes"). Principal and accrued interest on the Initial Notes is due and payable on the earlier of December 2017 or a specified period of time following a company sale or

change of control event. The Initial Notes bear interest at a rate of 4.8% per annum. The Company may elect to make any payment of amounts outstanding under the Initial Notes either in the form of cash or, subject to certain conditions, in shares of the Company's common stock of equal value, with such shares being valued for such purpose at the closing price of the Company's common stock as reported the NASDAQ Stock Market for the trading day immediately preceding the date of such payment if the Company's common stock is then listed on the NASDAQ Stock Market. In the event of a change of control of the Company or a sale of the Company, the Company will be required to pay all remaining principal and accrued interest on the Initial Notes in cash within a specified period following such event. Under the terms of the Cpf1 License Agreement, the Company may be required to issue additional promissory notes in connection with potential Success Payments.

In March 2017, a $5.0 million Success Payment under the Cpf1 License Agreement became due upon the market capitalization of the Company's common stock reaching $750 million. The Company issued a promissory note to each of Broad and Wageningen in an aggregate original principal amount of $5.0 million (collectively, the "Success Payment Notes"). Principal and accrued interest on the Success Payment Notes are due and payable in August 2017, and the Company may prepay the Success Payment Notes at any time. The Success Payment Notes are subject to the same interest and terms as the Initial Notes, other than the maturity date. Under the terms of the Success Payment Notes and the Initial Notes, the entire unpaid principal and accrued interest of the Notes will become immediately due and payable upon a payment default or bankruptcy- and insolvency-related defaults.

The Company believes that the carrying value of the Success Payments Notes and the Initial Notes approximates their fair value based on Level 3 inputs including a quoted rate.

***Litigation***

The Company is not a party to any litigation and did not have contingency reserves established for any litigation liabilities as of March 31, 2017 or December 31, 2016.

**7. Significant Agreements**

***Juno Therapeutics Collaboration Agreement***

*Summary of Agreement*

In May 2015, the Company entered into a Collaboration and License Agreement (the "Collaboration Agreement") with Juno Therapeutics. The collaboration is focused on the research and development of engineered T cells with chimeric antigen receptors ("CARs") and T cell receptors ("TCRs") that have been genetically modified to recognize and kill other cells. The parties will pursue the research and development of CAR and TCR engineered T cell products utilizing the Company's genome editing technologies with Juno Therapeutics' CAR and TCR technologies across three research areas.

The collaborative program of research to be undertaken by the parties pursuant to the Collaboration Agreement will be conducted in accordance with a mutually agreed upon research plan which outlines each party's research and development responsibilities across the three research areas. The Company's research and development responsibilities under the research plan are related to generating genome editing reagents that modify gene targets selected by Juno Therapeutics. Juno Therapeutics is responsible for evaluating and selecting for further research and development CAR and TCR engineered T cell products modified with the Company's genome editing reagents. Except with respect to the Company's obligations under the mutually agreed upon research plan, Juno Therapeutics has sole responsibility, at its own cost, for the worldwide research, development, manufacturing and commercialization of products within each of the three research areas for the diagnosis, treatment or prevention of any cancer in humans through the use of engineered T cells, excluding the diagnosis, treatment or prevention of medullary cystic kidney disease 1 (the "Exclusive Field").

The initial term of the research program commenced on May 26, 2015 and continues for five years ending on May 26, 2020 (the "Initial Research Program Term"). Juno Therapeutics may extend the Initial Research Program Term for up to two additional one year periods upon the payment of extension fees for each one year extension period,

assuming the Company has agreed to the extension request(s) (together, the initial term and any extension period(s) are referred to as the "Research Program Term").

Under the terms of the Collaboration Agreement, the Company granted to Juno Therapeutics during the Research Program Term a nonexclusive, worldwide, royalty-free, sublicensable (subject to certain conditions) license under certain of the intellectual property controlled by the Company solely for the purpose of conducting the following activities required under the specified research under the Collaboration Agreement: (i) conduct activities assigned to Juno Therapeutics under the research plan, (ii) conduct activities assigned to the Company under the research plan that the Company fails or refuses to conduct in a timely manner, (iii) use certain genome editing reagents generated under the research program to research, evaluate and conduct preclinical testing and development of certain engineered T cells and (iv) evaluate the data developed in the conduct of activities under the research plan (the "Research License"). Additionally, as it relates to two of the three research areas, the Company granted to Juno Therapeutics an exclusive, milestone and royalty-bearing, sublicensable license under certain of the intellectual property controlled by the Company to research, develop, make and have made, use, offer for sale, sell, import and export selected CAR and TCR engineered T cell products in the Exclusive Field on a worldwide basis, specifically as it relates to certain targets selected by Juno Therapeutics pursuant to the research program. Furthermore, as it relates to the same two research areas, the Company granted to Juno Therapeutics a non-exclusive, milestone and royalty-bearing, sub licensable license under certain of the intellectual property controlled by the Company to use genome editing reagents generated under the research program that are used in the creation of certain CAR or TCR engineered T cell products on which Juno Therapeutics has filed an investigational new drug ("IND") application in the Exclusive Field for the treatment or prevention of a cancer in humans to research, develop, make and have made, use, offer for sale, sell, import and export those CAR or TCR engineered T cell products in all fields outside of the Exclusive Field (the "Non-Exclusive Field") on a worldwide basis, specifically as it relates to certain targets selected by Juno Therapeutics pursuant to the research program (together, the license in the Exclusive Field and the license in the Non-Exclusive Field are referred to as the "Development and Commercialization License" for each particular research area). Lastly, as it relates to the third research area, the Company granted to Juno Therapeutics a milestone and royalty-bearing, sublicensable license under certain of the intellectual property controlled by the Company to use the genome editing reagents generated under the research program that are associated with certain CAR or TCR engineered T cell products to research, develop, make and have made, use, offer for sale, sell, import or export those CAR or TCR engineered T cell products in the Exclusive Field on a worldwide basis, specifically as it relates to certain products selected by Juno Therapeutics pursuant to the research program. The license associated with the third research area is exclusive as it relates to CAR or TCR engineered T cell products directed to certain targets as selected by Juno Therapeutics, but is otherwise non-exclusive (referred to as the "Development and Commercialization License" for the third research area).

The Collaboration Agreement will be managed on an overall basis by a project leader from each of the Company and Juno Therapeutics. The project leaders will serve as the contact point between the parties with respect to the research program and will be primarily responsible for facilitating the flow of information, interaction, and collaboration between the parties. In addition, the activities under the Collaboration Agreement during the Research Program Term will be governed by a joint research committee ("JRC") formed by an equal number of representatives from the Company and Juno Therapeutics. The JRC will oversee, review and recommend direction of the research program. Among other responsibilities, the JRC will monitor and report research progress and ensure open and frequent exchange between the parties regarding research program activities.

Under the terms of the Collaboration Agreement, the Company received a $25.0 million up-front, non-refundable, non-creditable cash payment. In addition, Juno Therapeutics will pay to the Company an aggregate of up to $22.0 million in research and development funding over the Initial Research Program Term across the three research areas consisting primarily of funding for up to a specified maximum number of full time equivalents personnel each year over the Initial Research Program Term across three research areas. Under the terms of the Collaboration Agreement, there is no incremental compensation due to the Company with respect to the Development and Commercialization License granted to Juno Therapeutics associated with the first target or product, as applicable, designated by Juno Therapeutics within each of the three research areas. However, for two of the three research areas, Juno Therapeutics has the option to purchase up to three additional Development and Commercialization Licenses associated with other gene targets for an additional fee of approximately $2.5 million per target. In addition, Juno Therapeutics would be required to make certain milestone payments to the Company upon the achievement of specified development, regulatory and commercial events. More specifically, for the first product to achieve the associated event in each of the three research areas, the Company is eligible to receive up to a $77.5 million in

development milestone payments and up to $80 million in regulatory milestone payments. In addition, the Company is eligible to receive additional development and regulatory milestone payments for subsequent products developed within each of the three research areas. Moreover, the Company is eligible for up to $75.0 million in commercial milestone payments associated with aggregate sales of all products within each of the three research areas. Development milestone payments are triggered upon the achievement of certain specified development criteria or upon initiation of a defined phase of clinical research for a product candidate. Regulatory milestone payments are triggered upon approval to market a product candidate by the United States Food and Drug Administration ("FDA") or other global regulatory authorities. Commercial milestone payments are triggered when an approved pharmaceutical product reaches certain defined levels of net sales by the licensee.

In addition, to the extent any of the product candidates covered by the licenses conveyed to Juno Therapeutics are commercialized, the Company would be entitled to receive tiered royalty payments of low double digits based on a percentage of net sales. Royalty payments are subject to certain reductions, including for any royalty payments required to be made by Juno Therapeutics related to a third-party's intellectual property rights, subject to an aggregate minimum floor. Royalties are due on a licensed product-by-licensed product and country-by-country basis from the date of the first commercial sale of each product in a country until the later of: (i) the tenth anniversary of the first commercial sale of such licensed product in such country and (ii) the expiration date in such country of the last to expire valid claim within the licensed intellectual property covering the manufacture, use or sale of such licensed product in such country. In May 2016, the Company achieved a $2.5 million milestone under the Collaboration Agreement resulting from technical progress in a research program to create engineered T cells with CARs and TCRs to treat cancer. Due to the uncertainty of pharmaceutical development and the high historical failure rates generally associated with drug development, no additional milestone or royalty payments may ever be received from Juno Therapeutics. As of March 31, 2017, the next potential milestone payment that the Company may be entitled to receive under the Collaboration Agreement is a substantive milestone payment of $2.5 million for the achievement of certain development criteria. The Company would recognize the milestone payment as revenue upon achievement. There are no cancellation, termination or refund provisions in the Collaboration Agreement that contain material financial consequences to the Company.

Unless earlier terminated, the Collaboration Agreement will continue in full force and effect, on a product-by-product and country-by-country basis until the date no further payments are due to the Company from Juno Therapeutics. Either party may terminate the Collaboration Agreement if the other party has materially breached or defaulted in the performance of any of its material obligations and such breach or default continues after the specified cure period. Either party may terminate the Collaboration Agreement in the event of the commencement of any proceeding in or for bankruptcy, insolvency, dissolution or winding up by or against the other party that is not dismissed or otherwise disposed of within a specified time period. Juno Therapeutics may terminate the Collaboration Agreement for convenience upon not less than six months prior written notice to the Company. The Company may terminate the Collaboration Agreement in the event that Juno Therapeutics brings, assumes, or participates in, or knowingly, willfully or recklessly assists in bringing a dispute or challenge against the Company related to its intellectual property.

Termination of the Collaboration Agreement for any reason does not release either party from any liability which, at the time of such termination, has already accrued to the other party or which is attributable to a period prior to such termination nor preclude either party from pursuing any rights and remedies it may have under the agreement or at law or in equity with respect to any breach of the Collaboration Agreement. If Juno Therapeutics terminates the Collaboration Agreement as a result of the Company's uncured material breach or default, then: (i) the licenses and rights conveyed to Juno Therapeutics will continue as set forth in the agreement, (ii) Juno Therapeutics' obligations related to milestones and royalties will continue as set forth in the agreement and (iii) Juno Therapeutics' rights to prosecute, maintain and enforce certain intellectual property rights will continue as set forth in the agreement. If Juno Therapeutics terminates the Collaboration Agreement for convenience or if the Company terminates the Collaboration Agreement as a result of Juno Therapeutics' uncured material breach or default, then the licenses conveyed to Juno Therapeutics will terminate.

*Accounting Analysis*

The Company evaluated the Collaboration Agreement in accordance with the provisions of ASC, Topic 605-25, *Revenue Recognition—Multiple Element Arrangements* ("ASC 605-25"). The Company's arrangement with

Juno Therapeutics contains the following deliverables: (i) research and development services during the Initial Research Program Term (the "R&D Services Deliverable"), (ii) the Research License, (iii) the Development and Commercialization Licenses related to each of the three research areas (each, the "Development and Commercialization License Deliverable" for the respective research area), (iv) significant and incremental discount related to the option to purchase up to three additional Development and Commercialization Licenses for two of the research areas (each, the "Discount Deliverable" for the associated option) and (v) JRC services during the Initial Research Program Term (the "JRC Deliverable").

The Company has determined that the options to purchase additional development and commercialization licenses within two of the research program areas related to other gene targets are substantive options. Juno Therapeutics is not contractually obligated to exercise the options. Moreover, as a result of the uncertain outcome of the discovery, research and development activities, there is significant uncertainty as to whether Juno Therapeutics will decide to exercise its option for any additional gene targets within either of the two applicable research areas. Consequently, the Company is at risk with regard to whether Juno Therapeutics will exercise the options. However, the Company has determined that the options to purchase additional development and commercialization licenses with respect to other gene targets within the two applicable research program areas are priced at a significant and incremental discount. As a result, the Company has concluded that the discounts to purchase development and commercialization licenses for up to three additional gene targets within both of the research areas represent separate elements in the arrangement at inception. Accordingly, the deliverables identified at inception of the arrangement include six separate deliverables related to the significant and incremental discount inherent in the pricing of the option to purchase up to three additional development and commercialization licenses for two of the research areas included within the research program.

The Company has concluded that the Research License deliverable does not qualify for separation from the R&D Services Deliverable. As it relates to the assessment of standalone value, the Company has determined that Juno Therapeutics cannot fully exploit the value of the Research License deliverable without receipt of the R&D Services Deliverable. This is primarily due to the fact that Juno Therapeutics must rely upon the Company to provide the research and development services included in the research plan because the services incorporate technology that is proprietary to the Company. The services to be provided by the Company involve unique skills and specialized expertise, particularly as it relates to genome editing technology that is not available in the marketplace. Accordingly, Juno Therapeutics must obtain the research and development services from the Company which significantly limits the ability for Juno Therapeutics to utilize the Research License for its intended purpose on a standalone basis. Therefore, the Research License deliverable does not have standalone value from the R&D Services Deliverable. As a result, the Research License deliverable and the R&D Services Deliverable have been combined as a single unit of accounting (the "R&D Services Unit of Accounting"). Conversely, the Company has concluded that each of the other deliverables identified at the inception of the arrangement has standalone value from each of the other elements based on their nature. Factors considered in this determination included, among other things, the capabilities of the collaboration partner, whether any other vendor sells the item separately, whether the value of the deliverable is dependent on the other elements in the arrangement, whether there are other vendors that can provide the items and if the customer could use the item for its intended purpose without the other deliverables in the arrangement. Additionally, the Collaboration Agreement does not include a general right of return. Accordingly, each of the other deliverables included in the Juno Therapeutics arrangement qualifies as a separate unit of accounting.

Therefore, the Company has identified eleven units of accounting in connection with its obligations under the collaboration arrangement with Juno Therapeutics as follows: (i) the R&D Services Unit of Accounting, (ii) three units of accounting related to the Development and Commercialization Licenses for each of the three research areas, (iii) six units of accounting related to each of the Discount Deliverables, and (iv) the JRC Deliverable.

The Company has determined that neither vendor specific objective evidence of selling price nor third-party evidence of selling price is available for any of the units of accounting identified at inception of the arrangement with Juno Therapeutics. Accordingly, the selling price of each unit of accounting was determined based on the Company's best estimate of selling price ("BESP"). The Company developed the BESP for all of the units of accounting included in the Collaboration Agreement with the objective of determining the price at which it would sell such an item if it were to be sold regularly on a standalone basis. The Company developed the BESP for the R&D Services Unit of Accounting and the JRC Deliverable primarily based on the nature of the services to be performed and estimates of the associated

effort and cost of the services, adjusted for a reasonable profit margin that would be expected to be realized under similar contracts. The Company developed the BESP for each of the Development and Commercialization License units of accounting based on the probability-weighted present value of expected future cash flows associated with each license related to each specific research area. In developing such estimate, the Company also considered applicable market conditions and relevant entity-specific factors, including those factors contemplated in negotiating the agreement, probability of success and the time needed to commercialize a product candidate pursuant to the associated license. The Company developed the BESP for each of the Discount Deliverables based on the estimated value of the associated in-the-money options. In developing such estimate, the Company considered the period to exercise the option, an appropriate discount rate and the likelihood that a market participant who was entitled to the discount would exercise the option.

Allocable arrangement consideration at inception is comprised of: (i) the up-front payment of $25.0 million, (ii) the research support of $20.0 million and (iii) payments related to specialized materials costs of $2.0 million. The research support of $20.0 million and payments related to specialized materials costs of $2.0 million represent contingent revenue features because the Company's retention of the associated arrangement consideration is dependent upon its future performance of research support services and development of specialized materials. The aggregate allocable arrangement consideration of $47.0 million was allocated among the separate units of accounting using the relative selling price method as follows: (i) R&D Services Unit of Accounting: $16.7 million, (ii) Development and Commercialization License for the first research area: $9.3 million, (iii) Development and Commercialization License for the second research area: $15.4 million, (iv) Development and Commercialization License for the third research area: $0.2 million, (v) the first Discount Deliverable for the first research area: $0.7 million, (vi) the second Discount Deliverable for the first research area: $0.4 million, (vii) the third Discount Deliverable for the first research area: $0.2 million, (viii) the first Discount Deliverable for the second research area: $2.0 million, (ix) the second Discount Deliverable for the second research area: $1.3 million, and (x) the third Discount Deliverable for the second research area: $0.8 million. No amounts were allocated to the JRC Deliverable because the associated BESP was determined to be de minimis. The amounts allocated to each of the development and commercialization licenses are based on the respective BESP calculations, which reflect the level of risk and expected probability of success inherent in the nature of the associated research area.

The Company will recognize revenue related to amounts allocated to the R&D Services Unit of Accounting as the underlying services are performed. The Company will recognize revenue related to amounts allocated to each of the Development and Commercialization Licenses upon delivery of the associated license, assuming the research services are substantially complete at the time the license is delivered. The rights to be conveyed to Juno Therapeutics pursuant to each of the Development and Commercialization Licenses extend exclusively to an individual target or product, as applicable; therefore, delivery is deemed to occur upon the designation by Juno Therapeutics of the specific target or product, as applicable, whereupon the license becomes effective. The Company will recognize revenue related to amounts allocated to each of the Discount Deliverables upon the earlier of exercise of the associated option or upon lapsing of the underlying right, if the respective option expires unexercised.

The Company has evaluated all of the milestones that may be received in connection with the Juno Therapeutics arrangement. In evaluating if a milestone is substantive, the Company assesses whether: (i) the consideration is commensurate with either the Company's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the Company's performance to achieve the milestone, (ii) the consideration relates solely to past performance, and (iii) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. All development and regulatory milestones are considered substantive on the basis of the contingent nature of the milestone, specifically reviewing factors such as the scientific, clinical, regulatory, commercial and other risks that must be overcome to achieve the milestone as well as the level of effort and investment required. Accordingly, such amounts will be recognized as revenue in full in the period in which the associated milestone is achieved, assuming all other revenue recognition criteria are met. All commercial milestones will be accounted for in the same manner as royalties and recorded as revenue upon achievement of the milestone, assuming all other revenue recognition criteria are met. The Company will recognize royalty revenue in the period of sale of the related product(s), based on the underlying contract terms, provided that the reported sales are reliably measurable and the Company has no remaining performance obligations, assuming all other revenue recognition criteria are met.

During the three months ended March 31, 2017 and 2016, the Company recognized revenue totaling approximately $0.7 million and $0.8 million, respectively, with respect to the collaboration with Juno Therapeutics. The revenue is classified as collaboration and other research and development revenue in the accompanying condensed consolidated statement of operations. As of March 31, 2017, there was approximately $26.1 million of deferred revenue related to the Company's collaboration with Juno Therapeutics, all of which is classified as long-term in the accompanying condensed consolidated balance sheet. In addition, as of March 31, 2017, the Company has recorded accounts receivable of $0.8 million related to reimbursable research and development costs under the Collaboration Agreement for activities performed during the first quarter of 2017.

***Adverum Biotechnologies, Inc. Collaboration, Option, and License Agreement***

In August 2016, the Company entered into an agreement with Adverum Biotechnologies, Inc. ("Adverum") to explore the delivery of genome editing medicines to treat up to five inherited retinal diseases. Under the terms of the agreement, the Company paid an upfront non-refundable fee of $1.0 million to evaluate Adverum's next generation adeno-associated viral vectors ("AAVs") for use in clinical development. The Company will support all preclinical activities related to this agreement, including research and development activities to be performed by Adverum, with $0.5 million of the upfront fee being creditable against this funding obligation. Accordingly, the Company has deferred and capitalized $0.5 million of the $1.0 million upfront fee as an advance payment for future research and development activities which the Company believes will be incurred in the future. The capitalized amount will be expensed as research and development expenses in the Company's consolidated statements of operations as the related services are performed. The Company expensed the remaining $0.5 million as research and development expense during 2016.

Additionally, the Company may pay, at its discretion, an additional fee of $1.0 million, per exercise, to exercise an option to receive an exclusive license to Adverum's next generation AAVs for use in an indication chosen under the agreement. Adverum is also entitled to receive development and regulatory milestone payments up to a maximum of a mid-single digit millions of dollars per license based on the achievement of specific events for a product candidate that includes an Adverum vector ("Adverum Product") and a low to mid-single digit millions of dollars based on the achievement of specific events for a product candidate that does not include an Adverum vector ("Non-Adverum Product"). Adverum is also entitled to receive certain commercial milestone payments for Adverum Products up to a maximum amount of a low double digit million dollar amount per product. The Company is also obligated to pay Adverum single digit to low double digit percentage royalties on net sales of Adverum Products and low single digit percentage royalties on sales of Non-Adverum Products sold in applicable territories during the royalty term.

***Allergan Pharmaceuticals Strategic Alliance and Option Agreement***

*Summary of Agreement*

In March 2017, the Company entered into a Strategic Alliance and Option Agreement with Allergan to discover, develop, and commercialize new gene editing medicines for a range of ocular disorders (the "Allergan Agreement"). Over a seven-year research term, Allergan will have an exclusive option to exclusively license from the Company up to five collaboration development programs for the treatment of ocular disorders (each a "CDP"), including the Company's Leber's Congenital Amaurosis type 10 program (the "LCA10 Program").

Under the Allergan Agreement, the Company will use commercially reasonable efforts to develop at least five CDPs and deliver preclinical results and data meeting specified criteria with respect to each CDP (each, an "Option Package" and such criteria, the "Option Package Criteria") to Allergan. The list of proposed targets that may be subject to a CDP may be amended from time to time by mutual agreement of the Company and Allergan. The Company is responsible for the preparation and delivery of a written development plan for each particular CDP setting forth the discovery and research activities to be conducted which is subject to the approval of the alliance steering committee that was formed under the Allergan Agreement, comprised of three members from each of the Company and Allergan (the "ASC"). The Company will maintain primary responsibility for the development efforts under each CDP. The Company is responsible for all research and development costs prior to the achievement of the Option Package Criteria. Upon achievement of the Option Package Criteria, as determined by the ASC, Allergan will have the ability, for a

defined period of time ("Initial Option Period") to exercise an option (each, an "Option") to obtain a world-wide right and license to the Company's background intellectual property and the Company's interest in the CDP intellectual property to develop, commercialize, make, have made, use, offer for sale, sell, and import any gene editing therapy product that results from such CDP during the term of the Allergan Agreement (a "Licensed Product") in any category of human diseases and conditions other than the diagnosis, treatment or prevention of any cancer in humans through the use of engineered T-cells and subject to specified other limitations. Allergan has the option to extend the Initial Option Period and require the Company to perform additional research and development services, subject to the payment of additional consideration. After exercise of an Option with respect to a CDP, with the exception of any CDP's where the Company has exercised its profit-sharing option, Allergan will be responsible for all development, manufacturing, and commercialization activities in connection with licensed products arising from such CDP, other than with respect to the LCA10 Program, if LCA10 is designated as a CDP, for which the Company has retained the right to develop that program through the acceptance for filing of the first IND application with respect to the LCA10 Program. Upon achievement of IND approval for LCA10, unless the Company has exercised its profit sharing option on LCA10, Allergan will be responsible for all development, manufacturing, and commercialization activities.

The initial term of the Allergan Agreement commenced on March 14, 2017 (the "Effective Date") and continues for seven years ending on March 14, 2024 (the "Research Term"). If the Company has not delivered an Option Package, which includes the results and data from the CDP, for five CDPs that satisfy the Option Package Criteria, then the Research Term will automatically extend by one-year increments until such obligation is satisfied, up to a maximum of ten years from the Effective Date.

The activities under the Allergan Agreement during the Research Term will be governed by the ASC. The ASC will review and monitor the direction of the development plan, evaluate and determine which targets are selected to become CDP, establish the Option Package Criteria for each CDP and evaluate the achievement of such criteria as well as oversee the development and commercialization activities after Allergan has licensed a CDP.

Under the terms of the Allergan Agreement, the Company received a $90.0 million up-front, non-refundable, non-creditable cash payment related to the Company's research and development costs for Option Packages for at least five CDPs and for reimbursement of the Company's past out of pocket costs with respect to the prosecution and defense of patents that it owns and in-licenses. Allergan has the option to purchase at least five development and commercialization licenses associated CDP that have satisfied the Option Package Criteria. The option exercise fee during the Initial Option Period is $15.0 million per CDP. If Allergan elects to extend the Initial Option Period, Allergan is required to pay an additional fee of $5.0 million to extend the option, at which point the Company is required to perform additional research services. If Allergan elects to exercise its option to a development and commercialization license after extending the Initial Option Period, Allergan must pay the Company the option exercise fee of $22.5 million, plus specified costs incurred by the Company in connection with the additional development work.

Following the exercise by Allergan of an Option with respect to a CDP, Allergan would be required to make certain milestone payments to the Company upon the achievement of specified development, product approval and launch and commercial events, on a CDP by CDP basis. On a CDP by CDP basis, for the first product in the first field to achieve the associated event, the Company is eligible to receive up to an aggregate of $42 million for development milestone payments and $75.0 million for product approval and launch milestone payments, in each case, for an indication in the field per CDP. In addition, the Company is eligible to receive additional development and product approval and launch milestone payments for subsequent products developed within two additional fields. The Company is also eligible for up to $90 million in sales milestone payments on a CDP by CDP basis, associated with aggregate worldwide sales. Certain product approval milestones are subject to certain reductions under specified circumstances, including for payments required to be made by Allergan to obtain certain third party intellectual property rights. In addition, within 45 days of the acceptance by the applicable regulatory authority of the Company's submission of an IND application with respect to the LCA10 Program, Allergan is required to pay the Company a one-time payment of $25.0 million (the "LCA10 IND Payment"), whether or not Allergan exercises its option under the Allergan Agreement to acquire an exclusive license with respect to the LCA10 Program. As of March 31, 2017, the next potential milestone payment that the Company may be entitled to receive under the Allergan Agreement is a substantive milestone payment of $8.0 million for the achievement of certain clinical criteria.

With respect to the LCA10 Program and up to one other CDP of the Company's choosing, following the exercise by Allergan of its Option to such programs, the Company will have the right to elect to participate in a profit-sharing arrangement with Allergan in the United States, on terms mutually agreed by the Company and Allergan and subject to a right of Allergan to reject such election under certain circumstances, under which the Company and Allergan would share equally in net profits and losses on specific terms to be agreed between the Company and Allergan, in lieu of Allergan paying royalties on net sales of any applicable Licensed Products in the United States, and in such event Allergan's milestone payment obligations would be reduced, with the Company being eligible to receive development and product approval and launch milestone payments up to a low nine-digit amount in the aggregate and further sales milestone payments up to a high-eight digit amount in the aggregate, subject to reduction under certain circumstances. If the Company elects to participate in a profit-sharing arrangement, the Company is obligated to reimburse Allergan for half of the development costs incurred by Allergan with respect to the applicable CDP, and Allergan will retain control of all development and commercialization activities for the applicable Licensed Products.

In addition, to the extent there is any Licensed Product, the Company would be entitled to receive tiered royalty payments of high single digits based on a percentage of net sales of such Licensed Product, subject to certain reductions under specified circumstances, and the Company will remain obligated to pay all license fees, milestone payments, and royalties due to its upstream licensors based on Allergan's exercise of its license rights with respect to Licensed Products. However, if a Licensed Product is subject to a profit sharing agreement the royalties will only be paid on ex-US net sales. Royalties are due on a Licensed Product-by-Licensed Product and country-by-country basis from the date of the first commercial sale of each Licensed Product in a country until the later of: i) the tenth anniversary of the first commercial sale of such Licensed Product in such country ii) the expiration date in such country of the last to expire valid claim within the licensed intellectual property covering the manufacture, use or sale of such Licensed Product in such country and iii) the expiration of an exclusive legal right granted by the regulatory authority in such country to market and sell such Licensed Product.

Unless earlier terminated, the Allergan Agreement will terminate upon i) the expiration of the Research Term, if Allergan does not exercise an Option, ii) on a Licensed Product-by-Licensed Product and country-by-country basis, on the date of the expiration of all payment obligations under the Allergan Agreement with respect to such Licensed Product in such country or iii) in its entirety upon the expiration of all payment obligations with respect to the last Licensed Product in all countries, unless terminated earlier due to the early termination provisions. Either party may terminate the Allergan Agreement if the other party has materially breached or defaulted in the performance of any of its material obligations and such breach or default continues after the specified cure period. During the Research Term, Allergan will have the right to terminate the Allergan Agreement on a CDP by CDP basis in the event of a change in control of the Company or for all CDPs, provided that Allergan will not have any right to exercise an Option for any CDPs following such termination. After the exercise of an Option, Allergan will have the right, at its sole discretion, to terminate the Allergan Agreement, on a CDP by CDP basis, upon 90 days' written notice. The Company may terminate the Allergan Agreement in the event that Allergan brings, assumes, or participates in, or knowingly, willfully or recklessly assists in bringing a dispute or challenge against the Company related to its intellectual property. Lastly, Allergan my terminate the Allergan Agreement with respect to a CDP if a safety concern, as specified in the Allergan Agreement, arises.

Termination of the Allergan Agreement for any reason will not release either party from any liability which, at the time of such termination, has already accrued to the other party or which is attributable to a period prior to such termination. In addition, termination of the Allergan Agreement will not preclude either party from pursuing any rights and remedies it may have under the agreement or at law or in equity with respect to any breach of the Allergan Agreement. If Allergan terminates the Allergan Agreement as a result of the Company's uncured material breach or default, then: i) the licenses and rights conveyed to Allergan will continue as set forth in the agreement for any CDP Allergan has already licensed and ii) Allergan's obligations related to milestones and royalties will continue as set forth in the agreement. If the Allergan Agreement is terminated for any other reason, then the options and licenses conveyed to Allergan under the agreement will terminate.

*Accounting Analysis*

The Company evaluated the Allergan Agreement in accordance with the provisions of ASC 605-25. The

Company's arrangement with Allergan contains the following deliverables: (i) research and development services during the Research Term (the "R&D Services Deliverable"), and (ii) ASC services during the Research Term (the "ASC Deliverable").

The Company has determined that the Options with respect to the CDP are substantive options. Allergan is not contractually obligated to exercise the Options and as a result of the uncertain outcome of the discovery, research and development activities as well as the significant option exercise fee payable upon exercise of an Option, there is significant uncertainty as to whether Allergan will decide to exercise its Option for any CDP. Consequently, the Company is at risk with regard to whether Allergan will exercise the Options. In addition, the option exercise fees are not priced at a significant and incremental discount. Accordingly, the substantive options are not considered deliverables at the inception of the arrangement and the associated option exercise payments are not included in allocable arrangement consideration. The Company has also determined that any obligations which are contingent upon the exercise of a substantive option are not considered deliverables at the outset of the arrangement.

The Company has concluded that the services being provided as part of the ASC Deliverable does not qualify for separation from the R&D Services Deliverable. The ASC provides oversight and management of the overall Allergan Agreement, and the members of the ASC from the Company have specialized industry knowledge, particularly as it relates to genome editing technology. The Company has concluded that the ASC is a participatory obligation of the Company and is meant to facilitate the early stage research being performed and coordinate the activities of both the Company and Allergan. Further, the ASC services are critical to the selection of the CDP, the ongoing evaluation of the CDP and the development and evaluation of the Option Package Criteria. Accordingly, the Company's participation on the ASC is essential to Allergan receiving value from the R&D Services Deliverable and as such, the ASC Deliverable along with the R&D Services Deliverable are considered one unit (the "CDP Services Unit"). As the Company concluded that the CDP Services Unit is the sole unit of accounting (the "CDP Services Unit of Accounting"), all of the initial arrangement consideration will be allocated to that unit and no allocation of arrangement consideration is necessary.

Allocable arrangement consideration at inception is comprised solely of the up-front payment of $90.0 million. The Company will recognize revenue related to the CDP Services Unit of Accounting as the underlying services are performed. In addition, as the LCA10 IND Payment is payable upon acceptance of the IND, it is contingent consideration related to the licensed technology. As such, if and when the LCA10 IND Payment is received, the Company will recognize revenue related to the LCA10 IND Payment in conjunction with the CDP Services Unit of Accounting as the underlying services are performed.

The Company has evaluated all of the milestones that may be received in connection with the Allergan Agreement. In evaluating if a milestone is substantive, the Company assesses whether: (i) the consideration is commensurate with either the Company's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the Company's performance to achieve the milestone, (ii) the consideration relates solely to past performance, and (iii) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. All development and product approval and launch milestones are considered substantive on the basis of the contingent nature of the milestones, specifically reviewing factors such as the scientific, clinical, regulatory, commercial and other risks that must be overcome to achieve the milestone. Accordingly, such amounts will be recognized as revenue in full in the period in which the associated milestone is achieved, assuming all other revenue recognition criteria are met. All sales milestones will be accounted for in the same manner as royalties and recorded as revenue upon achievement of the milestone, assuming all other revenue recognition criteria are met. The Company will recognize royalty revenue in the period of sale of the related product(s), based on the underlying contract terms, provided that the reported sales are reliably measurable and the Company has no remaining performance obligations, assuming all other revenue recognition criteria are met.

During the three months ended March 31, 2017, the Company recognized no revenue with respect to the Allergan Agreement as it had not commenced providing services related to the CDP Services Unit. As of March 31, 2017, there was $90.0 million of deferred revenue related to the Company's collaboration with Allergan, of which $77.9 million is classified as long-term on the consolidated balance sheet. The Company will recognize revenue on a straight-

line basis, as there is no discernible pattern or objective measure of performance of the services, over the estimated performance period. The estimated performance period is from the commencement of providing services related to the CDP Services Unit until the end of the Research Term.

***Other Agreements***

*Licensing Agreements*

The Company is a party to a number of license agreements under which the Company licenses patents, patent applications and other intellectual property from third parties. The Company anticipates entering into these types of license agreements in the future. The Company believes the following agreements are significant to its business:

*Massachusetts General Hospital Agreements*

In August 2014, the Company entered into an agreement to license certain patent rights owned or co-owned by MGH. Consideration for the granting of the license included the payment of an upfront license fee of $0.1 million, the issuance of 66,848 shares of the Company's common stock, which was based on 0.5% of the Company's outstanding stock on a fully diluted basis, and the right to receive future issuances of shares of common stock to maintain MGH's ownership following the third tranche of the Company's Series A redeemable convertible preferred stock financing (i.e. anti-dilution protection liability), which was settled in June 2015. MGH is entitled to receive nominal annual license fees and future clinical, regulatory and commercial milestone payments in an aggregate maximum amount of $3.7 million and an aggregate amount of $1.8 million upon the occurrence of certain sales milestones. The Company is also obligated to pay MGH low single digit percentage royalties on net sales of products for the prevention or treatment of human disease and ranging from low single digit to low double digit percentage royalties on net sales of other products and services made by the Company, its affiliates or its sublicenses. The royalty percentage depends on the product and service, and whether such licensed product or licensed service is covered by a valid claim within the certain patent rights that the Company licenses from MGH.

In August 2016, the Company entered into a license agreement with MGH (the "2016 MGH Agreement") to license certain patent rights owned or co-owned by MGH (the "Additional MGH Patent Rights"). Consideration for granting the license included the payment of an upfront nonrefundable license fee of $0.8 million, which the Company recorded as research and development expense in 2016. Under the 2016 MGH Agreement, MGH is entitled to nominal annual license fees, clinical and regulatory milestone payments totaling less than $1.0 million in the aggregate per licensed product up to four licensed products or processes to achieve the specified clinical and regulatory milestones, and commercial sales milestone payments totaling up to $4.9 million in the aggregate, consisting of milestone payments due upon the first commercial sales for up to four licensed products or processes and milestone payments due upon annual net sales of products or processes meeting specified thresholds. The Company is also obligated to pay MGH royalties of less than 1% on net sales of products and processes for the prevention or treatment of human disease, and royalties of a low single-digit percentage on net sales of products and processes for the prevention or treatment of a non-human animal disease, made by the Company, its affiliates, or its sublicensees. The royalty percentages that the Company is obligated to pay are subject to reduction if at the time of sale the applicable product or process is not covered by a valid claim within the Additional MGH Patent Rights. Under the 2016 MGH Agreement, the Company is obligated to reimburse MGH for all patent costs and future reasonable costs associated with the prosecution, filing, and maintenance of the licensed patents.

MGH is also entitled under the 2016 MGH Agreement to receive payments of up to $6.0 million in the event the Company's market capitalization reaches specified thresholds exceeding a low ten-digit dollar amount, on or prior to the expiration or termination of the 2016 MGH Agreement (or if earlier, a Company sale) ("MGH Market Cap Success Payments") or a Company sale for consideration in excess of those thresholds ("MGH Company Sale Success Payments"). Additional MGH Market Cap Success Payments become payable, and the amount of potential MGH Company Sale Success Payments would increase further, if the Company's market capitalization reaches additional higher thresholds and the Company has at least one product candidate that is covered by a claim of an Additional MGH Patent Right and that (i) is the subject of a Phase 1 clinical trial of which the Company or an affiliate or sublicensee of the Company is the sponsor, (ii) was the subject of a Phase 1 clinical trial of which the Company or an affiliate or

sublicensee of the Company was the sponsor with the Company having determined to conduct a subsequent clinical trial with respect to such product candidate, or (iii) has been approved for sale in either the United States or European Union. MGH Market Cap Success Payments are payable in cash or shares of Company common stock at the Company's discretion, and MGH Company Sale Success Payments are payable solely in cash.

*The Broad Institute Agreements*

In October 2014, the Company entered into an agreement (the "Cas9-I License Agreement") with Broad and Harvard to license certain patent rights owned or co-owned by, or among, Broad, Massachusetts Institute of Technology ("MIT"), and Harvard (collectively, the "Institutions"). Consideration for the granting of the license included the payment of an upfront license issuance fee of $0.2 million and the issuance of 561,531 shares of the Company's common stock. The Institutions are collectively entitled to receive clinical and regulatory milestone payments totaling up to $14.8 million in the aggregate per licensed product approved in the United States, European Union, and Japan for the treatment of a human disease that afflicts at least a specified number of patients in the aggregate in the United States. If the Company undergoes a change of control during the term of the license agreement, the clinical and regulatory milestone payments will be increased by a certain percentage in the mid-double digits. The Company is also obligated to make additional payments to the Institutions, collectively, of up to an aggregate of $54.0 million upon the occurrence of certain sales milestones per licensed product for the treatment of a human disease that afflicts at least a specified number of patients in the aggregate in the United States. The Institutions are collectively entitled to receive clinical and regulatory milestone payments totaling up to $4.1 million in the aggregate per licensed product approved in the U.S. and at least one jurisdiction outside the U.S. for the treatment of a human disease based on certain criteria. The Company is also obligated to make additional payments to the Institutions, collectively, of up to an aggregate of $36.0 million upon the occurrence of certain sales milestones per licensed product for the treatment of a rare disease meeting certain criteria. The Institutions are entitled to receive from the Company nominal annual license fees and a mid-single digit percentage royalties on net sales of products for the prevention or treatment of human disease and ranging from low single digit to high single digit percentage royalties on net sales of other products and services, made by the Company, its affiliates, or its sublicensees. The royalty percentage depends on the product and service, and whether such licensed product or licensed service is covered by a valid claim within the certain patent rights that the Company licenses from the Institutions.

In December 2016, the Company entered into the Cpf1 License Agreement with Broad, for specified patent rights (the "Cpf1 Patent Rights") related primarily to Cpf1 compositions of matter and their use for gene editing. Concurrently with entering into the Cpf1 License Agreement, the Company, Broad, and Harvard amended and restated the Cas9-I License Agreement as described below. Concurrently, the Company and Broad also entered into a license agreement (the "Cas9-II License Agreement") for specified patent rights (the "Cas9-II Patent Rights") related primarily to certain Cas9 compositions of matter and their use for genome editing. The Company will pay an upfront fee in aggregate of $16.5 million under these agreements, of which $10.0 million is in the form of notes payable, described further in Note 6. The upfront fee was recorded in research and development expenses during 2016.

*Cpf1 License Agreement*

Pursuant to the Cpf1 License Agreement, Broad, on behalf of itself, Harvard, MIT, Wageningen, and the University of Tokyo ("UTokyo" and, together with Broad, Harvard, MIT, and Wageningen, the "Cpf1 Institutions") granted the Company an exclusive, worldwide, royalty-bearing, sublicensable license to the Cpf1 Patent Rights, to make, have made, use, have used, sell, offer for sale, have sold, export and import products in the field of the prevention or treatment of human disease using gene therapy, editing of genetic material, or targeting of genetic material, subject to certain limitations and retained rights (collectively, the "Cpf1 Exclusive Field"), as well as a non-exclusive, worldwide, royalty-bearing sublicensable license to the Cpf1 Patent Rights for all other purposes, subject to certain limitations and retained rights. The Company is obligated to use commercially reasonable efforts to research, develop, and commercialize products in the Cpf1 Exclusive Field. The Company is also required to achieve certain development milestones within specified time periods for products covered by the Cpf1 Patent Rights, with Broad having the right to terminate the Cpf1 License Agreement if the Company fails to achieve these milestones within the required time periods.

Broad and Wageningen are collectively entitled to receive clinical and regulatory milestone payments totaling up to $20.0 million in the aggregate per licensed product approved in the United States, European Union, and Japan for the prevention or treatment of a human disease that afflicts at least a specified number of patients in the aggregate in the United States. The Company is also obligated to make additional payments to Broad and Wageningen, collectively, of up to an aggregate of $54.0 million upon the occurrence of certain sales milestones per licensed product for the prevention or treatment of a human disease that afflicts at least a specified number of patients in the aggregate in the United States. Broad and Wageningen are collectively entitled to receive clinical and regulatory milestone payments totaling up to $6.0 million in the aggregate per licensed product approved in the United States, European Union and Japan for the prevention or treatment of a human disease that afflicts fewer than a specified number of patients in the aggregate in the United States or a specified number of patients per year in the United States (an "Ultra-Orphan Disease"). The Company is also obligated to make additional payments to Broad and Wageningen, collectively, of up to an aggregate of $36.0 million upon the occurrence of certain sales milestones per licensed product for the prevention or treatment of an Ultra-Orphan Disease.

Broad and Wageningen, collectively, are entitled to receive, on a product-by-product and country-by-country basis, mid single-digit percentage royalty on net sales of licensed products for the prevention or treatment of human disease, and royalties on net sales of other licensed products and licensed services, made by the Company, its affiliates, or its sublicensees. The royalty percentage depends on the product and service, and whether such licensed product or licensed service is covered by a valid claim within the Cpf1 Patent Rights. If the Company is legally required to pay royalties to a third party on net sales of the Company's products because such third party holds patent rights that cover such licensed product, then the Company can credit up to a specified percentage of the amount paid to such third party against the royalties due to Broad and Wageningen in the same period. Such credit may not exceed 50% of the applicable royalties paid by the Company to the applicable third party. The Company's obligation to pay royalties will expire on a product-by-product and country-by-country basis upon the later of the expiration of the last to expire valid claim of the Cpf1 Patent Rights that covers each licensed product or service in each country or the tenth anniversary of the date of the first commercial sale of the licensed product or licensed service. If the Company sublicenses any of the Cpf1 Patent Rights to a third party, Broad and Wageningen, collectively, have the right to receive sublicense income, depending on the stage of development of the products or services in question at the time of the sublicense.

Under the Cpf1 License Agreement, Broad and Wageningen are also entitled, collectively, to receive success payments in the event the Company's market capitalization reaches specified thresholds (the "Cpf1 Market Cap Success Payments") or a Company sale for consideration in excess of those thresholds (the "Cpf1 Company Sale Success Payments" and, collectively with the Cpf1 Market Cap Success Payments, the "Cpf1 Success Payments"). The Cpf1 Success Payments payable to Broad and Wageningen range from $750 million to a mid eight digit dollar amount, and collectively will not exceed, in aggregate, $125.0 million, which maximum amount would be payable only if the Company reaches a market capitalization threshold of $10.0 billion and has at least one product candidate covered by a claim of a patent right licensed to the Company under either the Cpf1 License Agreement or the Cas9-I License Agreement that is or was the subject of a clinical trial pursuant to development efforts by the Company or any Company affiliate or sublicensee. The Cpf1 Market Cap Success Payments are payable by the Company in cash or in the form of promissory notes on substantially the same terms and conditions as the Initial Notes (described in Note 6), except that the maturity date of such notes will, subject to certain exceptions, be 150 days following issuance. Following a change in control of the Company, Cpf1 Market Cap Success Payments are required to be made in cash. Cpf1 Company Sale Success Payments are payable solely in cash.

Unless terminated earlier, the term of the Cpf1 License Agreement will expire on a country-by-country basis, upon the expiration of the last to expire valid claim of the Cpf1 Patent Rights in such country. The Company has the right to terminate the Cpf1 License Agreement at will upon four months' written notice to Broad. Either party may terminate the Cpf1 License Agreement upon a specified period of notice in the event of the other party's uncured material breach of a material obligation, such notice period varying depending on the nature of the breach. Broad may terminate the Cpf1 License Agreement immediately if the Company challenges the enforceability, validity, or scope of any Cpf1 Patent Right or assist a third party to do so, or in the event of the Company's bankruptcy or insolvency.

*Amendment and Restatement of Cas9-I License Agreement*

In December 2016, the Company amended and restated the Cas9-I License Agreement to exclude additional fields from the scope of the exclusive license previously granted to the Company, to make the exclusive license to three targets become non-exclusive, subject to the limitation that each of Broad and Harvard would only be permitted to grant a license to only one third party at a time with respect to each such target within the field of the exclusive license, and to revise certain provisions relating to the rights of Harvard and Broad to grant further licenses under specified circumstances to third parties that wish to develop and commercialize products that target a particular gene and that otherwise would fall within the scope of the exclusive license under this agreement, so that Harvard and Broad together would have rights substantially similar to the equivalent rights possessed by Broad under the Cpf1 License Agreement to designate gene targets for which the designating institution, whether alone or together with an affiliate or third party, has an interest in researching and developing products that would otherwise be covered by rights licensed by Harvard and/or Broad to the Company under this agreement, the Cpf1 License Agreement or the Cas9-II Agreement (such agreement, as amended, the "Amended and Restated Cas9-I License Agreement"). In March 2017, the Company and Harvard and Broad further amended the Amended and Restated Cas9-I License Agreement to (i) grant an exclusive license from Broad to the Company with respect to certain patent rights that The Rockefeller University ("Rockefeller") has or may have rights in and to and for which Rockefeller has, under a certain inter-institutional agreement that Broad and Rockefeller entered into in February 2017, appointed Broad as sole and exclusive agent for the purposes of licensing and (ii) provide to Rockefeller certain rights, including with respect to patent enforcement, indemnification, insurance, confidentiality, reservation of certain rights, and publicity, that are generally consistent with those granted to Broad, Harvard, MIT and the Howard Hughes Medical Institute under the Amended and Restated Cas9-I License Agreement.

*Cas9-II License Agreement*

Pursuant to the Cas9-II License Agreement, Broad, on behalf of itself, MIT, Harvard, and the University of Iowa Research Foundation, granted the Company an exclusive, worldwide, royalty bearing sublicensable license to certain of the Cas9-II Patent Rights as well as a non-exclusive, worldwide, royalty-bearing sublicensable license to all of the Cas9-II Patent Rights, in each case on terms substantially similar to the licenses granted to the Company under Cpf1 License Agreement except, among other things, for the following commitment amounts. Under the Cas9-II License Agreement, the Company will pay an upfront license fee in a low seven digits amount as well as an annual license maintenance fee. The Company is obligated to pay clinical and regulatory milestone payments per licensed product approved in the United States, European Union and Japan for the prevention or treatment of a human disease that afflicts at least a specified number of patients in the aggregate in the United States totaling up to $3.7 million in the aggregate, and sales milestone payments for any such licensed product totaling up to $13.5 million in the aggregate. In addition, the Company is obligated to pay clinical and regulatory milestone payments totaling up to $1.1 million in the aggregate per licensed product approved in the United States and the European Union or Japan for the prevention or treatment of a human disease that afflicts fewer than a specified number of patients in the United States, plus sales milestone payments of up to $9.0 million for any such licensed product. Consistent with the Cpf1 License Agreement, the licensors are entitled to royalties on net sales of products for the prevention or treatment of human disease and other products and services made by the Company, its affiliates, or its sublicensees. Royalties due under other license agreements are creditable against these royalties up to a specified amount in the same period. Lastly, Broad is entitled to receive success payments if the Company's market capitalization reaches specified thresholds ascending from a low ten-digit dollar amount to $9.0 billion or a Company sale. The potential success payments range from a low seven digit dollar amount to a low eight digit dollar amount and will not exceed, in aggregate, $30.0 million, which maximum amount would be owed only if the Company reaches a market capitalization threshold of $9.0 billion and has at least one product candidate covered by a claim of a patent right licensed to the Company under either the Cas9 II License Agreement or the Cas9-I License Agreement that is or was the subject of a clinical trial pursuant to development efforts by the Company or any Company affiliate or sublicensee.

**8. Stock-based compensation**

Total compensation cost recognized for all stock-based compensation awards in the condensed consolidated statements of operations and comprehensive loss was as follows (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2017 | 2016 |
| Research and development | $ 3,614 | $ 3,458 |
| General and administrative | 2,190 | 752 |
| Total stock-compensation expense | $ 5,804 | $ 4,210 |

***Restricted Stock***

From time to time, upon approval by the Company's board of directors, certain employees and advisors have been granted restricted shares of common stock. These shares of restricted stock are subject to repurchase rights. Accordingly, the Company has recorded the proceeds from the issuance of restricted stock as a liability in the condensed consolidated balance sheets included as a component of accrued expenses or other long term liabilities based on the scheduled vesting dates. The restricted stock liability is reclassified into stockholders' equity as the restricted stock vests. A summary of the status of and changes in unvested restricted stock as of March 31, 2017 is as follows:

| | Shares | Weighted Average Grant Date Fair Value Per Share |
|---|---|---|
| **Unvested Restricted Common Stock as of December 31, 2016** | 822,638 | $ 0.0213 |
| Issued | — | — |
| Vested | (208,293) | $ 0.0171 |
| **Unvested Restricted Common Stock as of March 31, 2017** | 614,345 | $ 0.0227 |

For the three months ended March 31, 2017, the expense for restricted stock awards related to employees and non-employees was $0.3 million and $2.0 million, respectively.

As of March 31, 2017, the Company had no unrecognized stock-based compensation expense related to its employee unvested restricted stock awards. As of March 31, 2017, the Company had unrecognized stock-based compensation expense related to its non-employee unvested restricted stock awards of $2.7 million which is expected to be recognized over the remaining weighted average vesting period of 0.3 years.

***Stock Options***

Certain of the Company's stock option agreements allow for the exercise of unvested awards. During 2014, options to purchase 75,304 shares of common stock for $0.03 per share were exercised prior to their vesting. The unvested shares are subject to repurchase by the Company if the employees cease to provide service to the Company, with or without cause. As such, the Company does not treat the exercise of unvested options as a substantive exercise. The Company has recorded the proceeds from the exercise of unvested stock options as a liability in the condensed consolidated balance sheets as a component of other long term liabilities based on the scheduled vesting dates. The liability for unvested common stock subject to repurchase is reclassified into stockholders' equity as the shares vest.

The following is a summary of stock option activity for the three months ended March 31, 2017:

| | Shares | Weighted Average Exercise Price | Remaining Contractual Life (years) | Aggregate Intrinsic Value (in thousands) |
|---|---|---|---|---|
| **Outstanding at December 31, 2016** | 3,411,783 | $ 13.71 | 8.8 | $ 16,190 |
| Granted | 1,067,741 | $ 24.18 | | |
| Exercised | (85,872) | $ 5.11 | | |
| Cancelled | (83,902) | $ 11.67 | | |
| **Outstanding at March 31, 2017** | 4,309,750 | $ 16.51 | 9.1 | $ 31,863 |
| Vested and expected to vest at March 31, 2017 | 4,309,750 | $ 16.51 | 9.1 | $ 31,863 |
| Exercisable at March 31, 2017 | 838,769 | $ 11.37 | 8.2 | $ 10,268 |

The table above reflects restricted stock issued upon exercise of unvested stock options as exercised on the dates that the shares are no longer subject to repurchase. The Company had 17,609 and 21,955 shares of unvested restricted common stock outstanding at March 31, 2017 and December 31, 2016, respectively, resulting from the exercise of unvested stock options.

Using the Black-Scholes option pricing model, the weighted average fair value of options granted to employees and directors during the three months ended March 31, 2017 and 2016 was $16.73 and $13.03, respectively. The expense related to options granted to employees and directors was $3.1 million and $0.9 million for the three months ended March 31, 2017 and 2016, respectively.

The fair value of each option issued to employees and directors was estimated at the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2017 | 2016 |
| Risk free interest rate | 2.1 % | 1.5 % |
| Expected dividend yield | — | — |
| Expected term (in years) | 6.25 | 6.25 |
| Expected volatility | 78.0 % | 80.0 % |

There were no options issued to persons other than employees and directors during the three months ended March 31, 2017 and 2016, respectively. As of March 31, 2017, the Company had unrecognized stock-based compensation expense related to its employee stock options of $39.2 million which the Company expects to recognize over the remaining weighted average vesting period of 3.13 years.

**9. Net loss per share**

Basic net loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding during the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted average number of common shares and potentially dilutive securities outstanding for the period determined using the treasury stock and if converted methods. Contingently issuable shares are included in the calculation of basic loss per share as of the beginning of the period in which all the necessary conditions have been satisfied. Contingently issuable shares are included in diluted loss per share based on the number of shares, if any, that would be issuable under the terms of the arrangement if the end of the reporting period was the end of the contingency period, if the results are dilutive.

For purposes of the diluted net loss per share calculation, stock options are considered to be common stock equivalents, but they were excluded from the Company’s calculation of diluted net loss per share allocable to common stockholders because their inclusion would have been anti-dilutive. Therefore, basic and diluted net loss per share

applicable to common stockholders was the same for all periods presented. Contingently issuable shares of common stock pursuant to the 2016 License Agreements, as discussed more fully in Note 6, are excluded from the calculation of basic and diluted net loss per share calculation as the Payment Conditions have not been satisfied.

Upon the closing of the March Offering, the Company sold 4,600,000 shares of common stock. The issuance of these shares resulted in a significant increase in the Company's weighted-average shares outstanding for the three months ended March 31, 2017 when compared to the comparable prior year period and is expected to continue to impact the year-over-year comparability of the Company's net loss per share calculations for the next twelve months.

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

| | As of March 31, | |
|---|---|---|
| | 2017 | 2016 |
| Unvested restricted common stock | 614,345 | 1,403,302 |
| Outstanding stock options | 4,309,750 | 2,400,024 |
| Estimated number of shares issuable for convertible notes [1] | 678,349 | — |
| Total | 5,602,444 | 3,803,326 |

(1) Represents the number of shares that would have been issued if the Company had elected to pay the promissory notes, as discussed in Note 6, in shares of the Company's common stock on the valuation date of March 31, 2017. The number of shares issued, for purposes of this presentation, is calculated by dividing the principal of the notes payable, including accrued interest, by the stock price per share on the valuation date.

The table above reflects restricted stock issued upon exercise of unvested stock options as exercised on the dates that the shares are no longer subject to repurchase.

**10. Related-party transactions**

During the three months ended March 31, 2016, the Company paid a related party $0.6 million in rent and facility-related fees. The Company did not make any payments to this related party in the three months ended March 31, 2017.

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

*The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the Securities and Exchange Commission on March 3, 2017 (the "2016 10-K").*

*This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. There are a number of important risks and uncertainties that could cause our actual results to differ materially from those indicated by forward-looking statements. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q, particularly in the section entitled "Risk Factors" in Part II, Item 1A that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments that we may make.*

*You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date of this Quarterly Report on Form 10-Q,and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.*

### Overview

We are a leading genome editing company dedicated to treating patients with genetically defined diseases by correcting their disease-causing genes. Our mission is to translate the promise of genome editing science into a broad class of transformative genomic medicines to benefit the greatest number of patients. To this end, we are developing a proprietary genome editing platform based on CRISPR technology. Our product development strategy is to target genetically defined diseases with an initial focus on debilitating illnesses where there are no approved treatments and where the genetic basis of disease is well understood. Over time, we also intend to develop medicines that may address genetically treatable diseases in addition to genetically defined diseases. A genetically defined disease may be treated by correcting a disease-causing gene, whereas a genetically treatable disease is a disease that does not necessarily have a single, disease-causing gene, but which nonetheless may be treated by editing genes to ameliorate or eliminate the signs or symptoms of that disease. We are advancing discovery research programs, including programs to address genetic, infectious, and oncologic diseases of the liver, lung, blood, eye, and muscle. Our most advanced program is designed to address a specific genetic form of retinal degeneration called Leber Congenital Amaurosis type 10 ("LCA10"), a disease for which we are not aware of any available therapies and which we are aware of only one potential treatment in clinical trial in the United States and Europe. We aim to initiate a clinical natural history study in mid-2017 to evaluate the clinical course and characteristics of LCA10 more extensively, and we aim to file an investigational new drug ("IND") application by mid-2018 for our LCA10 program. In May 2015, we entered into a collaboration with Juno Therapeutics, Inc. ("Juno Therapeutics"), a leader in the emerging field of immuno-oncology, to develop novel engineered T cell therapies for cancer and, in March 2017, we entered into a strategic alliance and option agreement with Allergan Pharmaceuticals International Limited ("Allergan"), a wholly-owned subsidiary of Allergan plc, a leading global pharmaceutical company, to discover, develop, and commercialize new gene editing medicines for a range of ocular disorders.

Since our inception in September 2013, our operations have focused on organizing and staffing our company, business planning, raising capital, establishing our intellectual property portfolio, assembling our core capabilities in genome editing, seeking to identify potential product candidates, and undertaking preclinical studies. All of our research

programs are still in the preclinical or research stage of development and their risk of failure is high. We have not generated any revenue from product sales. We have funded our operations primarily through the initial public offering of our common stock (the "IPO") and our follow-on offering of our common stock in March 2017 (the "March Offering"), private placements of our preferred stock, an equipment loan, and payments received under our collaboration with Juno Therapeutics and the upfront payment that we received under our strategic alliance with Allergan. From inception through March 31, 2017, we raised an aggregate of $482.8 million to fund our operations.

In February 2016, we completed our IPO and sold 6,785,000 shares of our common stock, including 885,000 shares of our common stock pursuant to the full exercise by the underwriters of an option to purchase additional shares, at a public offering price of $16.00 per share for an aggregate offering of approximately $108.6 million. We received aggregate net proceeds from the IPO of approximately $97.5 million, after deducting underwriting discounts and commissions and other offering expenses payable by us. In March 2017, we completed the March Offering and sold 4,600,000 shares of our common stock, including 600,000 shares of our common stock pursuant to the full exercise by the underwriters of an option to purchase additional shares, at the public offering price of $22.50 per share for an aggregate offering of approximately $103.5 million. We received net proceeds from the follow-on offering of approximately $96.7 million, after deducting underwriting discounts and commissions and other offering expenses payable by us.

Since inception, we have incurred significant operating losses. Our net losses were $31.1 million and $17.7 million for the three months ended March 31, 2017 and 2016, respectively. As of March 31, 2017, we had an accumulated deficit of $216.6 million. We expect to continue to incur significant expenses and operating losses for the foreseeable future. Our net losses may fluctuate significantly from quarter to quarter and from year to year. We anticipate that our expenses will increase substantially as we continue our current research programs and our preclinical development activities; seek to identify additional research programs and additional product candidates; initiate preclinical testing and clinical trials for any product candidates we identify and develop; maintain, expand, and protect our intellectual property portfolio, including reimbursing our licensors for such expenses related to the intellectual property that we in-license from such licensors; further develop our genome editing platform; hire additional clinical, quality control, and scientific personnel; and incur additional costs associated with operating as a public company. We do not expect to be profitable for the year ending December 31, 2017 or the foreseeable future.

**Financial Operations Overview**

***Revenue***

To date, we have not generated any revenue from product sales and we do not expect to generate any revenue from product sales for the foreseeable future. In connection with entering into our collaboration with Juno Therapeutics in May 2015, we received an upfront payment of $25.0 million, and in May 2016, we received a milestone payment of $2.5 million. In addition, we will receive up to $22.0 million in research support over the five years of the collaboration and across the three programs under the collaboration, subject to adjustment in accordance with the terms of the agreement. Through March 31, 2017, we had recognized an aggregate of $8.0 million of research support from Juno Therapeutics since entering into the agreement, including $2.5 million recognized during the second quarter of 2016 in connection with the achievement of our first milestone under the collaboration, resulting from technical progress in a research program under the collaboration. During the three months ended March 31, 2017, we recognized $0.7 million of research support from Juno Therapeutics. In connection with entering into our strategic alliance with Allergan in March 2017, we received an upfront payment of $90.0 million from Allergan (such payment, the "Allergan Upfront"). During the three months ended March 31, 2017, the Company recognized no revenue in connection with the Allergan Upfront. As of March 31, 2017, we recorded $90.0 million of deferred revenue, of which $77.9 million is classified as long-term on the condensed consolidated balance sheet.

In May 2016, we entered into an award agreement with the Cystic Fibrosis Foundation Therapeutics, Inc. ("CFFT") pursuant to which CFFT has agreed to pay us up to $5.0 million over the agreement's three year term to support our cystic fibrosis development program and related technology research and development. Under the terms of the agreement, we are required to contribute additional funds to the program in an amount equal to the funds contributed by CFFT and to pay certain amounts to CFFT upon the achievement of specified events. Through March 31, 2017, we

had recognized $0.3 million of revenue related to our agreement with CFFT, including $14 thousand that was recognized during the three months ended March 31, 2017.

For the foreseeable future, we expect substantially all of our revenue will be generated from our collaboration with Juno Therapeutics, our strategic research alliance with Allergan to the extent Allergan exercises any of its options, our agreement with CFFT, any other collaborations or agreements we may enter into, and rental payments from a subtenant of ours.

***Expenses***

*Research and Development Expenses*

Research and development expenses consist primarily of costs incurred for our research activities, including our drug discovery efforts and preclinical studies under our research programs, which include:

· employee-related expenses including salaries, benefits, and stock-based compensation expense;

· costs of funding research performed by third parties that conduct research and development and preclinical activities on our behalf;

· costs of purchasing lab supplies and non-capital equipment used in our preclinical activities and in manufacturing preclinical study materials;

· consultant fees;

· facility costs including rent, depreciation, and maintenance expenses; and

· fees for acquiring and maintaining licenses under our third-party licensing agreements.

Research and development costs are expensed as incurred. At this time, we cannot reasonably estimate or know the nature, timing, and estimated costs of the efforts that will be necessary to complete the development of any product candidates we may identify and develop. This is due to the numerous risks and uncertainties associated with developing such product candidates, including the uncertainty of:

· successful completion of preclinical studies, IND-enabling studies and natural history studies;

· successful enrollment in, and completion of, clinical trials;

· receipt of marketing approvals from applicable regulatory authorities;

· establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;

· obtaining and maintaining patent and trade secret protection and non-patent exclusivity;

· launching commercial sales of a product, if and when approved, whether alone or in collaboration with others;

· acceptance of a product, if and when approved, by patients, the medical community, and third-party payors;

· effectively competing with other therapies and treatment options;

· a continued acceptable safety profile following approval;

· enforcing and defending intellectual property and proprietary rights and claims; and

· achieving desirable medicinal properties for the intended indications.

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

Other than in connection with our collaboration with Juno Therapeutics and our agreement with CFFT, we do not track research and development costs on a program-by-program basis as we have not yet identified a product candidate for advancement into clinical trials. We plan to track research and development costs for any individual development program when we identify a product candidate from the program that we believe we can advance into clinical trials.

Research and development activities are central to our business model. We expect research and development costs to increase significantly for the foreseeable future as our development programs progress, including as we continue to support the preclinical studies for our LCA10 program as well as our other research programs.

*General and Administrative Expenses*

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation for personnel in executive, finance, investor relations, business development, legal, corporate affairs, and human resource functions. Other significant costs include corporate facility costs not otherwise included in research and development expenses, legal fees related to patent and corporate matters, and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities and potential commercialization of any product candidates we identify and develop. These increases will include increased costs associated with the lease for our headquarters and will likely include increased costs related to the hiring of additional personnel, and fees to outside consultants. We also anticipate increased expenses related to reimbursement of third-party patent-related expenses and increased expenses associated with being a public company, including costs for audit, legal, regulatory, and tax-related services, director and officer insurance premiums, and investor relations costs. With respect to reimbursement of third-party patent-related expenses specifically, given the ongoing nature of the interference and opposition proceedings involving the patents licensed to us under our license agreement with The Broad Institute, Inc. (“Broad”) and the President and Fellows of Harvard College (“Harvard”) as described in more detail in Part II, Item 1A “Risk Factors—Risks Related to Our Intellectual Property,” we anticipate general and administrative expenses will continue to be significant. Some of our in-licensed patents under our license agreement with Broad and Harvard are subject to priority disputes, and we anticipate that our obligation to reimburse Broad and Harvard for expenses related to these interference and opposition proceedings during future periods will be substantial until such proceedings are resolved.

*Other Income (Expense), Net*

For the three months ended March 31, 2017, other income (expense), net consisted primarily of rental income from our sublease and interest income earned on our cash equivalents net of interest expense on our construction financing lease obligation and notes payable.

For the three months ended March 31, 2016, other income (expense), net consisted primarily of interest income earned on our cash equivalents and government grant income, net of re-measurement losses associated with changes in the fair value of our liability for a warrant to purchase preferred stock. Upon the completion of our IPO, all of our preferred stock converted into common stock on a 2.6-for-one basis, our outstanding warrant to purchase preferred stock converted into a warrant to purchase common stock and we reclassified the fair value of the warrant to additional paid-in capital. As a result, we ceased recognizing further re-measurement gains or losses associated with the warrant after the

first quarter of 2016.

**Critical Accounting Policies and Estimates**

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with United States generally accepted accounting principles. The preparation of our condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenues, and expenses, and the disclosure of contingent assets and liabilities in our condensed consolidated financial statements. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the condensed consolidated financial statements prospectively from the date of change in estimates.

There have been no material changes to our critical accounting policies from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2016 10-K.

**Results of Operations**

***Comparison of the Three Months ended March 31, 2017 and 2016***

The following table summarizes our results of operations for the three months ended March 31, 2017 and 2016, together with the changes in those items in dollars (in thousands):

| | Three Months Ended March 31, | | |
|---|---|---|---|
| | 2017 | 2016 | Dollar Change |
| Collaboration and other research and development revenues | $ 682 | $ 805 | $ (123) |
| Operating expenses: | | | |
| Research and development | 19,021 | 8,882 | 10,139 |
| General and administrative | 12,288 | 9,762 | 2,526 |
| Total operating expenses | 31,309 | 18,644 | 12,665 |
| Other income (expense), net: | | | |
| Other income (expense), net | 140 | (30) | 170 |
| Interest income (expense), net | (610) | 124 | (734) |
| Total other income (expense), net | (470) | 94 | (564) |
| Net loss | $ (31,097) | $ (17,745) | $ (13,352) |

*Collaboration and other research and development revenues*

Collaboration and other research and development revenues were $0.7 million for the three months ended March 31, 2017 and consisted primarily of revenue recognized pursuant to our collaboration with Juno Therapeutics and $14 thousand of revenue recognized pursuant to our agreement with CFFT. Collaboration and other research and development revenues were $0.8 million for the three months ended March 31, 2016 and consisted of revenue recognized pursuant to our collaboration with Juno Therapeutics.

*Research and Development Expenses*

Research and development expenses increased by $10.1 million, to $19.0 million for the three months ended March 31, 2017 from $8.9 million for the three months ended March 31, 2016. The following table summarizes our

research and development expenses for the three months ended March 31, 2017 and March 31, 2016, together with the changes in those items in dollars (in thousands):

| | Three Months Ended March 31, | | |
|---|---|---|---|
| | 2017 | 2016 | Dollar Change |
| Employee related expenses | $ 3,452 | $ 1,994 | $ 1,458 |
| Stock-based compensation expense | 3,613 | 3,459 | 154 |
| Process and platform development expenses | 3,089 | 2,015 | 1,074 |
| Facility expenses | 1,028 | 1,055 | (27) |
| Other expenses | 7,839 | 359 | 7,480 |
| Total research and development expenses | $ 19,021 | $ 8,882 | $ 10,139 |

The increase in research and development expenses for the three months ended March 31, 2017 compared to the three months ended March 31, 2016 was primarily attributable to:

- approximately $7.4 million in increased other expenses, resulting primarily from the $5.0 million notes payable that were issued during the first quarter of 2017 to Broad and Wageningen University (“Wageningen”) under one of our licensing agreements and the payment by us of $2.3 million to certain of our licensors in connection with receiving the Allergan Upfront. See “— Indebtedness” below for more information regarding such notes;
- approximately $1.4 million in increased employee related expenses, resulting from an increase in the size of our workforce and the hiring of key executives throughout 2016;
- approximately $1.1 million in increased process and platform development costs due to increased research activity; and
- approximately $0.2 million in increased stock-based compensation expenses.

*General and Administrative Expenses*

General and administrative expenses increased by $2.5 million, to $12.3 million for the three months ended March 31, 2017 from $9.8 million for the three months ended March 31, 2016. The increase in general and administrative expenses was primarily attributable to:

- approximately $1.4 million in increased stock-based compensation expenses;
- approximately $1.0 million in increased employee related expenses, resulting from an increase in the size of our workforce;
- approximately $0.5 million in increased contractor consulting fees; and
- approximately $0.3 million in increased other expenses including facility-related expenses; partially offset by
- approximately $0.7 million in decreased external IP legal and patent-related fees, including expenses associated with the prosecution and maintenance of the patents and patent applications owned by us or licensed to us.

*Other income (expense), net*

For the three months ended March 31, 2017, other income (expense), net was an expense of $470 thousand, which was primarily attributable to interest expense on our construction financing lease obligation and certain

promissory notes in the aggregate original principal amount of $15.0 million, offset by rental income from our sublease and interest income earned on our cash.

For the three months ended March 31, 2016, other income (expense), net was income of 94 thousand, consisting primarily of interest income earned on our cash equivalents and government grant income, net of re-measurement losses associated with changes in the fair value of our liability for a warrant to purchase preferred stock. Upon the completion of our IPO, all of our preferred stock converted into common stock on a 2.6-for-one basis and our outstanding warrant to purchase preferred stock converted into a warrant to purchase common stock and we reclassified the fair value of the warrant to additional paid-in capital. As a result, we ceased recognizing further re-measurement gains or losses associated with the warrant after the first quarter of 2016.

**Liquidity and Capital Resources**

***Sources of Liquidity***

From inception through March 31, 2017, we funded our operations primarily through proceeds from private placements of our preferred stock of $163.3 million, net proceeds of $97.5 million from our IPO, net proceeds of $96.7 million from our March Offering, the Allergan Upfront, an up-front payment, research and development payments and a milestone payment under our collaboration with Juno Therapeutics of $25.0 million, $5.8 million and $2.5 million, respectively, and $2.0 million of gross proceeds from an equipment loan financing. As of March 31, 2017, we had cash and cash equivalents of $351.6 million.

In addition to our existing cash and cash equivalents, we are eligible to earn milestone payments and are entitled to cost reimbursement under our collaboration agreement with Juno Therapeutics. Additionally, under the Allergan agreement, we are eligible to earn milestone payments and certain cost reimbursement. Our ability to earn the milestone payments and cost reimbursements and the timing of earning these amounts are dependent upon the timing and outcome of our development, regulatory and commercial activities and are uncertain at this time. As of March 31, 2017, our right to payments under our collaboration agreement with Juno Therapeutics and our strategic alliance and option agreement with Allergan, our award agreement with CFFT, and payments from our subtenant is our only committed potential external source of funds.

*Indebtedness*

In December 2016, in connection with our entry into our Cpf1 License Agreement with Broad (the "Cpf1 License Agreement"), we issued promissory notes (the "Initial Notes") in an aggregate original principal amount of $10.0 million to Broad and Wageningen. Principal and interest on the Initial Notes is payable in December 2017, or if earlier, a specified period of time following a company sale event.

In March 2017, a success payment in the amount of $5.0 million under our Cpf1 License Agreement became due upon our market capitalization reaching $750 million, and we issued promissory notes to Broad and Wageningen in the aggregate original principal amount of $5.0 million (the "Success Payment Notes" and collectively with the Initial Notes, the "Notes"). The principal and interest on the Success Payment Notes is due and payable in August 2017.

The Notes bear interest at a rate of 4.8% per annum. We may elect to make any payment of amounts outstanding under the Notes either in the form of cash or, subject to certain conditions, in shares of our common stock of equal value, with such shares being valued for such purpose at the closing price of our common stock as reported the NASDAQ Stock Market for the trading day immediately preceding the date of such payment if our common stock is then listed on the NASDAQ Stock Market. In the event of a change of control of our company or a sale of our company, we will be required to pay all remaining principal and accrued interest on the Notes in cash within a specified period following such event.

Under the terms of the Cpf1 License Agreement and other license agreements with Broad and MGH, we may be required to issue additional promissory notes in connection with the achievement of success payment criteria. See Note 7 to our condensed consolidated financial statements for more information regarding such success payment criteria.

*Cash Flows*

The following table provides information regarding our cash flows for the three months ended March 31, 2017 and 2016 (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2017 | 2016 |
| Net cash provided by (used in): | | |
| Operating activities | $ 69,791 | $ (9,629) |
| Investing activities | (656) | (2,562) |
| Financing activities | 97,094 | 98,215 |
| Net increase in cash and cash equivalents | $ 166,229 | $ 86,024 |

*Net Cash Provided by (Used in) Operating Activities*

The use of cash in all periods resulted primarily from our net losses adjusted for non-cash charges and changes in components of working capital.

Net cash provided by operating activities was approximately $69.8 million for the three months ended March 31, 2017, and consisted primarily of a net loss of $31.1 million adjusted for non-cash items including stock-based compensation expense of $5.8 million, non-cash research and development expenses of $5.0 million, depreciation expense of $0.6 million, other non-cash items expense of $0.1 million, and a net change in operating assets and liabilities of $89.4 million. The change in operating assets and liabilities was related to an increase in deferred revenue of $90.2 million, primarily related to receiving the Allergan Upfront, an increase of $10.1 million in accounts payable and an increase in prepaid and other current assets of $0.5 million, partially offset by a decrease of $10.5 million in accrued expenses and a decrease in accounts receivable of $0.9 million.

Net cash used in operating activities was approximately $9.6 million for the three months ended March 31, 2016, and consisted primarily of a net loss of $17.7 million adjusted for non-cash items including stock-based

compensation of $4.2 million, depreciation expense of $0.2 million, re-measurement loss of $0.1 million, and a net change in operating assets and liabilities of $3.6 million. The change in operating assets and liabilities was related to an increase of $2.2 million in other non-current assets, a $1.8 million increase in accrued expenses, a $0.5 million increase in accounts payable, and a $0.2 million increase in deferred revenue, partially offset by a decrease of $1.1 million in prepaid expenses and other current assets.

*Net Cash Used in Investing Activities*

Net cash used in investing activities was approximately $0.1 million for the three months ended March 31, 2017 and consisted of costs to acquire property, plant and equipment.

Net cash used in investing activities was approximately $3.0 million for the three months ended March 31, 2016 and consisted of costs to acquire property, plant, and equipment and an increase in restricted cash related to our letter of credit for our corporate headquarters.

*Net Cash Provided by Financing Activities*

Net cash provided by financing activities was approximately $97.1 million for the three months ended March 31, 2017 primarily related to $97.1 million in proceeds received from our March Offering, net of issuance costs that were paid as of March 31, 2017, and $0.4 million in proceeds from exercises of our common stock, partially offset by $0.4 million in payments made on the construction financing lease obligation.

Net cash provided by financing activities was approximately $98.2 million for the three months ended March 31, 2016 and primarily related to $98.2 million in proceeds received from our IPO, net of issuance costs.

***Funding Requirements***

We expect our expenses to increase in connection with our ongoing activities, particularly as we further advance our current research programs and our preclinical development activities; seek to identify product candidates and additional research programs; initiate preclinical testing and clinical trials for any product candidates we identify and develop; maintain, expand, and protect our intellectual property portfolio, including reimbursing our licensors for expenses related to the intellectual property that we in-license from such licensors; hire additional clinical, quality control, and scientific personnel; and incur additional costs associated with operating as a public company. In addition, if we obtain marketing approval for any product candidate that we identify and develop, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing, and distribution to the extent that such sales, marketing, and distribution are not the responsibility of a collaborator. We do not expect to generate significant recurring revenue unless and until we obtain regulatory approval for and commercialize a product candidate. Furthermore, following the closing of our IPO, we have begun to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce, or eliminate our research and development programs or future commercialization efforts.

We expect that our existing cash and cash equivalents at March 31, 2017, anticipated interest income, anticipated research support under our collaboration agreement with Juno Therapeutics, and anticipated payments from CFFT, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 24 months. We have based our estimates on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the scope, progress, results, and costs of drug discovery, preclinical development, laboratory testing, and clinical trials for the product candidates we may develop;

- the costs of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property and proprietary rights, and defending intellectual property-related claims;

- the costs, timing, and outcome of regulatory review of the product candidates we may develop;
- the costs of future activities, including product sales, medical affairs, marketing, manufacturing, and distribution, for any product candidates for which we receive regulatory approval;
- the success of our collaboration with Juno Therapeutics and our strategic alliance with Allergan;
- whether Juno Therapeutics exercises either or both of its options to extend the research program term under our collaboration (each of which would trigger an extension payment to us);
- whether Allergan exercises any of its options under our strategic alliance;
- our ability to establish and maintain additional collaborations on favorable terms, if at all;
- the extent to which we acquire or in-license other medicines and technologies;
- the costs of reimbursing our licensors for the prosecution and maintenance of the patent rights in-licensed by us; and
- the costs of operating as a public company.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive, and uncertain process that takes many years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, any product candidate that we identify and develop, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of genomic medicines that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, our stockholders' ownership interests will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends.

If we raise funds through additional collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs, or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

**Contractual Obligations**

The following table summarizes our significant contractual obligations as of payment due date by period at March 31, 2017 (in thousands):

| | Total | Less Than 1 Year | 1 to 3 Years | 3 to 5 Years | More than 5 Years |
|---|---|---|---|---|---|
| Notes payable[1] | $15,600 | $ 15,600 | $ — | $ — | $ — |
| Operating lease obligations | 28,073 | 3,981 | 12,544 | 8,887 | 2,661 |
| Total | $43,673 | $ 19,581 | $ 12,544 | $ 8,887 | $ 2,661 |

(1) The Notes are convertible, at our option, into shares of our common stock subject to certain conditions. In the event of a change of control of our company or a sale of our company, we will be required to pay all remaining principal and accrued interest on the Notes in cash within a specified period following such event. The amounts included in the above table include interest that will accrue through the maturity date of each of the Notes.

In March 2017, a success payment in the amount of $5.0 million under our Cpf1 License Agreement became due upon our market capitalization reaching $750 million, and we issued the Success Payment Notes to Broad and Wageningen in the aggregate original principal amount of $5.0 million. The Success Payment Notes bear interest at a rate of 4.8% per annum. The principal and interest on the Success Payment Notes are due and payable in August 2017. Other than described above, during the three months ended March 31, 2017, there were no material changes to our contractual obligations and commitments described under Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2016 10-K.

**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 applicable Securities and Exchange Commission rules.

**Item 3. Quantitative and Qualitative Disclosures About Market Risk.**

We are exposed to market risk related to changes in interest rates. As of March 31, 2017, we had cash and cash equivalents of $351.6 million, primarily held in money market mutual funds consisting of U.S. government-backed 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, including cash equivalents, are in the form, or may be in the form of, money market funds or marketable securities and are or may be invested in U.S. Treasury and U.S. government agency obligations. Due to the short-term maturities and low risk profiles of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our investments.

While we contract with certain vendors and institutions internationally, substantially all of our total liabilities as of March 31, 2017 were denominated in the United States dollar and we believe that we do not have any material exposure to foreign currency exchange rate risk.

Inflation would generally affect us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the three months ended March 31, 2017.

**Item 4. Controls and Procedures.**

**Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2017. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure

controls and procedures as March 31, 2017, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

**Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q 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.

From time to time, we may become involved in litigation or other legal proceedings relating to claims arising from the ordinary course of business. There can be no assurance that any proceedings that result from these third-party actions will be resolved in our favor. In addition, if they are not resolved in our favor, there can be no assurance that the result will not have a material adverse effect on our business, financial condition, results of operations, or prospects. For additional information regarding these matters set forth in this section, see "Risk Factors—Risks Related to Our Intellectual Property—Some of our in-licensed patents are subject to priority disputes". Regardless of outcome, litigation or other legal proceedings can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

On January 11, 2016 and March 17, 2016, the Patent Trial and Appeal Board, or PTAB, of the United States Patent and Trademark Office ("USPTO") declared an interference between a pending U.S. patent application (U.S. Serial No. 13/842,859) that is owned by the University of California, the University of Vienna, and Emmanuelle Charpentier and 12 U.S. patents (U.S. Patent Nos. 8,697,359; 8,771,945; 8,795,965; 8,865,406; 8,871,445; 8,889,356; 8,895,308; 8,906,616; 8,932,814; 8,945,839; 8,993,233; and 8,999,641) and a pending U.S. patent application (U.S. Serial No. 14/704,551) that are co-owned by The Broad Institute, Inc. ("Broad"), Massachusetts Institute of Technology ("MIT"), and in some cases the President and Fellows of Harvard College ("Harvard"), and in-licensed by us. An interference is a proceeding within the USPTO to determine priority of invention of the subject matter of patent claims filed by different parties. In the declared interference, the University of California, acting on behalf of itself and the University of Vienna, and Emmanuelle Charpentier were designated as the senior party and Broad was designated as the junior party.

On February 15, 2017, the PTAB held that there is no interference-in-fact, which means that no interference is needed to resolve priority between the parties because the PTAB determined that the Broad claims are directed to subject matter that is patentably distinct from those of the University of California, the University of Vienna, and Emmanuelle Charpentier. The interference proceeding has therefore ended. Therefore, the 12 U.S. patents and one U.S. patent application that we have in-licensed from Broad, acting on behalf of itself, MIT, and Harvard, as well as the U.S. patent application owned by the University of California, the University of Vienna, and Emmanuelle Charpentier, with respect to which the PTAB had declared an interference were not modified or revoked as a result of this interference proceeding.

On April 12, 2017, the University of California, the University of Vienna, and Emmanuelle Charpentier filed a Notice of Appeal to the Court of Appeals for the Federal Circuit for review of the orders, decisions, rulings and opinions that were made by the PTAB in the interference proceeding.

Separately, ToolGen Inc. ("ToolGen") also filed Suggestions of Interference in the USPTO on April 13, 2015, which became publicly available on November 12, 2015 and December 3, 2015, against five U.S. patents, which are among the 12 U.S. patents with respect to which the PTAB had declared an interference and which we have in-licensed from Broad, acting on behalf of itself, MIT, and Harvard. The Suggestions of Interference that were filed by ToolGen are still pending and it is uncertain when and in what manner the USPTO will act on them.

On May 9, 2016, the USPTO granted a request for *ex parte* re-examination of U.S. Patent No. 8,771,945, which is among the 12 U.S. patents with respect to which the PTAB had declared an interference and which we have in-licensed from Broad, acting on behalf of itself and MIT. On May 12, 2016, the PTAB suspended the re-examination of U.S. Patent No. 8,771,945 noting that it has jurisdiction over any file that involves a patent involved in the interference. It is uncertain when the PTAB will lift the suspension, however the PTAB may do so in light of the PTAB's no interference-in-fact holding.

The European Patent Office Opposition Division has initiated opposition proceedings in the European Patent Office against six European patents that we have in-licensed from Broad, acting on behalf of itself, MIT and Harvard and one European patent that we have in-licensed from Broad, acting on behalf of itself and MIT.

**Item 1A. Risk Factors.**

Our business is subject to numerous risks. The following important factors, among others, could cause our actual results to differ materially from those expressed in forward-looking statements made by us or on our behalf in this Quarterly Report on Form 10-Q and other filings with the Securities and Exchange Commission (the "SEC"), press releases, communications with investors, and oral statements. Actual future results may differ materially from those anticipated in our forward-looking statements. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

**Risks Related to Our Financial Position and Need for Additional Capital**

***We have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.***

Since inception, we have incurred significant operating losses. Our net losses were $97.2 million, $72.9 million and $13.7 million, for the years ended December 31, 2016, 2015 and 2014, respectively. As of March 31, 2017, we had an accumulated deficit of $216.6 million. We have financed our operations primarily through the public offering of our common stock, private placements of our preferred stock, an equipment loan, our collaboration with Juno Therapeutics, Inc. ("Juno Therapeutics"), our agreement with Cystic Fibrosis Foundation Therapeutics, Inc. ("CFFT"), and an upfront payment from Allergan Pharmaceuticals International Limited ("Allergan"). We have devoted all of our efforts to research and development. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- continue our current research programs and our preclinical development of product candidates from our current research programs;
- seek to identify additional research programs and additional product candidates;
- initiate preclinical testing and clinical trials for any product candidates we identify and develop;
- maintain, expand, and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our patent portfolio;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing, and distribution infrastructure to commercialize any medicines for which we may obtain marketing approval;
- further develop our genome editing platform;
- hire additional clinical, quality control, and scientific personnel;
- add operational, financial, and management information systems and personnel, including personnel to support our product development;
- acquire or in-license other medicines and technologies;
- validate a commercial-scale current Good Manufacturing Practices ("cGMP") manufacturing facility; and
- continue to operate as a public company.

We have not initiated clinical development of any product candidate and expect that it will be many years, if ever, before we have a product candidate ready for commercialization. To become and remain profitable, we must develop and eventually commercialize a medicine or medicines with significant market potential. This will require us to be successful in a range of challenging activities, including identifying product candidates, completing preclinical testing and clinical trials of product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing, and selling those medicines for which we may obtain marketing approval, and satisfying any post-marketing requirements. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. We are currently only in the preclinical testing stages for our most advanced research programs. 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 the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business, or continue our operations. A decline in the value of our company could cause our stockholders to lose all or part of their investments in us.

***We will need substantial additional funding. If we are unable to raise capital when needed, we would be forced to delay, reduce, or eliminate our research and product development programs or commercialization efforts.***

We expect our expenses to increase in connection with our ongoing activities, particularly as we identify, continue the research and development of, initiate clinical trials of, and seek marketing approval for, product candidates. In addition, if we obtain marketing approval for any product candidates we may develop, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing, and distribution to the extent that such sales, marketing, manufacturing, and distribution are not the responsibility of a collaborator. In 2016 we incurred, and in future years we expect to continue to incur, significant costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce, or eliminate our research and product development programs or future commercialization efforts.

We expect that our existing cash and cash equivalents at March 31, 2017, anticipated interest income, anticipated research support under our collaboration agreement with Juno Therapeutics, and anticipated payments from CFFT will enable us to fund our operating expenses and capital expenditure requirements for at least the next 24 months. Our future capital requirements will depend on many factors, including:

- the scope, progress, results, and costs of drug discovery, preclinical development, laboratory testing, and clinical or natural history study trials for the product candidates we may develop;
- the costs of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property and proprietary rights, and defending intellectual property-related claims;
- the costs, timing, and outcome of regulatory review of the product candidates we may develop;
- the costs of future activities, including product sales, medical affairs, marketing, manufacturing, and distribution, for any product candidates for which we receive regulatory approval;
- the success of our collaboration with Juno Therapeutics and our strategic alliance with Allergan;
- whether Juno Therapeutics exercises either or both of its options to extend the research program term under our collaboration (each of which would trigger an extension payment to us);
- whether Allergan exercises any of its options under our strategic alliance;
- our ability to establish and maintain additional collaborations on favorable terms, if at all;
- the extent to which we acquire or in-license other medicines and technologies;

- the costs of reimbursing our licensors for the prosecution and maintenance of the patent rights in-licensed by us; and

- the costs of operating as a public company.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive, and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, even if we successfully identify and develop product candidates and those are approved, we may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of medicines that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

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

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, and licensing arrangements. We do not have any committed external source of funds, other than our collaboration with Juno Therapeutics and our agreement with CFFT, each of which is limited in scope and duration. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders may be materially diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends.

If we raise funds through additional collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs, or product candidates, or we may have to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

***Our short operating history may make it difficult for our stockholders to evaluate the success of our business to date and to assess our future viability.***

We are an early-stage company. We were founded and commenced operations in the second half of 2013. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, acquiring and developing our technology, identifying potential product candidates, and undertaking preclinical studies. All of our research programs are still in the preclinical or research stage of development, and their risk of failure is high. We have not yet demonstrated an ability to initiate or successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale medicine, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Typically, it takes about 10 to 15 years to develop a new medicine from the time it is discovered to when it is available for treating patients. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays, and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We expect that our financial condition and operating results will continue to fluctuate significantly from quarter-to-quarter and year-to-year due to a variety of factors, many of which are beyond our control. Accordingly, our

stockholders should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

***We have never generated revenue from product sales and may never be profitable.***

Our ability to generate revenue from product sales and achieve profitability depends on our ability, alone or with collaborative partners, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize, product candidates we may identify for development. We do not anticipate generating revenues from product sales for the next several years, if ever. Our ability to generate future revenues from product sales depends heavily on our, or our collaborators', ability to successfully:

- identify product candidates and complete research and preclinical and clinical development of any product candidates we may identify;
- seek and obtain regulatory and marketing approvals for any of our product candidates for which we complete clinical trials;
- launch and commercialize any of our product candidates for which we obtain regulatory and marketing approval by establishing a sales force, marketing, and distribution infrastructure or, alternatively, collaborating with a commercialization partner;
- qualify for adequate coverage and reimbursement by government and third-party payors for any our product candidates for which we obtain regulatory and marketing approval;
- develop, maintain, and enhance a sustainable, scalable, reproducible, and transferable manufacturing process for the product candidates we may develop;
- establish and maintain supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and the market demand for any of our product candidates for which we obtain regulatory and marketing approval;
- obtain market acceptance of any product candidates we may develop as viable treatment options;
- address competing technological and market developments;
- implement internal systems and infrastructure, as needed;
- negotiate favorable terms in any collaboration, licensing, or other arrangements into which we may enter and performing our obligations in such collaborations;
- maintain, protect, and expand our portfolio of intellectual property rights, including patents, trade secrets, and know-how;
- avoid and defend against third-party interference or infringement claims; and
- attract, hire, and retain qualified personnel.

Even if one or more of the product candidates we may develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration (the "FDA"), the European Medicines Agency (the "EMA"), or other regulatory authorities to perform clinical and other studies in addition to those that we currently anticipate. Even if we are able to generate revenues from the sale of any approved products, we may not become profitable and may need to obtain additional funding to continue operations.

**Risks Related to Discovery, Development, and Commercialization**

***We intend to identify and develop product candidates based on a novel genome editing technology, which makes it difficult to predict the time and cost of product candidate development. No products that utilize genome editing technology have been approved in the United States or in Europe, and there have only been a limited number of human clinical trials of a genome editing product candidate.***

We have concentrated our research and development efforts on our genome editing platform, which uses CRISPR technology. Our future success depends on the successful development of this novel genome editing therapeutic approach. To date, no product that utilizes genome editing, including CRISPR technology, has been approved in the United States or Europe and there have been only a limited number of clinical trials involving the use of a therapeutic utilizing genome editing technologies. For example, we are aware of a limited number of groups initiating clinical trials using CRISPR technology. Because our programs are all in the research or preclinical stage, we have not yet been able to assess safety in humans, and there may be long-term effects from treatment with any of our future product candidates that we cannot predict at this time. Any product candidates we may develop will act at the level of DNA, and, because animal DNA differs from human DNA, it will be difficult for us to test our future product candidates in animal models for either safety or efficacy. Also, animal models do not exist for some of the diseases we expect to pursue in our programs. As a result of these factors, it is more difficult for us to predict the time and cost of product candidate development, and we cannot predict whether the application of our genome editing platform, or any similar or competitive genome editing platforms, will result in the identification, development, and regulatory approval of any medicines. There can be no assurance that any development problems we experience in the future related to our genome editing platform or any of our research programs will not cause significant delays or unanticipated costs, or that such development problems can be solved. We may also experience delays in developing a sustainable, reproducible, and scalable manufacturing process or transferring that process to commercial partners. Any of these factors may prevent us from completing our preclinical studies or any clinical trials that we may initiate or commercializing any product candidates we may develop on a timely or profitable basis, if at all.

***Because genome editing is novel and the regulatory landscape that will govern any product candidates we may develop is uncertain and may change, we cannot predict the time and cost of obtaining regulatory approval, if we receive it at all, for any product candidates we may develop.***

The regulatory requirements that will govern any novel genome editing product candidates we develop are not entirely clear and may change. Within the broader genomic medicine field, we are aware of a limited number of gene therapy products that have received marketing authorization from the European Commission, and no gene therapy products have received marketing approval in the United States. Even with respect to more established products that fit into the categories of gene therapies or cell therapies, the regulatory landscape is still developing. Regulatory requirements governing gene therapy products and cell therapy products have changed frequently and will likely continue to change in the future. Moreover, there is substantial, and sometimes uncoordinated, overlap in those responsible for regulation of existing gene therapy products and cell therapy products. For example, in the United States, the FDA has established the Office of Cellular, Tissue and Gene Therapies within its Center for Biologics Evaluation and Research (“CBER”) to consolidate the review of gene therapy and related products, and the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER on its review. Gene therapy clinical trials are also subject to review and oversight by an institutional biosafety committee (“IBC”), a local institutional committee that reviews and oversees basic and clinical research conducted at the institution participating in the clinical trial. Gene therapy clinical trials conducted at institutions that receive funding for recombinant DNA research from the United States National Institutes of Health (the “NIH”) are also subject to review by the NIH Office of Biotechnology Activities’ Recombinant DNA Advisory Committee. Although the FDA decides whether individual gene therapy protocols may proceed, the review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical trial, even if the FDA has reviewed the trial and approved its initiation. The same applies in the European Union. The EMA’s Committee for Advanced Therapies (“CAT”) is responsible for assessing the quality, safety, and efficacy of advanced-therapy medicinal products. The role of the CAT is to prepare a draft opinion on an application for marketing authorization for a gene therapy medicinal candidate that is submitted to the EMA. In the European Union, the development and evaluation of a gene therapy medicinal product must be considered in the context of the relevant European Union guidelines. The EMA may issue new guidelines concerning the development and marketing

authorization for gene therapy medicinal products and require that we comply with these new guidelines. As a result, the procedures and standards applied to gene therapy products and cell therapy products may be applied to any CRISPR product candidates we may develop, but that remains uncertain at this point.

Adverse developments in clinical trials conducted by others of gene therapy products, cell therapy products, or products developed through the application of a CRISPR or other genome editing technology may cause the FDA, the EMA, and other regulatory bodies to revise the requirements for approval of any product candidates we may develop or limit the use of products utilizing genome editing technologies, either of which could materially harm our business. In addition, the clinical trial requirements of the FDA, the EMA, and other regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty, and intended use and market of the potential products. The regulatory approval process for novel product candidates such as ours can be more expensive and take longer than for other, better known, or more extensively studied pharmaceutical or other product candidates. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of products utilizing genome editing technology in a timely manner or under technically or commercially feasible conditions. In addition, regulatory action or private litigation could result in expenses, delays, or other impediments to our research programs or the commercialization of resulting products.

The regulatory review committees and advisory groups described above and the new guidelines they promulgate may lengthen the regulatory review process, require us to perform additional studies or trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of these treatment candidates, or lead to significant post-approval limitations or restrictions. As we advance our research programs and develop future product candidates, we will be required to consult with these regulatory and advisory groups and to comply with applicable guidelines. If we fail to do so, we may be required to delay or discontinue development of any product candidates we identify and develop.

***Adverse public perception of genomic medicines, and genome editing in particular, may negatively impact regulatory approval of, or demand for, our potential products.***

Our potential therapeutic products involve editing the human genome. The clinical and commercial success of our potential products will depend in part on public acceptance of the use of genome editing therapy for the prevention or treatment of human diseases. Public attitudes may be influenced by claims that genome editing is unsafe, unethical, or immoral, and, consequently, our products may not gain the acceptance of the public or the medical community. Adverse public attitudes may adversely impact our ability to enroll clinical trials. Moreover, our success will depend upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of product candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

In addition, genome editing technology is subject to public debate and heightened regulatory scrutiny due to ethical concerns relating to the application of genome editing technology to human embryos or the human germline. For example, in April 2015, Chinese scientists reported on their attempts to edit the genome of human embryos to modify the gene for hemoglobin beta. This is the gene in which a mutation occurs in patients with the inherited blood disorder beta thalassemia. Although this research was purposefully conducted in embryos that were not viable, the work prompted calls for a moratorium or other types of restrictions on genome editing of human eggs, sperm, and embryos. The Alliance for Regenerative Medicine in Washington has called for a voluntary moratorium on the use of genome editing technologies, including CRISPR/Cas9, in research that involved altering human embryos or human germline cells. Similarly, the NIH has announced that it would not fund any use of genome editing technologies in human embryos, noting that there are multiple existing legislative and regulatory prohibitions against such work, including the Dickey-Wicker Amendment, which prohibits the use of appropriated funds for the creation of human embryos for research purposes or for research in which human embryos are destroyed. While the National Academy of Sciences released a report in February 2017 suggesting that it may be advisable to permit clinical trials for germline genome editing if undertaken for compelling reasons and under strict oversight, it maintained that any such research should only proceed with broad public input. Laws in the United Kingdom prohibit genetically modified embryos from being implanted into women, but embryos can be altered in research labs under license from the Human Fertilisation and Embryology Authority. Research on embryos is more tightly controlled in many other European countries.

Moreover, in an annual worldwide threat assessment report delivered to the U.S. Congress in February 2016, the U.S. Director of National Intelligence stated that research into genome editing probably increases the risk of the creation of potentially harmful biological agents or products, including weapons of mass destruction. He noted that the broad distribution, low cost, and accelerated pace of development of genome editing technology could result in the deliberate or unintentional misuse of such technology.

Although we do not use our technologies to edit human embryos or the human germline, such public debate about the use of genome editing technologies in human embryos and heightened regulatory scrutiny could prevent or delay our development of product candidates. More restrictive government regulations or negative public opinion would have a negative effect on our business or financial condition and may delay or impair our development and commercialization of product candidates or demand for any products we may develop. Adverse events in our preclinical studies or clinical trials or those of our competitors or of academic researchers utilizing genome editing technologies, even if not ultimately attributable to product candidates we may identify and develop, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of potential product candidates we may identify and develop, stricter labeling requirements for those product candidates that are approved, and a decrease in demand for any such product candidates. Use of genome editing technology by a third party or government to develop biological agents or products that threaten the United States' national security could similarly result in such negative impacts to us.

***We may not be successful in our efforts to identify, develop, or commercialize potential product candidates.***

The success of our business depends primarily upon our ability to identify, develop, and commercialize products based on our genome editing platform. All of our product development programs are still in the preclinical or research stage of development. Our research programs, including those subject to our collaboration with Juno Therapeutics, our agreement with CFFT and our strategic alliance with Allergan, may fail to identify potential product candidates for clinical development for a number of reasons. Our research methodology may be unsuccessful in identifying potential product candidates, or our potential product candidates may be shown to have harmful side effects or may have other characteristics that may make the products impractical to manufacture, unmarketable, or unlikely to receive marketing approval.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs, which would have a material adverse effect on our business, financial condition, results of operations, and prospects. Research programs to identify new product candidates require substantial technical, financial, and human resources. We may focus our efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful.

***The genome editing field is relatively new and is evolving rapidly. We are focusing our research and development efforts on CRISPR gene editing technology using Cas9 and Cpf1 enzymes, but other genome editing technologies may be discovered that provide significant advantages over CRISPR/Cas9 or CRISPR/Cpf1, which could materially harm our business.***

To date, we have focused our efforts on genome editing technologies using CRISPR and the Cas9 and Cpf1 enzymes. Other companies have previously undertaken research and development of genome editing technologies using zinc finger nucleases, engineered meganucleases, and transcription activator-like effector ("TALE") nucleases, but to date none has obtained marketing approval for a product candidate. There can be no certainty that the CRISPR/Cas9 or CRISPR/Cpf1 technology will lead to the development of genomic medicines, that other genome editing technologies will not be considered better or more attractive for the development of medicines or that either Cas9 or Cpf1, the two CRISPR associated proteins that we use, may be useful or successful in developing therapeutics. For example, Cas9 or Cpf1 may be determined to be less attractive than other CRISPR enzymes, including CRISPR enzymes that have yet to be discovered. Similarly, a new genome editing technology that has not been discovered yet may be determined to be more attractive than CRISPR. Moreover, if we decide to develop genome technologies other than CRISPR technology using a Cas9 or Cpf1 enzyme, we cannot be certain we will be able to obtain rights to such technologies. Although all of our founders who currently provide consulting and advisory services to us in the areas of Cas9 and TALE genome editing technologies have assignment of inventions obligations to us with respect to the services they perform for us,

these assignment of inventions obligations are subject to limitations and do not extend to their work in other fields or to the intellectual property arising from their employment with their respective academic and research institutions. To obtain intellectual property rights assigned by these founders to such institutions, we would need to enter into license agreements with such institutions. Any of these factors could reduce or eliminate our commercial opportunity, and could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***We depend heavily on the success of our most advanced program. All of our product development programs are at the preclinical or research stage. Preclinical testing and clinical trials of product candidates may not be successful. If we are unable to commercialize any product candidates we may develop or experience significant delays in doing so, our business will be materially harmed.***

We have invested a significant portion of our efforts and financial resources in the identification of our most advanced product development program for the treatment of Leber Congenital Amaurosis type 10 ("LCA10"). Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of a product candidate for the treatment of LCA10 and other product candidates that we may identify in the future. The success of product candidates we may identify and develop will depend on many factors, including the following:

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

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize any product candidates we may develop, which would materially harm our business.

Of the large number of biologics and drugs in development in the pharmaceutical industry, only a small percentage result in the submission of a Biologics License Application (a "BLA") to the FDA or a marketing authorization application (an "MAA") to the EMA. Not all BLAs or MAAs that are submitted to a regulatory agency are

approved for commercialization. Furthermore, even if we do receive regulatory approval to market any product candidates that we may identify and develop, any such approval may be subject to limitations on the indicated uses for which we may market the product. Accordingly, even if we are able to obtain the requisite financing to continue to fund our research programs, we cannot assure you that we will successfully develop or commercialize our most advanced program, or any of our other research programs. If we or any of our future development partners are unable to develop, or obtain regulatory approval for, or, if approved, successfully commercialize, any product candidates we may identify and develop, we may not be able to generate sufficient revenue to continue our business.

***If serious adverse events, undesirable side effects, or unexpected characteristics are identified during the development of any product candidates we may develop, we may need to abandon or limit our further clinical development of those product candidates.***

We have not evaluated any product candidates in human clinical trials, and our proposed delivery modes, combined with CRISPR technology, have a limited history of being tested clinically. It is impossible to predict when or if any product candidates we may develop will prove safe in humans. In the genomic medicine field, there have been several significant adverse events from gene therapy treatments in the past, including reported cases of leukemia and death. There can be no assurance that genome editing technologies will not cause undesirable side effects.

A significant risk in any genome editing product is that the edit will be “off-target” and cause serious adverse events, undesirable side effects, or unexpected characteristics. For example, off-target cuts could lead to disruption of a gene or a genetic regulatory sequence at an unintended site in the DNA, or, in those instances where we also provide a segment of DNA to serve as a repair template, it is possible that following off-target cut events, DNA from such repair template could be integrated into the genome at an unintended site, potentially disrupting another important gene or genomic element. We cannot be certain that off-target editing will not occur in any of our planned or future clinical studies. There is also the potential risk of delayed adverse events following exposure to genome editing therapy due to the potential for persistent biological activity of the genetic material or other components of products used to carry the genetic material.

If any product candidates we develop are associated with serious adverse events, or undesirable side effects, or have characteristics that are unexpected, we may need to abandon their development or limit development to certain uses or subpopulations in which the serious adverse events, undesirable side effects or other characteristics are less prevalent, less severe, or more acceptable from a risk-benefit perspective, any of which would have a material adverse effect on our business, financial condition, results of operations, and prospects. Many product candidates that initially showed promise in early stage testing for treating cancer or other diseases have later been found to cause side effects that prevented further clinical development of the product candidates.

***If any of the product candidates we may develop or the delivery modes we rely on cause undesirable side effects, it could delay or prevent their regulatory approval, limit the commercial potential, or result in significant negative consequences following any potential marketing approval.***

Product candidates we may develop may be associated with off-target editing or other serious adverse events, undesirable side effects, or unexpected characteristics. There also is the potential risk of delayed adverse events following exposure to gene editing therapy due to persistent biologic activity of the genetic material or other components of products used to carry the genetic material. In addition to serious adverse events or side effects caused by any product candidate we may develop, the administration process or related procedures also can cause undesirable side effects. If any such events occur, our clinical trials could be suspended or terminated.

If in the future we are unable to demonstrate that such adverse events were caused by factors other than our product candidate, the FDA, the European Commission, the EMA or other regulatory authorities could order us to cease further development of, or deny approval of, any product candidates we are able to develop for any or all targeted indications. Even if we are able to demonstrate that all future serious adverse events are not product-related, such occurrences could affect patient recruitment or the ability of enrolled patients to complete the trial. Moreover, if we elect, or are required, to delay, suspend or terminate any clinical trial of any product candidate we may develop, the commercial prospects of such product candidates may be harmed and our ability to generate product revenues from any

of these product candidates may be delayed or eliminated. Any of these occurrences may harm our ability to identify and develop product candidates, and may harm our business, financial condition, result of operations, and prospects significantly.

Additionally, if we successfully develop a product candidate and it receives marketing approval, the FDA could require us to adopt a Risk Evaluation and Mitigation Strategy ("REMS") to ensure that the benefits of treatment with such product candidate outweighs the risks for each potential patient, which may include, among other things, a medication guide outlining the risks of the product for distribution to patients, a communication plan to health care practitioners, extensive patient monitoring, or distribution systems and processes that are highly controlled, restrictive, and more costly than what is typical for the industry. Furthermore, if we or others later identify undesirable side effects caused by any product candidate that we to develop, several potentially significant negative consequences could result, including:

· regulatory authorities may suspend or withdraw approvals of such product candidate;

· regulatory authorities may require additional warnings on the label;

· we may be required to change the way a product candidate is administered or conduct additional clinical trials;

· we could be sued and held liable for harm caused to patients; and

· our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of any product candidates we may identify and develop and could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***We have not tested any of our proposed delivery modes and product candidates in clinical trials.***

Our proposed delivery modes, combined with our product candidates, have a limited history of being evaluated in human clinical trials. Any product candidates we develop may fail to show the desired safety and efficacy in later stages of clinical development despite having successfully advanced through initial clinical trials.

There is a high failure rate for drugs and biologics proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit, or prevent regulatory approval. In addition, regulatory delays or rejections may be encountered as a result of many factors, including changes in regulatory policy during the period of product development.

Any such adverse events may cause us to delay, limit, or terminate planned clinical trials, any of which would have a material adverse effect on our business, financial condition, results of operations, and prospects.

***Because we are developing product candidates for the treatment of diseases in which there is little clinical experience using new technologies, there is increased risk that the FDA, the EMA, or other regulatory authorities may not consider the endpoints of our clinical trials to provide clinically meaningful results and that these results may be difficult to analyze.***

During the regulatory review process, we will need to identify success criteria and endpoints such that the FDA, the EMA, or other regulatory authorities will be able to determine the clinical efficacy and safety profile of any product candidates we may develop. As we are initially seeking to identify and develop product candidates to treat diseases in which there is little clinical experience using new technologies, there is heightened risk that the FDA, the EMA, or other

regulatory authorities may not consider the clinical trial endpoints that we propose to provide clinically meaningful results (reflecting a tangible benefit to patients). In addition, the resulting clinical data and results may be difficult to analyze. Even if the FDA does find our success criteria to be sufficiently validated and clinically meaningful, we may not achieve the pre-specified endpoints to a degree of statistical significance. This may be a particularly significant risk for many of the genetically defined diseases for which we plan to develop product candidates because many of these diseases have small patient populations, and designing and executing a rigorous clinical trial with appropriate statistical power is more difficult than with diseases that have larger patient populations. Further, even if we do achieve the pre-specified criteria, we may produce results that are unpredictable or inconsistent with the results of the non-primary endpoints or other relevant data. The FDA also weighs the benefits of a product against its risks, and the FDA may view the efficacy results in the context of safety as not being supportive of regulatory approval. Other regulatory authorities in the European Union and other countries, such as the CAT, may make similar comments with respect to these endpoints and data. Any product candidates we may develop will be based on a novel technology that makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval. No genome editing product has been approved in the United States or in Europe.

***If clinical trials of any product candidates we may identify and develop fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of such product candidates.***

Before obtaining marketing approval from regulatory authorities for the sale of any product candidates we may identify and develop, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy in humans of any such product candidates. Clinical testing is expensive, difficult to design and implement, can take many years to complete, and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. 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. Many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates.

We or our collaborators may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize any product candidates we may identify and develop, including:

- delays in reaching a consensus with regulators on trial design;
- regulators, institutional review boards (“IRBs”) or independent ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- delays in reaching or failing to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective contract research organizations (“CROs”) and clinical trial sites;
- clinical trials of any product candidates we may develop may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development or research programs;
- difficulty in designing well-controlled clinical trials due to ethical considerations which may render it inappropriate to conduct a trial with a control arm that can be effectively compared to a treatment arm;
- difficulty in designing clinical trials and selecting endpoints for diseases that have not been well-studied and for which the natural history and course of the disease is poorly understood;

- the number of patients required for clinical trials of any product candidates we may develop may be larger than we anticipate; enrollment of suitable participants in these clinical trials, which may be particularly challenging for some of the rare genetically defined diseases we are targeting in our most advanced programs, may be delayed or slower than we anticipate; or subjects may drop out of these clinical trials at a higher rate than we anticipate;

- 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;

- regulators, IRBs, or independent ethics committees may require that we or our investigators suspend or terminate clinical research or clinical trials of any product candidates we may develop for various reasons, including noncompliance with regulatory requirements, a finding of undesirable side effects or other unexpected characteristics, or that the participants are being exposed to unacceptable health risks or after an inspection of our clinical trial operations or trial sites;

- the cost of clinical trials of any product candidates we may develop may be greater than we anticipate;

- the supply or quality of any product candidates we may develop or other materials necessary to conduct clinical trials of any product candidates we may develop may be insufficient or inadequate, including as a result of delays in the testing, validation, manufacturing, and delivery of any product candidates we may develop to the clinical sites by us or by third parties with whom we have contracted to perform certain of those functions;

- delays in having subjects complete participation in a trial or return for post-treatment follow-up;

- clinical trial sites dropping out of a trial;

- selection of clinical endpoints that require prolonged periods of clinical observation or analysis of the resulting data;

- occurrence of serious adverse events associated with any product candidates we may develop that are viewed to outweigh their potential benefits;

- occurrence of serious adverse events in trials of the same class of agents conducted by other sponsors; and

- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols.

If we or our collaborators are required to conduct additional clinical trials or other testing of any product candidates we may develop beyond those that we currently contemplate, if we or our collaborators are unable to successfully complete clinical trials of any product candidates we may develop or other testing, or if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we or our collaborators may:

- be delayed in obtaining marketing approval for any such product candidates we may develop or not obtain marketing approval at all;

- obtain approval for indications or patient populations that are not as broad as intended or desired;

- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;

- be subject to changes in the way the product is administered;

- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;

- have regulatory authorities withdraw, or suspend, their approval of the product or impose restrictions on its distribution in the form of a modified risk evaluation and mitigation strategy;

- be sued; or

- experience damage to our reputation.

Product development costs will also increase if we or our collaborators experience delays in testing or marketing approvals. We do not know whether any clinical trials will begin as planned, will need to be restructured, or will be completed on schedule, or at all. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize any product candidates we may develop, could allow our competitors to bring products to market before we do, and could impair our ability to successfully commercialize any product candidates we may develop, any of which may harm our business, financial condition, results of operations, and prospects.

***If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.***

We or our collaborators may not be able to initiate or continue clinical trials for any product candidates we identify or develop if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or analogous regulatory authorities outside the United States, or as needed to provide appropriate statistical power for a given trial. Enrollment may be particularly challenging for some of the rare genetically defined diseases we are targeting in our most advanced programs. In addition, if patients are unwilling to participate in our gene editing trials because of negative publicity from adverse events related to the biotechnology, gene therapy, or genome editing fields, competitive clinical trials for similar patient populations, clinical trials in competing products, or for other reasons, the timeline for recruiting patients, conducting studies, and obtaining regulatory approval of any product candidates we may develop may be delayed. Moreover, some of our competitors may have ongoing clinical trials for product candidates that would treat the same indications as any product candidates we may develop, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates.

Patient enrollment is also affected by other factors, including:

- severity of the disease under investigation;

- size of the patient population and process for identifying subjects;

- design of the trial protocol;

- availability and efficacy of approved medications for the disease under investigation;

- availability of genetic testing for potential patients;

- ability to obtain and maintain subject consent;

- risk that enrolled subjects will drop out before completion of the trial;

- eligibility and exclusion criteria for the trial in question;

- perceived risks and benefits of the product candidate under trial;

· perceived risks and benefits of genome editing as a therapeutic approach;

· efforts to facilitate timely enrollment in clinical trials;

· patient referral practices of physicians;

· ability to monitor patients adequately during and after treatment; and

· proximity and availability of clinical trial sites for prospective patients.

In particular, our most advanced programs are focused on rare genetically defined diseases with limited patient pools from which to draw for enrollment in clinical trials. For example, the global incidence of LCA10 is estimated to be two to three per 100,000 live births worldwide. The eligibility criteria of our clinical trials will further limit the pool of available trial participants. Additionally, the process of finding and diagnosing patients may prove costly.

Our ability to successfully initiate, enroll, and complete a clinical trial in any foreign country is subject to numerous risks unique to conducting business in foreign countries, including:

· difficulty in establishing or managing relationships with CROs and physicians;

· different standards for the conduct of clinical trials;

· different standard-of-care for patients with a particular disease;

· inability to locate qualified local consultants, physicians, and partners; and

· potential burden of complying with a variety of foreign laws, medical standards, and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatment.

Enrollment delays in our clinical trials may result in increased development costs for any product candidates we may develop, which would cause the value of our company to decline and limit our ability to obtain additional financing. If we or our collaborators have difficulty enrolling a sufficient number of patients to conduct our clinical trials as planned, we may need to delay, limit, or terminate ongoing or planned clinical trials, any of which would have an adverse effect on our business, financial condition, results of operations, and prospects.

***We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.***

Because we have limited financial and managerial resources, we focus on research programs and product candidates that we identify for specific indications among many potential options. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial medicines or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable medicines. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing, or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. Any such event could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***If we are unable to successfully identify patients who are likely to benefit from therapy with any medicines we develop, or experience significant delays in doing so, we may not realize the full commercial potential of any medicines we may develop.***

Our success may depend, in part, on our ability to identify patients who are likely to benefit from therapy with any medicines we may develop, which requires those potential patients to have their DNA analyzed for the presence or absence of a particular sequence. For example, although Leber Congential Amaurosis ("LCA") can be diagnosed based on a patient's symptoms and retinal scans, DNA samples are taken from LCA patients in order to test for the presence of the known gene mutations that cause LCA and, where possible, to identify the specific genetically defined disease, such as LCA10. If we, or any third parties that we engage to assist us, are unable to successfully identify such patients, or experience delays in doing so, then:

- our ability to develop any product candidates may be adversely affected if we are unable to appropriately select patients for enrollment in our clinical trials;
- any product candidates we develop may not receive marketing approval if safe and effective use of such product candidates depends on an *in vitro* diagnostic; and
- we may not realize the full commercial potential of any product candidates we develop that receive marketing approval if, among other reasons, we are unable to appropriately select patients who are likely to benefit from therapy with our medicines.

As a result, we may be unable to successfully develop and realize the commercial potential of any product candidates we may identify and develop, and our business, financial condition, results of operations, and prospects would be materially adversely effected.

***Even if we complete the necessary clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize a product candidate we may develop, and any such approval may be for a more narrow indication than we seek.***

We cannot commercialize a product candidate until the appropriate regulatory authorities have reviewed and approved the product candidate. Even if any product candidates we may develop meet their safety and efficacy endpoints in clinical trials, the regulatory authorities may not complete their review processes in a timely manner, or we may not be able to obtain regulatory approval. Additional delays may result if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory authority policy during the period of product development, clinical trials, and the review process.

Regulatory authorities also may approve a product candidate for more limited indications than requested or they may impose significant limitations in the form of narrow indications, warnings or a REMS. These regulatory authorities may require precautions or contra-indications with respect to conditions of use, or they may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory authorities may not approve the labeling claims that are necessary or desirable for the successful commercialization of any product candidates we may develop. Any of the foregoing scenarios could materially harm the commercial prospects for any product candidates we may develop and materially adversely affect our business, financial condition, results of operations, and prospects.

***Even if any product candidates we may develop receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors, and others in the medical community necessary for commercial success.***

The commercial success of any of our product candidates will depend upon its degree of market acceptance by physicians, patients, third-party payors, and others in the medical community. Ethical, social, and legal concerns about genomic medicines generally and genome editing technologies specifically could result in additional regulations restricting or prohibiting our products. Even if any product candidates we may develop receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors, and others in the medical community. The degree of market acceptance of any product candidates we may develop, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and safety of such product candidates as demonstrated in clinical trials;
- the potential and perceived advantages compared to alternative treatments;
- the limitation to our targeted patient population and limitations or warnings contained in approved labeling by the FDA or other regulatory authorities;
- the ability to offer our medicines for sale at competitive prices;
- convenience and ease of administration compared to alternative treatments;
- the clinical indications for which the product candidate is approved by FDA, the European Commission, or other regulatory agencies;
- public attitudes regarding genomic medicine generally and genome editing technologies specifically;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies, as well as their willingness to accept a therapeutic intervention that involves the editing of the patient's genome;
- product labeling or product insert requirements of the FDA, the EMA, or other regulatory authorities, including any limitations or warnings contained in a product's approved labeling;
- relative convenience and ease of administration;
- the timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments;
- the strength of marketing and distribution support;
- sufficient third-party coverage or reimbursement; and

· the prevalence and severity of any side effects.

If any product candidates we develop do not achieve an adequate level of acceptance, we may not generate significant product revenues, and we may not become profitable.

***If, in the future, we are unable to establish sales and marketing capabilities or enter into agreements with third parties to sell and market any product candidates we may develop, we may not be successful in commercializing those product candidates if and when they are approved.***

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing, or distribution of pharmaceutical products. To achieve commercial success for any approved medicine for which we retain sales and marketing responsibilities, we must either develop a sales and marketing organization or outsource these functions to third parties. In the future, we may choose to build a focused sales, marketing, and commercial support infrastructure to sell, or participate in sales activities with our collaborators for, some of our product candidates if and when they are approved.

There are risks involved with both establishing our own commercial capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force or reimbursement specialists is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing and other commercialization capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our commercialization personnel.

Factors that may inhibit our efforts to commercialize our medicines on our own include:

· our inability to recruit and retain adequate numbers of effective sales, marketing, reimbursement, customer service, medical affairs, and other support personnel;

· the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future medicines;

· the inability of reimbursement professionals to negotiate arrangements for formulary access, reimbursement, and other acceptance by payors;

· restricted or closed distribution channels that make it difficult to distribute our products to segments of the patient population;

· the lack of complementary medicines to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and

· unforeseen costs and expenses associated with creating an independent commercialization organization.

If we enter into arrangements with third parties to perform sales, marketing, commercial support, and distribution services, our product revenues or the profitability of these product revenues to us may be lower than if we were to market and sell any medicines we may develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to commercialize our product candidates or may be unable to do so on terms that are favorable to us. We may 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 medicines effectively. If we do not establish commercialization capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

***We face significant competition in an environment of rapid technological change, and there is a possibility that our competitors may achieve regulatory approval before us or develop therapies that are safer or more advanced or effective than ours, which may harm our financial condition and our ability to successfully market or commercialize any product candidates we may develop.***

The development and commercialization of new drug products is highly competitive. Moreover, the genome editing field is characterized by rapidly changing technologies, significant competition, and a strong emphasis on intellectual property. We will face competition with respect to any product candidates that we may seek to develop or commercialize in the future from major pharmaceutical companies, specialty pharmaceutical companies, and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies, and other public and private research organizations that conduct research, seek patent protection, and establish collaborative arrangements for research, development, manufacturing, and commercialization.

There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which we have research programs, including LCA10, Duchenne muscular dystrophy, and cystic fibrosis. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, and others are based on entirely different approaches.

Our platform and product focus is the development of therapies using CRISPR technology. Companies developing CRISPR technology or therapies using CRISPR technology include Caribou Biosciences, CRISPR Therapeutics, ERS Genomics, Intellia Therapeutics, and TRACR Hematology. There are additional companies developing therapies using additional genome editing technologies, including transcription activator-like effector nucleases, meganucleases, Mega-TALs, and zinc finger nucleases. These companies include bluebird bio, Cellectis, Poseida Therapeutics, Precision Biosciences, and Sangamo Therapeutics. Additional companies developing gene therapy products include Abeona Therapeutics, Adverum Biotechnologies, AGTC Therapeutics, Dimension Therapeutics, REGENXBIO, Spark Therapeutics, uniQure, and Voyager Therapeutics. In addition to competition from other genome editing therapies or gene therapies, any products we may develop may also face competition from other types of therapies, such as small molecule, antibody, or protein therapies.

Many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology, and gene therapy industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient, or are less expensive than any products that we may develop or that would render any products that we may develop obsolete or non-competitive. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Additionally, technologies developed by our competitors may render our potential product candidates uneconomical or obsolete, and we may not be successful in marketing any product candidates we may develop against competitors.

In addition, as a result of the expiration or successful challenge of our patent rights, we could face more litigation with respect to the validity and/or scope of patents relating to our competitors' products. The availability of our competitors' products could limit the demand, and the price we are able to charge, for any products that we may develop and commercialize.

***Even if we are able to commercialize any product candidates, such products may become subject to unfavorable pricing regulations, third-party reimbursement practices, or healthcare reform initiatives, which would harm our business.***

The regulations that govern marketing approvals, pricing, and reimbursement for new medicines vary widely from country to country. In the United States, recently enacted legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a medicine before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a medicine in a particular country, but then be subject to price regulations that delay our commercial launch of the medicine, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the medicine in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if any product candidates we may develop obtain marketing approval.

Our ability to commercialize any medicines successfully also will depend in part on the extent to which reimbursement for these medicines and related treatments will be available from government health administration authorities, private health insurers, and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any medicine that we commercialize and, if reimbursement is available, the level of reimbursement. Reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval.

There may be significant delays in obtaining reimbursement for newly approved medicines, and coverage may be more limited than the purposes for which the medicine is approved by the FDA or similar regulatory authorities outside the United States. Moreover, eligibility for reimbursement does not imply that any medicine will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale, and distribution. Interim reimbursement levels for new medicines, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the medicine and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost medicines and may be incorporated into existing payments for other services. Net prices for medicines may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of medicines from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our inability to promptly obtain coverage and profitable payment rates from both government-funded and private payors for any approved medicines we may develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize medicines, and our overall financial condition.

***Due to the novel nature of our technology and the potential for any product candidates we may develop to offer therapeutic benefit in a single administration or limited number of administrations, we face uncertainty related to pricing and reimbursement for these product candidates.***

Our initial target patient populations are relatively small, as a result of which the pricing and reimbursement of any product candidates we may develop, if approved, must be adequate to support the necessary commercial infrastructure. If we are unable to obtain adequate levels of reimbursement, our ability to successfully market and sell any such product candidates will be adversely affected. The manner and level at which reimbursement is provided for services related to any product candidates we may develop (e.g., for administration of our product to patients) is also important. Inadequate reimbursement for such services may lead to physician resistance and adversely affect our ability

to market or sell our products. In addition, it may be necessary for us to develop new reimbursement models in order to realize adequate value. Payors may not be able or willing to adopt such new models, and patients may be unable to afford that portion of the cost that such models may require them to bear. If we determine such new models are necessary but we are unsuccessful in developing them, or if such models are not adopted by payors, our business, financial condition, results of operations, and prospects could be adversely affected.

We expect the cost of a single administration of genomic medicine products, such as those we are seeking to develop, to be substantial, when and if they achieve regulatory approval. We expect that coverage and reimbursement by government and private payors will be essential for most patients to be able to afford these treatments. Accordingly, sales of any such product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of any product candidates we may develop will be paid by health maintenance, managed care, pharmacy benefit, and similar healthcare management organizations, or will be reimbursed by government authorities, private health coverage insurers, and other third-party payors. Coverage and reimbursement by a third-party payor may depend upon several factors, including the third-party payor's determination that use of a product is:

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

Obtaining coverage and reimbursement for a product from third-party payors is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical, and cost-effectiveness data. There is significant uncertainty related to third-party coverage and reimbursement of newly approved products. We may not be able to provide data sufficient to gain acceptance with respect to coverage and reimbursement. If coverage and reimbursement are not available, or are available only at limited levels, we may not be able to successfully commercialize any product candidates we may develop. Even if coverage is provided, the approved reimbursement amount may not be adequate to realize a sufficient return on our investment.

Moreover, the downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products such as ours. If we are unable to obtain adequate levels of reimbursement, our ability to successfully market and sell any product candidates we may develop will be harmed.

***If the market opportunities for any product candidates we may develop are smaller than we believe they are, our revenues may be adversely affected, and our business may suffer. Because the target patient populations for many of the product candidates we may develop are small, we must be able to successfully identify patients and achieve a significant market share to maintain profitability and growth.***

We focus our research and product development on treatments for rare genetically defined diseases. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with product candidates we may develop, are based on estimates. These estimates may prove to be incorrect and new studies may change the estimated incidence or prevalence of these diseases. The number of patients in the United States, Europe, and elsewhere may turn out to be lower than expected, and patients may not be amenable to treatment with our products, or may become increasingly difficult to identify or gain access to, all of which would adversely affect our business, financial condition, results of operations, and prospects.

***Product liability lawsuits against us could cause us to incur substantial liabilities and could limit commercialization of any medicines that we may develop.***

We face an inherent risk of product liability exposure related to the testing in human clinical trials of any product candidates we may develop and will face an even greater risk if we commercially sell any medicines that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or medicines caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

· decreased demand for any product candidates or medicines that we may develop;

· injury to our reputation and significant negative media attention;

· withdrawal of clinical trial participants;

· significant time and costs to defend the related litigation;

· substantial monetary awards to trial participants or patients;

· loss of revenue; and

· the inability to commercialize any medicines that we may develop.

Although we maintain product liability insurance coverage, it may not be adequate to cover all liabilities that we may incur. We anticipate that we will need to increase our insurance coverage when we begin clinical trials and if we successfully commercialize any medicine. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

***If we or any contract manufacturers and suppliers we engage fail to comply with environmental, health, and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.***

We and any contract manufacturers and suppliers we engage are subject to numerous federal, state, and local environmental, health, and safety laws, regulations, and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment, and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air, and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. We also could incur significant costs associated with civil or criminal fines and penalties.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research and product development efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological or hazardous waste insurance coverage, and our commercial general liability and umbrella liability policies (under which we currently have an aggregate of $7.0 million in coverage) specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized

with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, we may incur substantial costs in order to comply with current or future environmental, health, and safety laws, regulations, and permitting requirements. These current or future laws, regulations, and permitting requirements may impair our research, development, or production efforts. Failure to comply with these laws, regulations, and permitting requirements also may result in substantial fines, penalties, or other sanctions or business disruption, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Any third-party contract manufacturers and suppliers we engage will also be subject to these and other environmental, health, and safety laws and regulations. Liabilities they incur pursuant to these laws and regulations could result in significant costs or an interruption in operations, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***Genomic medicines are novel, and any product candidates we develop may be complex and difficult to manufacture. We could experience production problems that result in delays in our development or commercialization programs, limit the supply of our products, or otherwise harm our business.***

Any product candidates we may develop will likely require processing steps that are more complex than those required for most chemical pharmaceuticals. Moreover, unlike chemical pharmaceuticals, the physical and chemical properties of a biologic such as the product candidates we intend to develop generally cannot be fully characterized. As a result, assays of the finished product may not be sufficient to ensure that the product will perform in the intended manner. Problems with the manufacturing process, even minor deviations from the normal process, could result in product defects or manufacturing failures that result in lot failures, product recalls, product liability claims, or insufficient inventory. If we successfully develop product candidates, we may encounter problems achieving adequate quantities and quality of clinical-grade materials that meet FDA, EMA or other comparable applicable foreign standards or specifications with consistent and acceptable production yields and costs. To date, we are not aware of any cGMP gene therapy manufacturing facility in the United States receiving approval from the FDA for the manufacture of an approved genome editing or gene therapy product, and, therefore, the timeframe required for us to obtain such approval is uncertain.

In addition, the FDA, the EMA, and other regulatory authorities may require us to submit samples of any lot of any approved product together with the protocols showing the results of applicable tests at any time. Under some circumstances, the FDA, the EMA, or other regulatory authorities may require that we not distribute a lot until the agency authorizes its release. Slight deviations in the manufacturing process, including those affecting quality attributes and stability, may result in unacceptable changes in the product that could result in lot failures or product recalls. Lot failures or product recalls could cause us to delay clinical trials or product launches, which could be costly to us and otherwise harm our business, financial condition, results of operations, and prospects.

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

Given the nature of biologics manufacturing, there is a risk of contamination during manufacturing. Any contamination could materially harm our ability to produce product candidates on schedule and could harm our results of operations and cause reputational damage. Some of the raw materials that we anticipate will be required in our manufacturing process are derived from biologic sources. Such raw materials are difficult to procure and may be subject to contamination or recall. A material shortage, contamination, recall, or restriction on the use of biologically derived substances in the manufacture of any product candidates we may develop could adversely impact or disrupt the commercial manufacturing or the production of clinical material, which could materially harm our development timelines and our business, financial condition, results of operations, and prospects.

Any problems in our manufacturing process or the facilities with which we contract 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. Problems in third-party manufacturing process or facilities also could restrict our ability to meet market demand for any products we develop and commercialize.

**Risks Related to Our Dependence on Third Parties**

***We expect to depend on collaborations with third parties for the research, development, and commercialization of certain of the product candidates we may develop or for development of certain of our research programs. If any such collaborations are not successful, we may not be able to capitalize on the market potential of those product candidates or research programs.***

We anticipate seeking third-party collaborators for the research, development, and commercialization of certain of the product candidates we may develop or for development of certain of our research programs. For example, in May 2015, we entered into a collaboration with Juno Therapeutics focused on research and development of engineered T cell immunotherapies that utilize or incorporate our genome editing technologies, and in March 2017, we entered into a strategic alliance with Allergan focused on discovering, developing, and commercializing new gene editing medicines for a range of ocular disorders. Our likely collaborators for any other collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies, and biotechnology companies. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of any product candidates we may seek to develop with them and, in the case of our strategic alliance with Allergan, whether they exercise an option to commercialize a product. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot predict the success of any collaboration that we enter into.

Collaborations involving our research programs or any product candidates we may develop, including our collaboration with Juno Therapeutics, and alliance arrangements we may enter into under which our research programs may be involved and potential product candidates may be developed, including our strategic alliance with Allergan, pose the following risks to us:

- Collaborators may have significant discretion in determining the efforts and resources that they will apply to these collaborations.
- Collaborators may not pursue development and commercialization of any product candidates we may develop or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's or ally's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities.
- Collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials, or require a new formulation of a product candidate for clinical testing.
- Collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our medicines or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours.
- Collaborators with marketing and distribution rights to one or more medicines may not commit sufficient resources to the marketing and distribution of such medicine or medicines.
- Collaborators may not properly obtain, maintain, enforce, or defend our intellectual property or proprietary rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation.

- Disputes may arise between the collaborators and us that result in the delay or termination of the research, development, or commercialization of our medicines or product candidates or that result in costly litigation or arbitration that diverts management attention and resources.

- We may lose certain valuable rights under circumstances identified in our collaborations, including if we undergo a change of control.

- Collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.

- Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished, or terminated.

If our collaborations or alliances do not result in the successful development and commercialization of products, or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration or alliance, as the case may be. If we do not receive the funding we expect under these agreements, our development of product candidates could be delayed, and we may need additional resources to develop product candidates. In addition, if one of our collaborators terminates its agreement with us, we may find it more difficult to find a suitable replacement collaborator or attract new collaborators, and our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected. All of the risks relating to product development, regulatory approval, and commercialization described in this Quarterly Report on Form 10-Q apply to the activities of our collaborators and our strategic allies.

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

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

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

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge, and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us.

We may also be restricted under existing collaboration or alliance agreements from entering into future agreements on certain terms with potential collaborators or allies. For example, during the research program term of our collaboration with Juno Therapeutics, we may not directly or indirectly license, fund, enable, or participate in any research, development, manufacture, or commercialization of engineered T cells with chimeric antigen receptors and T cell receptors in the field of diagnosis, treatment, or prevention of cancer in humans through the use of engineered T cells, excluding the diagnosis, treatment, or prevention of medullary cystic kidney disease.

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

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop product candidates or bring them to market and generate product revenue.

***We expect to rely on third parties to conduct our clinical trials and some aspects of our research and preclinical testing, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research, or testing.***

We expect to rely on third parties, such as CROs, clinical data management organizations, medical institutions, and clinical investigators, to conduct our clinical trials. We currently rely and expect to continue to rely on third parties to conduct some aspects of our research and preclinical testing. Any of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it would delay our product development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices, for conducting, recording, and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity, and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity, and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines, or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for any product candidates we may develop and will not be able to, or may be delayed in our efforts to, successfully commercialize our medicines.

We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of any product candidates we may develop or commercialization of our medicines, producing additional losses and depriving us of potential product revenue.

***We contract with third parties for the manufacture of materials for our research programs and preclinical studies and expect to continue to do so for clinical trials and for commercialization of any product candidates that we may develop. This reliance on third parties increases the risk that we will not have sufficient quantities of such materials, product candidates, or any medicines that we may develop and commercialize, or that such supply will not be available to us at an acceptable cost, which could delay, prevent, or impair our development or commercialization efforts.***

We do not have any manufacturing facilities. We currently rely on third-party manufacturers for the manufacture of our materials for preclinical studies and expect to continue to do so for clinical testing and for commercial supply of any product candidates that we may develop and for which we or our collaborators obtain marketing approval. We do not have a long term supply agreement with any of the third-party manufacturers, and we purchase our required supply on a purchase order basis.

We may be unable to establish any agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- the possible breach of the manufacturing agreement by the third party;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us; and
- reliance on the third party for regulatory compliance, quality assurance, safety, and pharmacovigilance and related reporting.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocations, seizures or recalls of product candidates or medicines, operating restrictions, and criminal prosecutions, any of which could significantly and adversely affect supplies of our medicines and harm our business, financial condition, results of operations, and prospects.

Any medicines that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply for bulk drug substances. If any one of our current contract manufacturer cannot perform as agreed, we may be required to replace that manufacturer. Although we believe that there are several potential alternative manufacturers who could manufacture any product candidates we may develop, we may incur added costs and delays in identifying and qualifying any such replacement.

Our current and anticipated future dependence upon others for the manufacture of any product candidates we may develop or medicines may adversely affect our future profit margins and our ability to commercialize any medicines that receive marketing approval on a timely and competitive basis.

**Risks Related to Our Intellectual Property**

***If we are unable to obtain and maintain patent protection for any products we develop and for our technology, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize any product candidates we may develop, and our technology may be adversely affected.***

Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our CRISPR platform technology and any proprietary product candidates and technology we develop. We seek to protect our proprietary position by in-licensing intellectual property relating to our platform technology and filing patent applications in the United States and abroad related to our technologies and product candidates that are important to our business. If we or our licensors are unable to obtain or maintain patent protection with respect to our CRISPR platform technology and any proprietary products and technology we develop, our business, financial condition, results of operations, and prospects could be materially harmed.

No consistent policy regarding the scope of claims allowable in the field of genome editing, including CRISPR technology, has emerged in the United States. The scope of patent protection outside of the United States is also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions, obtain, maintain, and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and licensed patents. With respect to both in-licensed and owned intellectual property, we cannot predict whether the patent applications we and our licensors are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient protection from competitors.

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

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or product candidates or which effectively prevent others from commercializing competitive technologies and product candidates.

Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if patent applications we license or own currently or in the future issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us, or otherwise provide us with any competitive advantage. Any patents that we hold or in-license may be challenged, narrowed, circumvented, or invalidated by third parties. Consequently, we do not know whether any of our platform advances and product candidates will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner. For example, we are aware that third parties have suggested the use of the CRISPR technology in conjunction with a protein other than Cas9 or Cpf1. Our owned and in-licensed patents may not cover CRISPR technology in conjunction with a protein other than Cas9 or Cpf1. If our

competitors commercialize the CRISPR technology in conjunction with a protein other than Cas9 or Cpf1, our business, financial condition, results of operations, and prospects could be materially adversely affected.

The issuance of a patent is not conclusive as to its inventorship, scope, validity, or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. Our licensors are currently, and we or our licensors may in the future become, subject to a third party pre-issuance submission of prior art to the United States Patent and Trademark Office (the "USPTO") or opposition, derivation, revocation, re-examination, post-grant and *inter partes* review, or interference proceedings and other similar proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Moreover, we, or one of our licensors, may have to participate in interference proceedings declared by the USPTO to determine priority of invention or in post-grant challenge proceedings, such as oppositions in a foreign patent office, that challenge priority of invention or other features of patentability. Such challenges may result in loss of patent rights, loss of exclusivity, or in patent claims being narrowed, invalidated, or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and product candidates. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us. As discussed below, some of our in-licensed patents are subject to interference, opposition, and *ex parte* re-examination proceedings and therefore subject to these risks.

In addition, 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 intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. Moreover, some of our owned and in-licensed patents and patent applications are, and may in the future be, co-owned with third parties. If we are unable to obtain an exclusive license to any such third party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we or our licensors may need the cooperation of any such co-owners of our owned and in-licensed patents in order to enforce such patents against third parties, and such cooperation may not be provided to us or our licensors. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. For example, the research resulting in certain of our owned and in-licensed patent rights and technology was funded in part by the U.S. government. As a result, the U.S. government has certain rights, including march-in rights, to such patent rights and technology. When new technologies are developed with government funding, the government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the government to use the invention. For example, our licensors, including The Broad Institute, Inc. (the "Broad") have granted the U.S. government a non-exclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States, the inventions described in certain of our in-licensed patents and patent applications, including certain aspects of our in-licensed CRISPR technology. If the government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. These rights may permit the U.S. government to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use our licensed technology. The U.S. government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Any exercise by the government of any of the foregoing rights could harm our competitive position, business, financial condition, results of operations, and prospects.

***Our rights to develop and commercialize our technology and product candidates are subject, in part, to the terms and conditions of licenses granted to us by others.***

We are heavily reliant upon licenses to certain patent rights and proprietary technology from third parties that are important or necessary to the development of our genome editing technology, including our CRISPR technology, and product candidates. These and other licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and products in the future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in territories included in all of our licenses. For example, pursuant to our license agreements with Broad, and Broad and the President and Fellows of Harvard College ("Harvard"), the licensors may, under certain circumstances, grant a license to the patents that are the subject of such license agreements to a third party. Such third party would have full rights to the patent rights that are the subject of such licenses, which could impact our competitive position and enable a third party to commercialize products similar to our future product candidates and technology. Furthermore, under these license agreements, Broad has the right, after specified periods of time and subject to certain limitations, to designate gene targets for which Broad, whether alone or together with an affiliate or third party, has an interest in researching and developing products that would otherwise be covered by rights licensed to us under the agreements. Any of the foregoing would narrow the scope of our exclusive rights to the patents and patent applications we have in-licensed from Broad. The terms of these license agreements are described more fully under "Part I—Business—License Agreements" in our Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") on March 3, 2017 (the "2016 10-K"). In addition, our rights to our in-licensed patents and patent applications are dependent, in part, on inter-institutional or other operating agreements between the joint owners of such in-licensed patents and patent applications. If one or more of such joint owners breaches such inter-institutional or operating agreements, our rights to such in-licensed patents and patent applications may be adversely affected, which could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

In addition, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement, and defense of patents and patent applications covering the technology that we license from third parties. For example, pursuant to each of our intellectual property licenses with Broad, Harvard, The General Hospital Corporation, d/b/a Massachusetts General Hospital and Duke University, our licensors retain control of preparation, filing, prosecution, and maintenance, and, in certain circumstances, enforcement and defense of their patents and patent applications. Therefore, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced, and defended in a manner consistent with the best interests of our business. If our licensors fail to prosecute, maintain, enforce, and defend such patents, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, and our right to develop and commercialize any of our products that are subject of such licensed rights could be adversely affected. Additionally, given that we are required to reimburse our licensors for all of their expenses related to the prosecution, maintenance, enforcement and defense of patents and patent applications that we in-license from them, the ongoing nature of the interference, opposition, and re-examination proceedings involving the patents licensed to us under our license agreement with Harvard and Broad and our obligation to make such reimbursements are not subject to any limitations, we anticipate that our obligation to reimburse our licensors for expenses related to these matters will continue to be substantial. In connection with these reimbursement obligations, we paid an aggregate of $1.7 million, $9.4 million, and $23.6 million, respectively, during the years ended December 31, 2014, 2015, and 2016 and we incurred an aggregate of $4.0 million during the three months ended March 31, 2017.

Our licensors may have relied on third party consultants or collaborators or on funds from third parties such that our licensors are not the sole and exclusive owners of the patents we in-licensed. For example, certain patent applications licensed to us by Broad are co-owned with NIH. Broad does not and does not purport to grant any rights in NIH's interest in these patent applications under our agreement. If other third parties have ownership rights to our in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

In spite of our best efforts, our licensors might conclude that we have materially breached our license agreements and might therefore terminate the license agreements, thereby removing our ability to develop and

commercialize products and technology covered by these license agreements. If these in-licenses are terminated, or if the underlying patents fail to provide the intended exclusivity, competitors would have the freedom to seek regulatory approval of, and to market, products identical to ours. In addition, we may seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties (potentially including our competitors) to receive licenses to a portion of the intellectual property that is subject to our existing licenses. Any of these events could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

***Some of our in-licensed patents are subject to priority and validity disputes. In addition, our owned and in-licensed patents and other intellectual property may be subject to further priority and validity disputes, and other similar intellectual property proceedings including inventorship disputes. If we or our licensors are unsuccessful in any of these proceedings, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or to cease the development, manufacture, and commercialization of one or more of the product candidates we may develop, which could have a material adverse impact on our business.***

On January 11, 2016, the Patent Trial and Appeal Board of the USPTO, or PTAB, declared an interference between a pending U.S. patent application (U.S. Serial No. 13/842,859) that is owned by the University of California, the University of Vienna, and Emmanuelle Charpentier and 12 U.S. patents (U.S. Patent Nos. 8,697,359; 8,771,945; 8,795,965; 8,865,406; 8,871,445; 8,889,356; 8,895,308; 8,906,616; 8,932,814; 8,945,839; 8,993,233; and 8,999,641) that are co-owned by Broad and MIT, and in some cases Harvard, and in-licensed by us. On March 17, 2016, the PTAB re-declared the interference to add a pending U.S. patent application (U.S. Serial No. 14/704,551) that is co-owned by Broad, MIT, and Harvard, and in-licensed by us. An interference is a proceeding within the USPTO to determine priority of invention of the subject matter of patent claims filed by different parties. This proceeding is only potentially available for patent applications filed in the United States on or before March 15, 2013 and related continuing patent applications. In the interference, the University of California, the University of Vienna and Emmanuelle Charpentier asserted that inventors from the University of California and the University of Vienna, and Emmanuelle Charpentier made certain inventions claimed in the Broad, MIT and Harvard patents before the inventors from Broad, MIT and, in certain cases, Harvard.

In the declared interference, the University of California, acting on behalf of itself and the University of Vienna, and Emmanuelle Charpentier were designated as the senior party and Broad was designated as the junior party. In an interference proceeding, the junior party has the burden of proof and presents its priority evidence first. The declaration of interference defined the invention that is subject to the declaration of interference, also referred to as “the count,” as relating to a method that involves contacting a target DNA in a eukaryotic cell with certain defined CRISPR/Cas9 components for the purpose of cleaving or editing a target DNA molecule or modulating transcription of at least one gene encoded thereon. All of the claims in the pending U.S. patent application that is owned by the University of California, the University of Vienna, and Emmanuelle Charpentier and all of the claims in the 12 U.S. patents and one pending U.S. patent application that are co-owned by Broad and MIT, and in some cases Harvard, and in-licensed by us were implicated in the interference. The University of California, the University of Vienna, and Emmanuelle Charpentier are listed as applicants on U.S. Serial No. 13/842,859. The University of California derives rights in U.S. Serial No. 13/842,859 from an assignment by Dr. Jennifer Doudna and certain other inventors listed on such application. Caribou Biosciences has reported that it has an exclusive license to patent rights from the University of California and the University of Vienna. Intellia Therapeutics has reported that it has an exclusive license to such rights from Caribou Biosciences in certain fields. CRISPR Therapeutics, ERS Genomics, and TRACR Hematology, also our competitors, have reported that they have exclusively licensed such patent rights from Emmanuelle Charpentier. Further, Dr. Doudna was a founder of our company and entered into a consulting agreement with us at the time of our founding. However, Dr. Doudna gave notice of termination of that agreement in May 2014 after less than seven months of service, and she has had no further engagement in our business since that time. Dr. Doudna is also a founder of Caribou Biosciences and has been publicly identified as an advisor to Intellia Therapeutics, each of which is one of our competitors.

As a result of the declaration of interference, an adversarial proceeding in the USPTO before the PTAB was initiated. An interference is declared to ultimately determine priority, specifically which party was first to invent the commonly claimed invention. An interference is typically divided into two phases. The first phase is typically referred to

as the motions or preliminary motions phase while the second is referred to as the priority phase. In the first phase, each party may raise issues including but not limited to those relating to the patentability of a party's claims based on prior art, written description, and enablement. A party also may seek an earlier priority benefit or may challenge whether the declaration of interference was proper in the first place. Priority, or a determination of who first invented the commonly claimed invention, is determined in the second phase of an interference.

On February 15, 2017, the PTAB held that there is no interference-in-fact between the parties for the subject matter of the count. A judgment of no interference-in-fact means that no interference is needed to resolve priority between the parties because the PTAB determined that our in-licensed claims are directed to subject matter that is patentably distinct from those of the University of California, the University of Vienna, and Emmanuelle Charpentier. The interference proceeding has therefore ended without reaching the second priority phase. Therefore, the 12 U.S. patents and one U.S. patent application that we have in-licensed from Broad, acting on behalf of itself, MIT, and Harvard, as well as the U.S. patent application owned by the University of California, the University of Vienna, and Emmanuelle Charpentier, with respect to which the PTAB had declared an interference were not modified or revoked as a result of this interference proceeding.

On April 12, 2017, the University of California, the University of Vienna, and Emmanuelle Charpentier filed a Notice of Appeal to the Court of Appeals for the Federal Circuit for review of the orders, decisions, rulings and opinions that were made by the PTAB in the interference proceeding. It is uncertain when and in what manner the Federal Circuit will act on this appeal. A final, non-appealable judgment of no interference-in-fact bars any further interference between the same parties for claims to the same invention as the count of the interference. However, as discussed below, certain of these 12 U.S. patents and one U.S. patent application are, or may in the future be, subject to further intellectual property proceedings and disputes, including interference proceedings.

The University of California, the University of Vienna, and Emmanuelle Charpentier or other third parties may file a separate Suggestion of Interference against the Broad patents that were subject to the interference or other U.S. patents and patent applications that we own or in-license. For example, ToolGen Inc., or ToolGen, filed Suggestions of Interference in the USPTO on April 13, 2015, which became publicly available on November 12, 2015 and December 3, 2015, suggesting that they believe some of the claims in pending U.S. applications owned by ToolGen (U.S. Serial No. 14/685,568 and U.S. Serial No. 14/685,510, respectively) interfere with certain claims in five U.S. patents, which we have in-licensed from Broad, acting on behalf of itself, MIT, and Harvard. These five U.S. patents are among the 12 U.S. patents with respect to which the PTAB had declared an interference with the pending U.S. patent application (U.S. Serial No. 13/842,859) that is owned by the University of California, the University of Vienna, and Emmanuelle Charpentier. The Suggestions of Interference that were filed by ToolGen are still pending and it is uncertain when and in what manner the USPTO will act on them.

Our owned and in-licensed patents and patent applications are, and may in the future become, subject to validity disputes in the USPTO and other foreign patent offices. A request for *ex parte* re-examination was filed with the USPTO on February 16, 2016 against one patent that we have in-licensed from Broad, acting on behalf of itself and MIT (U.S. Patent No. 8,771,945), which was subject to the interference proceeding involving the University of California, the University of Vienna, and Emmanuelle Charpentier and referenced in the Suggestions of Interference filed by ToolGen. *Ex parte* re-examination is a procedure through which a third party can anonymously request the USPTO to re-examine a granted patent because the third party believes the granted patent may not be patentable over prior art in the form of a printed publication or another patent. Before the USPTO will re-examine a granted patent, the third party requestor must establish that the submitted prior art establishes a substantial and new question of patentability. If the USPTO determines there is a substantial and new question of patentability, it grants the re-examination request and re-examines the patent after giving the patent owner the option of filing an initial statement. The request for *ex parte* re-examination of U.S. Patent No. 8,771,945 was granted on May 9, 2016 thereby initiating a re-examination procedure between the USPTO and Broad, acting on behalf of itself and MIT. The third party requestor does not participate in the re-examination procedure after filing the request except that it has the option of responding if the patent owner chooses to file an initial statement. On May 12, 2016, the PTAB suspended the re-examination of U.S. Patent No. 8,771,945 noting that it has jurisdiction over any file that involves a patent involved in the interference. It is uncertain when the PTAB will lift the suspension, however the PTAB may do so in light of the PTAB's no interference-in-fact holding. If Broad is

unsuccessful during the re-examination, U.S. Patent No. 8,771,945 may be revoked or narrowed, which could have a material adverse effect on the scope of our rights under such patent.

The 12 in-licensed U.S. patents and one in-licensed U.S. patent application that were the subject of the interference with the pending U.S. patent application (U.S. Serial No. 13/842,859) that is owned by the University of California, the University of Vienna, and Emmanuelle Charpentier (which includes the five in-licensed U.S. patents that are the subject of the Suggestions of Interference filed by ToolGen and the one in-licensed U.S. patent that is the subject of the re-examination) relate generally to the CRISPR/Cas9 system and its use in eukaryotic cells. The claims of the 12 in-licensed U.S. patents and one in-licensed U.S. patent application vary in scope and coverage and include claims that are directed to CRISPR/Cas9 systems that employ viral vectors for delivery, single guide RNAs, modified guide RNAs, *S. aureus* Cas9, or a Cas9 nickase and are relevant to our genome editing platform technology. The loss or narrowing in scope of one or more of these in-licensed patents could have a material adverse effect on the conduct of our business, financial condition, results of operations, and prospects. The loss or narrowing in scope of one or more of these in-licensed patents could have a material adverse effect on the conduct of our business.

In addition, we or our licensors may be subject to claims that former employees, collaborators, or other third parties have an interest in our owned or in-licensed patents or patent applications, or other intellectual property as an inventor or co-inventor. If we are unable to obtain an exclusive license to any such third party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors. In addition, we may need the cooperation of any such co-owners to enforce any patents, including any patents that issue from such patent applications, against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on the conduct of our business, financial condition, results of operations, and prospects.

We or our licensors are subject to and may in the future become a party to similar proceedings or priority disputes in Europe or other foreign jurisdictions. The European Patent Office Opposition Division has initiated opposition proceedings in the European Patent Office, or EPO, against six European patents that we have in-licensed from Broad, acting on behalf of itself, MIT and Harvard (European Patent Nos. EP 2,771,468 B1, EP 2,784,162 B1, EP 2,896,697 B1, EP 2,898,075 B1, EP 2,921,557 B1, and EP 2,931,898 B1) and one European patent that we have in-licensed from Broad, acting on behalf of itself and MIT (European Patent No. EP 2,764,103 B1). The EPO opposition proceedings may involve issues including, but not limited to, procedural formalities related to filing the European patent application, priority, and the patentability of the involved claims. One or more of the third parties that have filed oppositions against European Patent Nos. EP 2,771,468 B1, EP 2,784,162 B1, EP 2,764,103 B1, EP 2,896,697 B1, EP 2,898,075 B1, EP 2,921,557 B1, and/or EP 2,931,898 B1 or other third parties may file future oppositions against other European patents that we in-license or own. For example, we are aware that a notice of opposition has been filed against one other European patent that we in license from Broad, acting on behalf of itself, MIT, Harvard and Rockefeller (European Patent No. EP 2,840,140 B1). The deadline for filing oppositions against this European patent is August 16, 2017. There may be other oppositions against this European patent that have not yet been filed or that have not yet been made available to the public. In addition, we are aware that Intellia Therapeutics filed petitions in two actions in United States District Court seeking discovery of information, including inventorship information, related to issues in these pending EPO opposition proceedings. One of these petitions was denied by the District Court and Intellia Therapeutics has filed a notice of appeal to the United States Court of Appeals. Disclosure of any such information may result in additional validity challenges to our in-licensed European patents and patent applications. The loss of priority for, or the loss of, these European patents could have a material adverse effect on the conduct of our business.

If we or our licensors are unsuccessful in any patent related disputes, including interference proceedings, patent oppositions, reexaminations, or other priority, inventorship, or validity disputes to which we or they are subject (including any of the proceedings discussed above), we may lose valuable intellectual property rights through the loss of one or more patents owned or licensed or our owned or licensed patent claims may be narrowed, invalidated, or held unenforceable. In addition, if we or our licensors are unsuccessful in any inventorship disputes to which we or they are subject, we may lose valuable intellectual property rights, such as exclusive ownership of, or the exclusive right to use, our owned or in-licensed patents. If we or our licensors are unsuccessful in any interference proceeding or other priority or inventorship dispute, we may be required to obtain and maintain licenses from third parties, including parties involved in any such interference proceedings or other priority or inventorship disputes. Such licenses may not be available on

commercially reasonable terms or at all, or may be non-exclusive. If we are unable to obtain and maintain such licenses, we may need to cease the development, manufacture, and commercialization of one or more of the product candidates we may develop. The loss of exclusivity or the narrowing of our owned and licensed patent claims could limit our ability to stop others from using or commercializing similar or identical technology and products. Any of the foregoing could result in a material adverse effect on our business, financial condition, results of operations, or prospects. Even if we are successful in any interference proceeding or other priority, inventorship, or validity disputes, it could result in substantial costs and be a distraction to our management and other employees.

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

Filing, prosecuting, and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. In addition, our intellectual property license agreements may not always include worldwide rights. For example, certain U.S. patent applications licensed to us by Broad include The University of Tokyo ("Tokyo") and NIH as joint applicants. Broad has only granted a license to us with respect to its interests and to Tokyo's interests in these U.S. patent applications but not to any foreign equivalents thereof. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. 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 or licenses but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims 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 and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations, and prospects may be adversely affected.

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

Periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our owned or licensed patents and applications. In certain circumstances, we rely on our licensing partners to pay these fees due to U.S. and non-U.S. patent agencies. The USPTO and various non-U.S. government agencies require compliance with several procedural, documentary, fee payment, and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. In some cases, an inadvertent lapse can be cured by

payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in a partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.***

We have entered into license agreements with third parties and may need to obtain additional licenses from our existing licensors and others to advance our research or allow commercialization of product candidates we may develop. It is possible that we may be unable to obtain any additional licenses at a reasonable cost or on reasonable terms, if at all. In that event, we may be required to expend significant time and resources to redesign our technology, product candidates, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected product candidates, which could harm our business, financial condition, results of operations, and prospects significantly. We cannot provide any assurances that third party patents do not exist which might be enforced against our current technology, including CRISPR genome editing technology, manufacturing methods, product candidates, or future methods or products resulting in either an injunction prohibiting our manufacture or sales, or, with respect to our sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties, which could be significant.

In each of our license agreements, and we expect in our future agreements, we are responsible for bringing any actions against any third party for infringing on the patents we have licensed. Certain of our license agreements also require us to meet development thresholds to maintain the license, including establishing a set timeline for developing and commercializing products. Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we currently license intellectual property or technology from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, including the amount, if any, that may become due and payable to our licensors in connection with sublicense income. If these events were to occur, they could have a material adverse effect on our business, financial condition, results of operations, and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially

acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates, which could have a material adverse effect on our business, financial conditions, results of operations, and prospects.

***We may not be successful in obtaining necessary rights to any product candidates we may develop through acquisitions and in-licenses.***

We currently have rights to intellectual property, through licenses from third parties, to identify and develop product candidates. Many pharmaceutical companies, biotechnology companies, and academic institutions are competing with us in the field of genome editing technology and filing patent applications potentially relevant to our business. For example, we are aware of third party patents and patent applications that may be construed to cover our CRISPR technology and product candidates. In order to avoid infringing these third party patents, or patents that issue from these third party patent applications, we may find it necessary or prudent to obtain licenses from such third party intellectual property holders. We may also require licenses from third parties for certain non-CRISPR technologies including certain delivery methods that we are evaluating for use with product candidates we may develop. In addition, with respect to any patents we co-own with third parties, we may require licenses to such co-owners' interest to such patents. However, we may be unable to secure such licenses or otherwise acquire or in-license any compositions, methods of use, processes, or other intellectual property rights from third parties that we identify as necessary for product candidates we may develop and CRISPR technology. The licensing or acquisition of third party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. For example, certain delivery modes, including certain adeno-associated virus vectors and lipid nanoparticle technologies, we are evaluating for use in our LCA10 program or with other product candidates we may develop are covered by patents held by third parties. If we are unable to successfully obtain rights to required third party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or product candidate, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.***

Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. Assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith America Invents Act (the "America Invents Act") enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. The America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. This combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations

governing patents could change in unpredictable ways that could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future.

***Issued patents covering our technology and product candidates could be found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad.***

If we or one of our licensors were to initiate legal proceedings against a third party to enforce a patent covering a product candidate we may develop or our technology, including CRISPR genome editing technology, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties have raised challenges to the validity of certain of our in-licensed patent claims and may in the future raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). For example, as discussed above, an interference was declared, and multiple Suggestions of Interference have been filed against certain of our in-licensed U.S. patents and patent applications, one of these U.S. patents is subject to a re-examination proceeding, opposition proceedings have been initiated against seven of our in-licensed European patents and additional interference, re-examination, opposition, and other intellectual property proceedings may be initiated in the future. For more information regarding these proceedings, see “Legal Proceedings” in Part I, Item 1 of this Quarterly Report on Form 10-Q. Such proceedings could result in the revocation of, cancellation of, or amendment to our patents in such a way that they no longer cover our technology or platform, or any product candidates that we may develop. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we or our licensing partners and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our technology or platform, or any product candidates that we may develop. Such a loss of patent protection would have a material adverse impact on our business, financial condition, results of operations, and prospects.

***The intellectual property landscape around genome editing technology, including CRISPR, is highly dynamic, and third parties may initiate legal proceedings alleging that we are infringing, misappropriating, or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.***

The field of genome editing, especially in the area of CRISPR technology, is still in its infancy, and no such products have reached the market. Due to the intense research and development that is taking place by several companies, including us and our competitors, in this field, the intellectual property landscape is in flux, and it may remain uncertain for the coming years. There may be significant intellectual property related litigation and proceedings relating to our owned and in-licensed, and other third party, intellectual property and proprietary rights in the future.

Our commercial success depends upon our ability and the ability of our collaborators to develop, manufacture, market, and sell any product candidates that we may develop and use our proprietary technologies without infringing, misappropriating, or otherwise violating the intellectual property and proprietary rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. We are subject to and may in the future become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our technology and any product candidates we may develop, including interference proceedings, post-grant review, *inter partes* review, and derivation proceedings before the USPTO and similar proceedings in foreign jurisdictions such as oppositions before the EPO. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit. We are aware of certain third party patent applications in this landscape that may, if issued as patents, be asserted to encompass our CRISPR/Cas9 technology. In particular, we are aware of several separate families of U.S. patent applications and foreign counterparts which relate to CRISPR/Cas9 technology, where the earliest priority

dates of each family pre-date the priority dates of our in-licensed patents and patent applications, including PCT Publication No. WO 2013/141680 (and its related U.S. Patent No. 9,637,739 and other related U.S. patent applications and foreign counterparts) filed by Vilnius University (which is reported to have exclusively licensed its rights to DuPont Pioneer, which is reported to have licensed certain rights to Caribou Biosciences, which is reported to have non-exclusively licensed certain rights to Intellia Therapeutics and CRISPR Therapeutics), WO 2013/176772 (and its related U.S. patent applications and foreign counterparts including European Patent No. EP 2,800,811 B1) filed by the University of California, the University of Vienna (both of which are reported to have exclusively licensed their rights to Caribou Biosciences, which is reported to have exclusively licensed certain rights to Intellia Therapeutics), and Emmanuelle Charpentier (who is reported to have exclusively licensed her rights to CRISPR Therapeutics, ERS Genomics and TRACR Hematology), and WO 2014/065596 (and its related U.S. patent applications and foreign counterparts) filed by ToolGen. Each of these patent families are owned by a different third party and contain claims that may be construed to cover components and uses of CRISPR/Cas9 technology. If we are not able to obtain or maintain a license on commercially reasonable terms to any third-party patents that cover our product candidates or activities, such third parties could potentially assert infringement claims against us, which could have a material adverse effect on the conduct of our business.

Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. A court of competent jurisdiction could hold that these third party patents are valid, enforceable, and infringed, which could materially and adversely affect our ability to commercialize any product candidates we may develop and any other product candidates or technologies covered by the asserted third party patents. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. If we are found to infringe a third party's intellectual property rights, and we are unsuccessful in demonstrating that such patents are invalid or unenforceable, we could be required to obtain a license from such third party to continue developing, manufacturing, and marketing any product candidates we may develop and our technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. We also could be forced, including by court order, to cease developing, manufacturing, and commercializing the infringing technology or product candidates. In addition, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our business, financial condition, results of operations, and prospects.

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

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

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims

that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations, and prospects.

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

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

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

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

In addition to seeking patents for some of our technology and product candidates, we also rely on trade secrets and confidentiality agreements to protect our unpatented know-how, technology, and other proprietary information and to maintain our competitive position. With respect to our technology platform, we consider trade secrets and know-how to be one of our primary sources of intellectual property. Trade secrets and know-how can be difficult to protect. In particular, we anticipate that with respect to our technology platform, these trade secrets and know-how will over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology, and the movement of personnel from academic to industry scientific positions.

We seek to protect these trade secrets and other proprietary technology, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors, and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. We cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or other third party, our competitive position would be materially and adversely harmed.

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

Depending upon the timing, duration and specifics of any FDA marketing approval of any product candidates we may develop, one or more of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Action of 1984 (the "Hatch-Waxman Amendments"). The Hatch-Waxman Amendments permit a patent extension term of up to five years as compensation for patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent may be extended and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. However, we may not be granted an extension because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents, or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our business, financial condition, results of operations, and prospects could be materially harmed.

***Intellectual property rights do not necessarily address all potential threats.***

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

- others may be able to make gene therapy products that are similar to any product candidates we may develop or utilize similar gene therapy technology but that are not covered by the claims of the patents that we license or may own in the future;
- we, or our license partners or current or future collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or may own in the future;
- we, or our license partners or current or future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending licensed patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents of others may harm our business; and
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

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

**Risks Related to Regulatory Approval and Other Legal Compliance Matters**

***Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time-consuming, and uncertain and may prevent us from obtaining approvals for the commercialization of any product candidates we may develop. If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals, we will not be able to commercialize, or will be delayed in commercializing, product candidates we may develop, and our ability to generate revenue will be materially impaired.***

Any product candidates we may develop and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, and distribution, are subject to comprehensive regulation by the FDA and other regulatory authorities in the United States and by comparable authorities in other countries. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate in a given jurisdiction. We have not received approval to market any product candidates from regulatory authorities in any jurisdiction. We have only limited experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party CROs to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the biologic product candidate's safety, purity, and potency. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Any product candidates we develop may not be effective, may be only moderately effective, or may prove to have undesirable or unintended side effects, toxicities, or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity, and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical, or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit, or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved medicine not commercially viable.

If we experience delays in obtaining approval or if we fail to obtain approval of any product candidates we may develop, the commercial prospects for those product candidates may be harmed, and our ability to generate revenues will be materially impaired.

***Failure to obtain marketing approval in foreign jurisdictions would prevent any product candidates we may develop from being marketed in such jurisdictions, which, in turn, would materially impair our ability to generate revenue.***

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

regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our medicines in any jurisdiction, which would materially impair our ability to generate revenue.

Additionally, on June 23, 2016, the electorate in the United Kingdom voted in favor of leaving the European Union, commonly referred to as Brexit. On March 29, 2017, the country formally notified the European Union of its intention to withdraw pursuant to Article 50 of the Lisbon Treaty. Since a significant proportion of the regulatory framework in the United Kingdom is derived from European Union directives and regulations, the referendum could materially impact the regulatory regime with respect to the approval of our product candidates in the United Kingdom or the European Union. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in the United Kingdom and/or the European Union and restrict our ability to generate revenue and achieve and sustain profitability. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the United Kingdom and/or European Union for our product candidates, which could significantly and materially harm our business.

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

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising, and promotional activities for such medicine, will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, and requirements regarding the distribution of samples to physicians and recordkeeping. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the medicine may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the medicine.

Accordingly, assuming we, or any collaborators we may have, receive marketing approval for one or more product candidates we develop, we, and such collaborators, and our and their contract manufacturers will continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance, and quality control. If we and such collaborators are not able to comply with post-approval regulatory requirements, we and such collaborators could have the marketing approvals for our products withdrawn by regulatory authorities and our, or such collaborators', ability to market any future products could be limited, which could adversely affect our ability to achieve or sustain profitability. Further, the cost of compliance with post-approval regulations may have a negative effect on our business, operating results, financial condition, and prospects.

***Any product candidate for which we obtain marketing approval could be subject to restrictions or withdrawal from the market, and we may be subject to substantial penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our medicines, when and if any of them are approved.***

The FDA and other regulatory agencies closely regulate the post-approval marketing and promotion of medicines to ensure that they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA and other regulatory agencies impose stringent restrictions on manufacturers' communications regarding off-label use, and if we do not market our medicines for their approved indications, we may be subject to enforcement action for off-label marketing by the FDA and other federal and state enforcement agencies, including the Department of Justice. Violation of the Federal Food, Product, and Cosmetic Act and other statutes, including the False Claims Act, relating to the promotion and advertising of prescription products may also lead to investigations or allegations of violations of federal and state health care fraud and abuse laws and state consumer protection laws.

In addition, later discovery of previously unknown problems with our medicines, manufacturers, or manufacturing processes, or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on such medicines, manufacturers, or manufacturing processes;
- restrictions on the labeling or marketing of a medicine;
- restrictions on the distribution or use of a medicine;
- requirements to conduct post-marketing clinical trials;
- receipt of warning or untitled letters;
- withdrawal of the medicines from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of medicines;
- fines, restitution, or disgorgement of profits or revenue;
- suspension or withdrawal of marketing approvals;
- suspension of any ongoing clinical trials;
- refusal to permit the import or export of our medicines;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize any product candidates we may develop and adversely affect our business, financial condition, results of operations, and prospects.

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

Healthcare providers, physicians, and third-party payors play a primary role in the recommendation and prescription of any product candidates that we may develop for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell, and distribute our medicines for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- the federal healthcare anti-kickback statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving, or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order, or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid;

- the federal False Claims Act imposes criminal and civil penalties, including civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment or approval from Medicare, Medicaid, or other government payors that are false or fraudulent or making a false statement to avoid, decrease, or conceal an obligation to pay money to the federal government, with potential liability including mandatory treble damages and significant per-claim penalties, currently set at $5,500 to $11,000 per false claim;

- the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as further amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH"), which imposes certain requirements, including mandatory contractual terms, with respect to safeguarding the privacy, security, and transmission of individually identifiable health information without appropriate authorization by entities subject to the rule, such as health plans, health care clearinghouses, and health care providers;

- the federal false statements statute, which prohibits knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items, or services;

- the federal transparency requirements under the federal Physician Payment Sunshine Act, which requires manufacturers of drugs, devices, biologics, and medical supplies to report to the Department of Health and Human Services information related to payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members and applicable group purchasing organizations; and

- analogous state laws and regulations, such as state anti-kickback and false claims laws, which 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 certain state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in government health care programs, such as Medicare and Medicaid, imprisonment, and the curtailment or restructuring of our operations, any of which could adversely affect our business, financial condition, results of operations, and prospects.

The provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order, or use of medicinal products is prohibited in the European Union. The provision of benefits or advantages to physicians is also governed by the national anti-bribery laws of European Union Member States, such as the UK Bribery Act 2010. Infringement of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain European Union Member States must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization, and/or the regulatory authorities of the individual European Union Member States. These requirements are provided in the national laws, industry codes, or professional codes of conduct applicable in the European Union Member States. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines, or imprisonment.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations, or case law involving applicable fraud and abuse or

other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal, and administrative penalties, damages, fines, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to criminal, civil, or administrative sanctions, including exclusions from government funded healthcare programs. Liabilities they incur pursuant to these laws could result in significant costs or an interruption in operations, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

***The efforts of the Administration to pursue regulatory reform may limit the FDA's ability to engage in oversight and implementation activities in the normal course, and that could negatively impact our business.***

The Trump Administration has taken several executive actions, including the issuance of a number of executive orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. On January 30, 2017, President Trump issued an executive order, applicable to all executive agencies, including the FDA, that requires that for each notice of proposed rulemaking or final regulation to be issued in fiscal year 2017, the agency shall identify at least two existing regulations to be repealed, unless prohibited by law. These requirements are referred to as the "two-for-one" provisions. This executive order includes a budget neutrality provision that requires the total incremental cost of all new regulations in the 2017 fiscal year, including repealed regulations, to be no greater than zero, except in limited circumstances. For fiscal years 2018 and beyond, the executive order requires agencies to identify regulations to offset any incremental cost of a new regulation. In interim guidance issued by the Office of Information and Regulatory Affairs within the Office of Management and on February 2, 2017, the administration indicates that the "two-for-one" provisions may apply not only to agency regulations, but also to significant agency guidance documents. It is difficult to predict how these requirements will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

***Recently enacted and future legislation may increase the difficulty and cost for us and any future collaborators to obtain marketing approval of and commercialize our product candidates and affect the prices we, or they, may obtain.***

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could, among other things, prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability, or the ability of any future collaborators, to profitably sell any products for which we, or they, obtain marketing approval. We expect that current laws, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we, or any future collaborators, may receive for any approved products.

In the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (the "Medicare Modernization Act"), changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for physician administered drugs. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class. Cost reduction initiatives and other provisions of this legislation could decrease the coverage and price that we receive for any approved products. While the Medicare Modernization Act applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the Medicare Modernization Act may result in a similar reduction in payments from private payors.

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (the "PPACA"). Among the provisions of the

PPACA of importance to our business, including, without limitation, our ability to commercialize and the prices we may obtain for any of our product candidates and that are approved for sale, are the following:

- an annual, non-deductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- expansion of federal healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers and enhanced penalties for noncompliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program new requirements to report financial arrangements with physicians and teaching hospitals;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since the PPACA 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. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and will remain in effect through 2024 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used.

With the new Administration and Congress, there may be additional legislative changes, including potentially repeal and replacement of certain provisions of the PPACA. It remains to be seen, however, whether new legislation will be enacted and, if so, precisely what any new legislation will provide and what impact it will have on the availability of healthcare and containing or lowering the cost of healthcare. For example, it is possible that repeal and replacement initiatives, if enacted into law, could ultimately result in fewer individuals having health insurance coverage or in individuals having insurance coverage with less generous benefits. While the timing and scope of any potential future legislation to repeal and replace PPACA provisions is highly uncertain in many respects, it is also possible that some of the PPACA provisions that generally are not favorable for the research-based pharmaceutical industry could also be repealed along with PPACA coverage expansion provisions.

Accordingly, such reforms, if enacted, could have an adverse effect on anticipated revenue from product candidates that we may successfully develop and for which we may obtain marketing approval and may affect our overall financial condition and ability to develop or commercialize product candidates. We expect that the PPACA, as

well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and additional downward pressure on the price that we receive for any approved product and/or the level of reimbursement physicians receive for administering any approved product we might bring to market. Reductions in reimbursement levels may negatively impact the prices we receive or the frequency with which our products are prescribed or administered. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors.

The costs of prescription pharmaceuticals in the United States has also been the subject of considerable discussion in the United States, and members of Congress and the Administration have stated that they will address such costs through new legislative and administrative measures. The pricing of prescription pharmaceuticals is also subject to governmental control outside the United States. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our product candidates to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our ability to generate revenues and become profitable could be impaired.

***Fast track designation by the FDA may not actually lead to a faster development or regulatory review or approval process, and does not assure FDA approval of our product candidates.***

If a product candidate is intended for the treatment of a serious or life threatening condition and the product candidate demonstrates the potential to address unmet medical need for this condition, the sponsor may apply for FDA fast track designation. However, a fast track designation does not ensure that the product candidate will receive marketing approval or that approval will be granted within any particular timeframe. As a result, while we may seek and receive fast track designation for our product candidates, we may not experience a faster development process, review or approval compared to conventional FDA procedures. In addition, the FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast track designation alone does not guarantee qualification for the FDA's priority review procedures.

***Priority review designation by the FDA may not lead to a faster regulatory review or approval process and, in any event, does not assure FDA approval of our product candidates.***

If the FDA determines that a product candidate offers major advances in treatment or provides a treatment where no adequate therapy exists, the FDA may designate the product candidate for priority review. A priority review designation means that the goal for the FDA to review an application is six months, rather than the standard review period of ten months. We may request priority review for certain of our product candidates. The FDA has broad discretion with respect to whether or not to grant priority review status to a product candidate, so even if we believe a particular product candidate is eligible for such designation or status, the FDA may decide not to grant it. Moreover, a priority review designation does not necessarily mean a faster regulatory review process or necessarily confer any advantage with respect to approval compared to conventional FDA procedures. Receiving priority review from the FDA does not guarantee approval within the six-month review cycle or thereafter.

***We may not be able to obtain orphan drug exclusivity for one or more of our product candidates, and even if we do, that exclusivity may not prevent the FDA or the EMA from approving other competing products.***

Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug or biologic intended to treat a rare disease or condition. A similar regulatory scheme governs approval of orphan products by the EMA in the European Union. Generally, if a product candidate with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the FDA or the EMA from approving another marketing application for the same product for the same therapeutic indication for that time period. The applicable period is seven years in the United States and ten years in the European Union. The exclusivity period in the European Union can be reduced to six years if a

product no longer meets the criteria for orphan drug designation, in particular if the product is sufficiently profitable so that market exclusivity is no longer justified.

In order for the FDA to grant orphan drug exclusivity to one of our products, the agency must find that the product is indicated for the treatment of a condition or disease with a patient population of fewer than 200,000 individuals annually in the United States. The FDA may conclude that the condition or disease for which we seek orphan drug exclusivity does not meet this standard. Even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different products can be approved for the same condition. In addition, even after an orphan drug is approved, the FDA can subsequently approve the same product for the same condition if the FDA concludes that the later product is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. Orphan drug exclusivity may also be lost if the FDA or EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of the patients with the rare disease or condition.

***Our employees, principal investigators, consultants, and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.***

We are exposed to the risk of fraud or other misconduct by our employees, consultants, and commercial partners, and, if we commence clinical trials, our principal investigators. Misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in the European Union and other jurisdictions, provide accurate information to the FDA, the European Commission, and other regulatory authorities, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately, or disclose unauthorized activities to us. In particular, sales, marketing, and 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 restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs, and other business arrangements. Such misconduct also could involve the improper use of information obtained in the course of clinical trials or interactions with the FDA or other regulatory authorities, which could result in regulatory sanctions and cause serious harm to our reputation. We have adopted a code of conduct applicable to all of our employees, but it is not always possible to identify and deter employee misconduct, 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 government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. 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, financial condition, results of operations, and prospects, including the imposition of significant fines or other sanctions.

***Laws and regulations governing any international operations we may have in the future may preclude us from developing, manufacturing and selling certain product candidates outside of the United States and require us to develop and implement costly compliance programs.***

We are subject to numerous laws and regulations in each jurisdiction outside the United States in which we operate. The creation, implementation and maintenance of international business practices compliance programs is costly and such programs are difficult to enforce, particularly where reliance on third parties is required.

The Foreign Corrupt Practices Act (“FCPA”) prohibits any U.S. individual or business from paying, offering, authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. The anti-bribery provisions of the FCPA are enforced primarily by the Department of Justice. The SEC is involved with enforcement of the books and records provisions of the FCPA.

Compliance with the FCPA is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. Our expansion outside of the United States has required, and will continue to require, us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing, or selling certain drugs and drug candidates outside of the United States, which could limit our growth potential and increase our development costs. The failure to comply with laws governing international business practices may result in substantial penalties, including suspension or debarment from government contracting. Violation of the FCPA can result in significant civil and criminal penalties. Indictment alone under the FCPA can lead to suspension of the right to do business with the U.S. government until the pending claims are resolved. Conviction of a violation of the FCPA can result in long-term disqualification as a government contractor. The termination of a government contract or relationship as a result of our failure to satisfy any of our obligations under laws governing international business practices would have a negative impact on our operations and harm our reputation and ability to procure government contracts. The SEC also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

**Risks Related to Employee Matters and Managing Growth**

***Our future success depends on our ability to retain our Chief Executive Officer and other key executives and to attract, retain, and motivate qualified personnel.***

We are highly dependent on Katrine S. Bosley, our Chief Executive Officer, as well as the other principal members of our management and scientific teams. Ms. Bosley is employed "at will," meaning we or she may terminate the employment relationship at any time. We do not maintain "key person" insurance for any of our executives or other employees. The loss of the services of any of these persons could impede the achievement of our research, development, and commercialization objectives.

Recruiting and retaining qualified scientific, clinical, manufacturing, and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. The inability to recruit, or loss of services of certain executives, key employees, consultants, or advisors, may impede the progress of our research, development, and commercialization objectives and have a material adverse effect on our business, financial condition, results of operations, and prospects.

***We have expanded and expect to further expand our development, regulatory, and future sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.***

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs, and sales and marketing. For example, our total number of employees grew from 55 to 89 from December 31, 2015 to December 31, 2016. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational, and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expected expansion of our operations or recruit and train additional qualified personnel.

Moreover, the expected physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

**Risks Related to Our Common Stock**

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

Our shares of common stock began trading on The NASDAQ Global Select Market in February 2016. Given the limited trading history of our common stock, there is a risk that an active trading market for our shares will not be sustained, which could put downward pressure on the market price of our common stock and thereby affect the ability of our stockholders to sell their shares.

***The market price of our common stock may be volatile, which could result in substantial losses for our stockholders.***

Our stock price has been, and is likely to remain, volatile. Some of the factors that may cause the market price of our common stock to fluctuate include:

- the success of existing or new competitive products or technologies;
- the timing and results of preclinical studies for our LCA10 program and any product candidates that we may develop;
- commencement or termination of collaborations for our product development and research programs;
- failure or discontinuation of any of our product development and research programs;
- results of preclinical studies, clinical trials, or regulatory approvals of product candidates of our competitors, or announcements about new research programs or product candidates of our competitors;
- developments or changing views regarding the use of genomic medicines, including those that involve genome editing;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents, or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our research programs, clinical development programs, or product candidates that we may develop;
- the results of our efforts to develop additional product candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines, or recommendations by securities analysts;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders, or other stockholders;
- expiration of market stand-off or lock-up agreements;

· variations in our financial results or those of companies that are perceived to be similar to us;

· changes in estimates or recommendations by securities analysts, if any, that cover our stock;

· changes in the structure of healthcare payment systems;

· market conditions in the pharmaceutical and biotechnology sectors;

· general economic, industry, and market conditions; and

· the other factors described in this "Risk Factors" section.

In recent years, the stock market in general, and the market for pharmaceutical and biotechnology companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. Following periods of such volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources from our business.

***If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock and trading volume could decline.***

The trading market for our common stock depends, in part, on the research and reports that industry or financial analysts publish about us or our business. If one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock or fail to regularly publish reports on us, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

***A significant portion of our total outstanding shares may be sold into the market in the near future, which could cause the market price of our common stock to decline significantly, even if our business is doing well.***

Sales of a substantial number of shares of our 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.

Moreover, holders of an aggregate of approximately 15.3 million shares of our common stock have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also have registered substantially all shares of common stock that we may issue under our equity compensation plans or that are issuable upon exercise of outstanding options. These shares can be freely sold in the public market upon issuance and once vested, subject to volume limitations applicable to affiliates. In addition, under the terms of certain of our license agreements and certain promissory notes that we have issued, and additional promissory notes that we may issue in the future in connection with these license agreements, we may elect to issue shares of our common stock in satisfaction of specified payment obligations of ours, which shares may be registered under the Securities Act of 1933, as amended (the "Securities Act"), or subject to rights requiring us to register such shares under the Securities Act. Such an election by us could result in the issuance of a substantial number of shares and upon registration under the Securities Act these shares would be able to be freely sold in the public market, subject to volume limitations applicable to affiliates. If any of the additional shares described above are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

In addition, certain of our employees, executive officers, directors, and affiliated stockholders have entered or may enter into Rule 10b5-1 plans providing for sales of shares of our common stock from time to time. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the employee, director or officer when entering into the plan, without further direction from the employee, officer, director, or affiliated stockholder. A Rule 10b5-1 plan may be amended or terminated in some circumstances. Our employees, executive officers, directors, and affiliated stockholders also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information.

***Our executive officers, directors, and principal stockholders, if they choose to act together, have the ability to control all matters submitted to stockholders for approval.***

As of March 31, 2017, our executive officers and directors, combined with our stockholders who owned more than 5% of our outstanding common stock, and their affiliates, in the aggregate, beneficially owned shares representing a majority of our outstanding common stock. As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change in control of our company and might affect the market price of our common stock.

***We are an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.***

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act") and may remain an emerging growth company until December 31, 2021. For so long as we remain an emerging growth company, we are permitted and plan to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 ("SOX Section 404") not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements, reduced disclosure obligations regarding executive compensation, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In particular, in our 2016 10-K, we did not include all of the executive compensation related information that would be required if we were not an emerging growth company. We expect to continue to take advantage of some of the reporting exemptions available to emerging growth companies. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, we are subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

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

As a public company, and particularly after we are no longer an "emerging growth company," we will incur significant legal, accounting, and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The NASDAQ Global Select 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. We have had to hire additional accounting, finance, and other personnel in connection with our becoming, and our efforts to comply with the requirements of being, a public company, and our management and other personnel devote a substantial amount of time towards maintaining compliance with these requirements. These requirements increase our legal and financial compliance costs and make some activities more time-consuming and costly. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to SOX Section 404, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with SOX Section 404 within the prescribed period, we are engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants, 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, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by SOX Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

***We have broad discretion in the use of our cash reserves and may not use them effectively.***

Our management has broad discretion to use our cash reserves and could use our cash reserves 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 their use, we may invest our cash reserves in a manner that does not produce income or that loses value.

***We do not expect to pay any dividends for the foreseeable future. Accordingly, stockholders must rely on capital appreciation, if any, for any return on their investments.***

We have never declared or paid cash dividends on our common 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 stockholders' sole source of gain for the foreseeable future.

***Provisions in our restated certificate of incorporation and amended and restated bylaws or Delaware law might discourage, delay, or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.***

Provisions in our restated certificate of incorporation and amended and restated bylaws or Delaware law may discourage, delay, or prevent a merger, acquisition, or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors;
- a classified board of directors so that not all members of our board of directors are elected at one time;
- advance notice requirements for stockholder proposals and nominations;

- the inability of stockholders to act by written consent or to call special meetings;

- the requirement that at least 75% of the votes cast by all our stockholders approve the amendment or repeal of certain provisions of our amended and restated bylaws or restated certificate of incorporation;

- the ability of our board of directors to make, alter, or repeal our amended and restated bylaws; and

- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could be used to institute a rights plan, or a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our board of directors.

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

The existence of the foregoing provisions could deter potential acquirers of our company, thereby reducing the likelihood that our stockholders could receive a premium for their shares of common stock in an acquisition.

***Our restated certificate of incorporation designates the state courts in the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal court for the District of Delaware, as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could discourage lawsuits against the company and our directors and officers.***

Our restated certificate of incorporation provides that, unless our board of directors otherwise determines, the state courts in the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal court for the District of Delaware, will be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to our company or our stockholders, any action asserting a claim against us or any of our directors or officers arising pursuant to any provision of the General Corporation Law of the State of Delaware or our restated certificate of incorporation or amended and restated bylaws, or any action asserting a claim against us or any of our directors or officers governed by the internal affairs doctrine. This exclusive forum provision may limit the ability of our stockholders to bring a claim in a judicial forum that such stockholders find favorable for disputes with us or our directors or officers, which may discourage such lawsuits against us and our directors and officers.

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

**Recent Sales of Unregistered Securities**

In March 2017, in connection with the triggering of a success payment under the Cpf1 License Agreement, we issued promissory notes (the "Notes"), in an aggregate principal amount of $5.0 million to Broad and Wageningen. The Notes are convertible, at our option, into shares of our common stock subject to certain conditions. No underwriters were involved in the foregoing issuances of securities. The securities were issued pursuant to Section 4(a)(2) under the Securities Act, relating to transactions by an issuer not involving any public offering. All recipients either received adequate information about us or had access, through other relationships, to such information.

**Use of Proceeds from Registered Securities**

On February 8, 2016, we closed our initial public offering of common stock under a registration statement on Form S-1 (File No. 333-208856) that was declared effective by the Securities and Exchange Commission (the "SEC") on February 2, 2016.

We received aggregate net proceeds from the offering of $97.5 million, after deducting underwriting discounts and commissions and other offering expenses payable by us. None of the underwriting discounts and commissions or other offering expenses were incurred or paid to directors or officers of ours or their associates or to persons owning 10% or more of our common stock or to any affiliates of ours.

As of March 31, 2017, we had used approximately $45.3 million of the net offering proceeds, primarily to fund preclinical studies for our LCA10 program, continued expansion of our platform technology, and preclinical studies of our research programs in addition to LCA10 and engineered T cells, as well as for working capital and general corporate purposes. We have invested the remaining net proceeds from the offering in a variety of capital preservation investments, including short-term, investment grade, interest bearing instruments and U.S. government securities. There has been no material change in our planned use of the net proceeds from the offering as described in our final prospectus filed with the SEC pursuant to Rule 424(b) under the Securities Act of 1933, as amended.

**Item 6. Exhibits**

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index, which is incorporated herein 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.

**EDITAS MEDICINE, INC.**

Dated: May 15, 2017

By: /s/ Andrew A. F. Hack
Andrew A. F. Hack M.D., Ph.D.
Chief Financial Officer
(Principal Financial Officer)

| Exhibit Number | Description of Exhibit |
|---|---|
| 10.1† | Strategic Alliance and Option Agreement, dated March 14, 2017, between the Registrant and Allergan Pharmaceuticals International Limited |
| 10.2 | Amendment No.1 to Amended and Restated Cas9-I License Agreement, by and among the Registrant, President and Fellows of Harvard College, and The Broad Institute, Inc., dated March 3, 2017 (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37687) filed with the Securities and Exchange Commission on March 7, 2017) |
| 10.3 | Common Stock Sales Agreement, dated March 3, 2017, between the Registrant and Cowen and Company, LLC (incorporated by reference to Exhibit 1.2 to the Registrant's Registration Statement on Form S-3 (File No. 333-216444) filed with the Securities and Exchange Commission on March 3, 2017 |
| 31.1 | Rule 13a-14(a) Certification of Principal Executive Officer |
| 31.2 | Rule 13a-14(a) Certification of Principal Financial Officer |
| 32.1 | Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. §1350 |
| 101.INS | XBRL Instance Document |
| 101.SCH | XBRL Taxonomy Extension Schema Document |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document |

† Confidential treatment requested as to certain portions, which portions have been omitted and filed separately with the Securities and Exchange Commission.

**Exhibit 10.1**

**EXECUTION VERSION**

Confidential Materials omitted and filed separately with the
Securities and Exchange Commission. Double asterisks denote omissions.

# STRATEGIC ALLIANCE AND OPTION AGREEMENT

**by and between**

**EDITAS MEDICINE, INC.**

**AND**

**ALLERGAN PHARMACEUTICALS INTERNATIONAL LIMITED**

**CONFIDENTIAL**

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This STRATEGIC ALLIANCE AND OPTION AGREEMENT (the "Agreement") is entered into and made effective as of March 14, 2017 (the "Effective Date") by and between Editas Medicine, Inc., a Delaware corporation ("Editas") and Allergan Pharmaceuticals International Limited, a public company limited by shares organized under the laws of Ireland ("Allergan"). Editas and Allergan are each referred to herein by name or as a "Party" or, collectively, as "Parties."

## RECITALS

WHEREAS, Editas is a biotechnology company focused, *inter alia*, on the application of its industry-leading Genome Editing Technology to the discovery and development of Gene Editing Therapies for the treatment of a broad range of diseases and conditions;

WHEREAS, Allergan is a leading pharmaceutical company focused, *inter alia*, on the discovery, development, and commercialization of therapeutic products for the treatment of ocular disorders;

WHEREAS, the Parties acknowledge that Editas has made substantial investment in the protection of its intellectual property, including reimbursement by Editas of out-of-pocket Patent Costs for the prosecution and defense thereof; and

WHEREAS, the Parties desire to establish an alliance to discover, develop, and commercialize novel genomic medicines for a broad range of serious ocular disorders.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained, as well as past Patent Costs incurred by Editas, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

## ARTICLE 1
## DEFINITIONS

1.1 Defined Terms. As used in this Agreement, the following terms will have the meanings set forth in this ARTICLE 1 unless context dictates otherwise:

"2014 MGH Agreement" means the Exclusive Patent License Agreement (MGH Agreement No. A221317; MGH Case Nos. [**]) entered into by and between The General Hospital Corporation, d/b/a Massachusetts General Hospital ("MGH") and Editas, dated as of August 29, 2014, as amended by the First Amendment, dated as of June 29, 2015 and the Second Amendment, dated as of November 17, 2016.

"2016 MGH Agreement" means the Exclusive Patent License Agreement (MGH Agreement No. A224596; MGH Case Nos. [**]) by and between MGH and Editas, dated as of August 2, 2016.

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with a Party to this Agreement, regardless of whether such Affiliate is or becomes an Affiliate on or after the

Effective Date. A Person shall be deemed to "control" another Person if it (a) owns, directly or indirectly, beneficially or legally, at least fifty percent (50%) of the outstanding voting securities or capital stock of such other Person, or has other comparable ownership interest with respect to any Person other than a corporation; or (b) has the power, whether pursuant to contract, ownership of securities or otherwise, to direct the management and policies of the Person.

"Allergan CDP Patents" means all Patents that claim an Invention conceived solely by or on behalf of Allergan, its Affiliates, Licensees, or Sublicensees in the course of performing activities conducted pursuant to a Collaboration Development Program or Allergan Development Program.

"Allergan Development Program" means one or more Collaboration Development Program(s) for which Allergan exercises its Option and that has(ve) not been terminated in accordance with ARTICLE 12.

"Biosimilar Product" means, with respect to a Licensed Product in any country in the Territory, any Gene Editing Therapy sold by a Third Party not authorized by or on behalf of Allergan, its Affiliates, Licensees, or Sublicensees, that targets the same Target as the Licensed Product and, on the basis of a prior Regulatory Approval granted to a Licensed Product, (a) is approved by the FDA as a "biosimilar" or "interchangeable" product pursuant to Section 351(k) of the Public Health Service Act (42 U.S.C. § 262(k)), (b) is approved by the EMA as a "similar biological medicinal product" pursuant to EU Directive 2001/83/EC, or (c) has received analogous abbreviated Regulatory Approval from the applicable Regulatory Authority in another foreign jurisdiction.

"Biosimilar Product Competition" means (a) with respect to a Licensed Product in the United States or a Major European Country, if during a Calendar Quarter, one or more Biosimilar Product(s) is commercially available in such country and such Biosimilar Product(s) has a market share of [**] percent [**]%) or more of the aggregate market in such country of such Licensed Product and the Biosimilar Product(s) (based on sales of units of such Licensed Product and such Biosimilar Product(s), as reported by IMS International, or if such data are not available, such other reliable data source as reasonably determined by the Parties) or (b) with respect to a Licensed Product in any other country in the Territory, if during a Calendar Quarter, one or more Biosimilar Product(s) is commercially available in such country and such Biosimilar Product(s) reduces the Net Sales of such Licensed Product in such country by at least [**] percent ([**]%) as compared to the Net Sales in such country from the Calendar Quarter immediately preceding the commercial availability of such Biosimilar Product(s).

"Business Day" means a day on which banking institutions in Boston, Massachusetts, United States are open for business, excluding any Saturday or Sunday.

"Calendar Quarter" means a period of three (3) consecutive months ending on the last day of March, June, September, or December, respectively.

"Calendar Year" means a period of twelve (12) consecutive months beginning on January 1 and ending on December 31.

"Cas9-I Agreement" means the Amended and Restated Cas9-I License Agreement entered into by and among the President and Fellows of Harvard College ("Harvard"), the Broad Institute, Inc. ("Broad") and Editas, dated as of December 16, 2016, as amended on March 3, 2017.

"Cas9-II Agreement" means the Cas9-II License Agreement by and between Broad and Editas, dated as of December 16, 2016.

"Cpf1 Agreement" means the Cpf1 License Agreement by and between Broad and Editas, dated as of December 16, 2016.

"CDP IP" means, collectively, CDP Patents and CDP Know-How.

"CDP Know-How" means all Know-How developed solely or jointly by or on behalf of Editas and/or Allergan in the course of activities conducted pursuant to a Collaboration Development Program.

"CDP Patents" means, collectively, the Allergan CDP Patents, Editas CDP Patents, and the Joint CDP Patents.

"CDP Product" means any Gene Editing Therapy that modifies a Target, is Developed by Editas as part of a Collaboration Development Program, prior to Allergan's exercise (if ever) of its Option to license such Collaboration Development Program.

"cGMP" means all applicable standards relating to Manufacturing practices for fine chemicals, intermediates, bulk products or Licensed Products, including (a) the principles detailed in the FDA's current Good Manufacturing Practices, 21 CFR Parts 210 and 211 and The Rules Governing Medicinal Products in the European Community, Volume IV, Good Manufacturing Practice for Medicinal Products, as each may be amended from time to time or (b) Laws promulgated by any Governmental Authority having jurisdiction over the Manufacture of a product.

"Change of Control" means, with respect to Editas, (a) a merger or consolidation of Editas with a Third Party which results in the voting securities of Editas outstanding immediately prior thereto ceasing to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger or consolidation, (b) a transaction or series of related transactions in which a Third Party, together with its Affiliates, becomes the owner of fifty percent (50%) or more of the combined voting power of Editas' outstanding securities other than through issuances by Editas of securities of Editas in a bona fide financing transaction or series of related bona fide financing transactions, or (c) the sale or other transfer to a Third Party of all or substantially all of Editas' assets or all or substantially all of Editas' business to which this Agreement relates.

"Clinical Trial" means a human clinical trial, including any Phase 1 Clinical Trial, Phase 2 Clinical Trial or Phase 3 Clinical Trial.

"Collaboration Development Program" means a Development program initially undertaken by Editas pursuant to this Agreement to study the use of Gene Editing Therapy(ies)

directed at a Target and an Indication and approved as a Collaboration Development Program by the ASC. An initial list of Collaboration Development Programs is set forth as Exhibit A-1, which list may be updated from time to time by mutual agreement of the Parties pursuant to Section 3.1.4.

"Commercialization" and "Commercialize" means all activities undertaken relating to the marketing, promotion (including advertising, detailing, sponsored product or continuing medical education), any other offering for sale, distribution, and sale of a product.

"Commercially Reasonable Efforts" means (a) with respect to the efforts to be expended by a Party with respect to an agreed objective, except as otherwise provided in clause (b), such reasonable, diligent, and good faith efforts as such Party would normally use to accomplish a similar objective under similar circumstances taking into account the responsible allocation of such Party's resources under the circumstances, and (b) (i) with respect to Allergan's obligations [**].

"Competitive Product" means, with respect to a Licensed Product or Editas Product, [**].

"Control," "Controls," "Controlled" or "Controlling" means, with respect to any intellectual property, possession of the right (whether through ownership or license (other than by operation of this Agreement) or control over an Affiliate with such right) to grant the licenses or sublicenses as provided herein without violating the terms of any agreement or other arrangement with any Third Party. Notwithstanding the foregoing, intellectual property of a Party that is licensed from a Third Party after the Effective Date and would otherwise be considered to be under the Control of a Party shall not be deemed to be under the Control of such Party, unless such Third Party license becomes an In-License pursuant to Section 6.6.4(b).

"Core Option Package Criteria" means the core data package criteria for each Option Package, as set forth on Exhibit B.

"Cover," "Covering" or "Covered" means, with respect to a product, composition, technology, process or method that, in the absence of ownership of or a license granted under a Patent, the manufacture, use (where such use is for the treatment of an Indication approved by the applicable Regulatory Authority), offer for sale, or sale of such product or composition, would infringe such Patent (or, in the case of a Patent that has not yet issued, would infringe such Patent if it were to issue).

"CRISPR" means a clustered regularly interspaced short palindromic repeat.

"CRISPR Technology" means an enzymatically active or inactive Cas9, Cpf1 or other CRISPR-derived endonuclease and one or more nucleic acid sequence(s).

"Develop" or "Development" means all activities relating to research, non-clinical and preclinical testing and trials, clinical testing and trials, including Clinical Trials, toxicology testing, modification, optimization and animal efficacy testing of pharmaceutical compounds, statistical analysis, publication and presentation of study results and reporting, preparation and submission to Regulatory Authorities of applications (including any CMC information) relating to Licensed Products.

"Development Costs" means the FTE Costs and the direct out-of-pocket costs incurred by or on behalf of a Party or any of its Affiliates in the conduct of the Development of a Licensed Product.

"DOJ" means the Antitrust Division of the United States Department of Justice.

"Dollars" or "$" means the legal tender of the U.S.

"Editas Background IP" means, collectively, the Editas Background Patents and Editas Background Know-How.

"Editas Background Know-How" means all Know-How which is Controlled by Editas or its Affiliates at any time during the Term, that either (a) relates to the type(s) of Genome Editing Technology used (or intended to be used) in the conduct of a Collaboration Development Program and (b) is reasonably necessary or useful to Develop, Commercialize or Manufacture a Licensed Product; provided that Additional Third Party IP licensed by Editas shall only be included in the Editas Background Know-How if the license for such Additional Third Party IP becomes an In-License pursuant to Section 6.6.4(b)(iii). The CDP Know-How shall not be Editas Background Know-How. Notwithstanding anything in this Agreement to the contrary, Editas Background Know-How shall not include any Know-How to the extent Controlled by any Person that acquires all or any part of Editas or an Affiliate of Editas, or any affiliates of such Person, in each case (A) which is Controlled by such Person immediately prior to the effective date of the acquisition or (B) which is Controlled by such Person on or after the effective date of acquisition but is not Controlled by Editas or an Affiliate of Editas (excluding for purposes of this provision, such Person and Affiliates of Editas that are such Affiliates by virtue of controlling, being controlled by or under common control with such Person) and was developed, invented or obtained without the direct or indirect use of any non-public Editas Background Know-How.

"Editas Background Patents" means the Patents set forth on Exhibit I and all other Patents which are owned or Controlled by Editas or its Affiliates at any time during the Term to the extent they claim or cover the Editas Background Know-How; provided that Additional Third Party IP licensed by Editas shall only be included in the Editas Background Patents if the license for such Additional Third Party IP becomes an In-License pursuant to Section 6.6.4(b)(iii). The CDP Patents shall not be Editas Background Patents. Notwithstanding anything in this Agreement to the contrary, Editas Background Patents shall not include any Patents to the extent owned or Controlled by any Person that acquires all or any part of Editas or an Affiliate of Editas, or any affiliates of such Person, in each case (A) which is Controlled by such Person immediately prior to the effective date of the acquisition or (B) which is Controlled by such Person on or after the effective date of acquisition but is not Controlled by Editas or an Affiliate of Editas (excluding for purposes of this provision, such Person and Affiliates of Editas that are such Affiliates by virtue of controlling, being controlled by or under common control with such Person) and was developed, invented, or obtained without the direct or indirect use of any non-public Editas Background Know-How.

"Editas CDP Patents" means all Patents that claim an Invention conceived solely by or on behalf of Editas or its Affiliates in the course of performing activities conducted pursuant to a Collaboration Development Program.

"Editas Product" means a Gene Editing Therapy that is Developed or Commercialized by Editas under an Editas Program.

"Editas Program" means (a) a Collaboration Development Program for which Allergan fails to exercise its Option before expiration or termination of the Initial Option Period or the Extended Option Period, as applicable, (including any applicable HSR Extension Period) or (b) an Allergan Development Program terminated pursuant to Section 5.3.2, 12.4, 12.5.1, 12.6 or 12.7.

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

"European Union" means the European Union member states as then-currently constituted. As of the Effective Date, the European Union member states are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom.

"Executive Officers" means, with respect to Allergan, its Chief R&D Officer, and with respect to Editas, its chief scientific officer.

"Existing In-Licenses" means the license agreements set forth on Exhibit C, as amended or restated from time to time.

"FDA" means the U.S. Food and Drug Administration, and any successor entity thereto.

"Field" means a category of human diseases or conditions affecting the same therapeutic area. By way of example, the following are each deemed a different therapeutic area and thus a different Field: Ocular Field, otology, central nervous system, gastrointestinal, medical aesthetics/dermatology, urology, women's health, immunology/infectious diseases, cardiology/vascular diseases, and oncology.

"First Commercial Sale" means, with respect to a Licensed Product or an Editas Product and a country, the first sale of such Licensed Product or Editas Product, as applicable, made by the applicable Party, its Affiliates, Licensees, or Sublicensees to a Third Party in such country for end use or consumption in such country after any necessary Regulatory Approval and, with respect to the European Union, separate pricing approval (but, for clarity, excluding any sales for Clinical Trials or compassionate use programs).

"First Field" means, with respect to the achievement of a Milestone Event in an Allergan Development Program, the Field in which the first Licensed Product to achieve a particular Milestone Event is directed. First Field, Second Field and Third Field shall be determined on a Milestone Event-by-Milestone Event basis for each Allergan Development Program.

"FTC" means the United States Federal Trade Commission.

"FTE" means one (1) person (or the equivalent of one (1) person) working full time for one (1) twelve (12) month period in a Development, regulatory or other relevant capacity (excluding persons employed in general and administrative, non-technical management or other non-technical capacities) employed or contracted by Editas or any of its Affiliates and assigned to perform specified work, with such commitment of time and effort to constitute one (1) employee performing such work on a full-time basis, which for purposes hereof shall be [**] hours per year. No additional payment shall be made with respect to any person who works more than [**]) hours per year and any person who devotes less than [**] hours per year shall be treated as an FTE on a pro rata basis based upon the actual number of hours worked divided by [**].

"FTE Costs" means the FTE Rate multiplied by the applicable number of FTEs who perform a specified activity pursuant to this Agreement.

"FTE Rate" means $[**] per FTE for the period commencing on the Effective Date and ending December 31, 2017. On January 1, 2018 and on January 1st of each subsequent Calendar Year, the foregoing rate shall be increased for the Calendar Year then commencing by the percentage increase, if any, in the Consumer Price Index ("CPI") as of December 31 of the then most recently completed Calendar Year with respect to the level of the CPI on December 31, 2016. Consumer Price Index or CPI means the Consumer Price Index – Urban Wage Earners and Clerical Workers, US City Average, All Items, 1982-84 = 100, published by the United States Department of Labor, Bureau of Labor Statistics (or its successor equivalent index).

"GAAP" means U.S. generally accepted accounting principles, consistently applied.

"Gene Editing Therapy" means a product that uses Genome Editing Technology that functions through a mechanism of action of (a) editing (including modifying) of Genetic Material or (b) targeting of Genetic Material (including targeting of Genetic Material to modify associated chromatin), either (i) ex vivo for subsequent administration to a human, in the case of the foregoing clause (a) or (b) of a product so edited or targeted, or (ii) in vivo, by a product administered to a human, in the case of the foregoing clause (a) or (b) of a product that so edits or targets.

"Genetic Material" means all DNA (including DNA in and outside chromosomes) and RNA.

"Genome Editing Technology" means any CRISPR Technology, zinc finger nuclease, transcription activator-like effector nucleases (TALEN), and/or any other therapeutic endonuclease genome editing technology.

"GLP-Toxicology Study" means a toxicology study conducted in animals in accordance with current good laboratory practice, to the extent applicable, as required by the FDA under 21 CFR Part 58 and all applicable FDA rules, regulations, orders and guidance, or applicable requirements with respect thereto under current good laboratory practices prescribed by the European Community, the Organization for Economic Cooperation and Development Council (OECD), and the ICH Guidelines.

"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, division, board 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.

"HHMI" means the Howard Hughes Medical Institute.

"HSR Act" or "HSR" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (15 U.S.C. Sec. 18a), and the rules and regulations promulgated thereunder.

"HSR Clearance" means either (a) early termination of the applicable waiting period under the HSR Act with respect to the HSR Filings or (b) expiration of the applicable waiting period under the HSR Act with respect to the HSR Filings.

"HSR Filings" means the filings by Editas and Allergan with the FTC and the DOJ of a Notification and Report Form for Certain Mergers and Acquisitions (as that term is defined in the HSR Act) with respect to the matters set forth in this Agreement, together with all required documentary attachments thereto.

"In-License" means (a) the Existing In-Licenses and (b) any Third Party license agreements that become In-Licenses pursuant to Section 6.6.4(b).

"In-License Payment" means the royalty amounts payable by Editas to its Inbound Licensors pursuant to the In-Licenses on sales of Licensed Products, calculated on a Licensed Product-by-Licensed Product basis.

"Inbound Licensor" means the licensor(s) under an In-License.

"IND" means an investigational new drug application submitted to the FDA pursuant to Part 312 of Title 21 of the U.S. Code of Federal Regulations, including any amendments thereto. References herein to IND shall include, to the extent applicable, any comparable filing(s) outside the U.S. for the investigation of any product in any other country or group of countries (such as a Clinical Trial application in the European Union).

"Indication" means the intended use of a product for the treatment, control, mitigation, prevention or cure of a distinct recognized human disease or condition, or of a manifestation of a recognized human disease or condition, or for the relief of symptoms associated with a recognized human disease or condition, and which, if approved in the U.S., would be reflected in the "Indications and Usage" section of labeling pursuant to 21 C.F.R. §201.57(c)(2) or, to the extent applicable, any comparable labeling section outside the U.S.

"Institution" means each of Harvard, Broad and MGH.

"Invention" means any new and useful process, article of manufacture, compound, composition of matter, formulation or apparatus, or any improvement thereof, discovery or finding, whether or not patentable.

"Iowa" means the University of Iowa Research Foundation.

"Joint CDP Patents" means all Patents that claim an Invention conceived jointly by or on behalf of Editas and Allergan in the course of performing activities conducted pursuant to a Collaboration Development Program.

"Juno Field" means the diagnosis, treatment or prevention of any cancer in humans through the use of engineered T-cells, which shall exclude the diagnosis, treatment or prevention of medullary cystic kidney disease 1 regardless of whether such disease is characterized as a cancer.

"Know-How" means any ideas, Inventions, know-how, trade secrets, data, specifications, instructions, processes, formulas, technology, expert opinions and information, including biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, clinical, safety, manufacturing and quality control data or information.

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

"LCA10" or "Leber's Congenital Amaurosis 10" means any disease caused by a mutation in or around the CEP290 gene.

"LCA10 Program" means the Collaboration Development Program to Develop a Licensed Product for the treatment of LCA10.

"Licensed Product" means any Gene Editing Therapy that modifies a Target that is (i) Developed by Editas as the result of a Collaboration Development Program for which Allergan has exercised its Option or (ii) Developed by Allergan as the result of an Allergan Development Program, provided each such Gene Editing Therapy shall cease to be a Licensed Product upon termination of Allergan's rights thereto pursuant to the terms hereof.

"Licensee" means, with respect to a particular Licensed Product or Editas Product, a Third Party to whom Allergan or Editas, as applicable, has granted a license under any Know-How or Patents Controlled by the granting Party, but excluding any Third Party acting solely as a distributor.

"Major European Country" means any of the following countries: [**]. "Major European Countries" means all of the foregoing countries.

"Manufacture" means all activities related to the manufacturing of a compound or product, including test method development and stability testing, formulation, process development, manufacturing scale-up, manufacturing for use in non-clinical and clinical studies, manufacturing for commercial sale, packaging, release of product, quality assurance/quality control development, quality control testing (including in-process, in-process release and stability testing) and release of product or any component or ingredient thereof, and regulatory activities related to all of the foregoing.

"MIT" means the Massachusetts Institute of Technology.

"Net Sales" shall mean, with respect to a Licensed Product or Editas Product in a country in the Territory, the gross amount invoiced for sale or other disposition of such Licensed Product or Editas Product in such country by a Party, its Affiliates, Licensees, or Sublicensees to Third Parties (including distributors, wholesalers and end users), less the following deductions accounted for in accordance with GAAP:

(a) sales returns and allowances actually paid, granted or accrued on the Licensed Product, including trade quantity, prompt pay and cash discounts and adjustments, granted on account of price adjustments or billing errors;

(b) credits or allowances given or made for rejection, recall, return or wastage replacement of, and for uncollectible amounts on, Licensed Products or Editas Products or for rebates or retroactive price reductions;

(c) price reductions, rebates and chargeback payments granted to managed health care organizations, pharmacy benefit managers (or equivalents thereof), national, state/provincial, local, and other governments, their agencies and purchasers and reimbursers, or to trade customers (including Medicare, Medicaid, managed care and similar types of rebates and chargebacks);

(d) costs of outbound freight, insurance, and other transportation charges to the extent separately invoiced to the customer and included in gross amounts invoiced, as well as inventory management fees or similar fees for bona fide services provided by wholesalers, distributors, warehousing chains and other Third Parties related to the distribution of such Licensed Product or Editas Product;

(e) taxes, duties or other governmental charges (including any tax such as a value added or similar tax, other than any taxes based on income) relating to the sale of such Licensed Product, as adjusted for rebates and refunds, including pharmaceutical excise taxes;

(f) the portion of administrative fees paid during the relevant time period to group purchasing organizations or pharmaceutical benefit managers relating to such Licensed Product;

(g) that portion of, as applicable, (A) the annual fee on prescription drug manufacturers imposed by the PPACA or (B) the user fees imposed on device manufacturers by the Medical Device User Fee and Modernization Act of 2002, in each case that a Party or its Affiliates allocates to sales of the Licensed Products or Editas Products in accordance with such Party's or its Affiliate's standard policies and procedures consistently applied across its products; and

(h) any other deductions not otherwise itemized above but which are hereinafter consistently applied across Allergan's products as a result of a change in applicable Law or GAAP, provided that [**];

to the extent such deductions: (i) are applicable and in accordance with standard allocation procedures, (ii) have not already been deducted or excluded, (iii) are incurred in the ordinary course of business in type and amount consistent with good industry practice, and (iv) except with respect to the uncollectible amounts and pharmaceutical excise taxes described in subsections (b) and (e) above, are determined in accordance with GAAP. Net Sales shall not be imputed to transfers of Licensed Product or Editas Product without consideration or for nominal consideration for use in any clinical trial, or for any bona fide charitable, compassionate use or indigent patient program purpose or as a sample. For the avoidance of doubt, in the case of any transfer of any Licensed Product or Editas Product between or among a Party and its Affiliates, Licensees, or Sublicensees for resale, Net Sales shall be determined based on the sale made by such Affiliate, Licensee, or Sublicensee to a Third Party. In the case of any sale for value, such as barter or counter-trade, of a Licensed Product or Editas Product, or part thereof, other than in an arm's length transaction exclusively for cash, Net Sales shall be deemed to be the Net Sales at which substantially similar quantities of such Licensed Product and Editas Product are sold for cash in an arm's length transaction in the relevant country.

Notwithstanding anything to contrary contained herein, the following shall not be considered Net Sales for purposes of this Agreement: sales of (w) a Biosimilar Product by any Licensee or Sublicensee that has received a license from a Party in settlement of any dispute or pursuant to any judgment (provided that, any actual monies received by a Party or its Affiliates from such settlement after a deduction of such Party's out-of-pocket costs and expenses shall be treated as Net Sales in accordance with Section 8.3.2(f)), (x) a Licensed Product, Editas Product, or a Biosimilar Product by a Licensee or Sublicensee pursuant to a compulsory license (provided that, any actual monies received by a Party or its Affiliates pursuant to such compulsory license shall be treated as Net Sales) or (y) a Licensed Product or Editas Product as to which a Party or its Affiliate, Licensee, or Sublicensee does not receive any consideration tied to sales of such Licensed Product or Editas Product. If a Party appoints a distributor to sell an authorized Biosimilar Product of a Licensed Product or Editas Product, then only the consideration actually paid to such Party or its Affiliate by such distributor shall be included in the calculation of Net Sales.

"Ocular Field" means the treatment, control, mitigation, prevention or cure of any disease of the eye or its adnexa.

"Ocular Indication" means an Indication in the Ocular Field.

"Option Exercise Fee" means the fee applicable to Allergan's exercise of an Option, as set forth in the table in Section 6.3.

"Option Package" means, with respect to a given Collaboration Development Program, the results and data to be delivered to Allergan at the conclusion of Editas' Development obligations with respect to such Collaboration Development Program, which results and data shall be sufficient for the ASC to evaluate each category of the Option Package Criteria determined in advance for such Collaboration Development Program.

"Option Package Criteria" means the Core Option Package Criteria, as may be customized for each Collaboration Development Program by the Parties, acting through the ASC

pursuant to Section 3.1.4, prior to the commencement of a Collaboration Development Program, or by the Parties from time to time thereafter by mutual agreement.

"Patent" means (a) all patents and patent applications in any country or supranational jurisdiction in the Territory, (b) any substitutions, divisionals, continuations, continuations-in-part, provisional applications, reissues, renewals, registrations, confirmations, re-examinations, extensions, supplementary protection certificates and the like of any such patents or patent applications, and (c) foreign counterparts of any of the foregoing.

"Patent-Based Exclusivity" means, with respect to a Licensed Product or Editas Product in a country in the Territory, that at least one Valid Claim of the Editas Background Patents, the Editas CDP Patents or the Joint CDP Patents Covers such Licensed Product in such country.

"Patent Challenge" means any direct or indirect dispute or challenge, or any knowing, willful, or reckless assistance in the dispute or challenge, of the validity, patentability, priority, inventorship, ownership or enforceability of any Editas Background Patent or any claim thereof, or opposition or assistance in the opposition of the grant of any letters patent within the Editas Background Patents, in any legal or administrative proceedings, including in a court of law, before the United States Patent and Trademark Office or other agency or tribunal in any jurisdiction, or in arbitration including, without limitation, by reexamination, inter partes review, opposition, interference, post-grant review, nullity proceeding, preissuance submission, third party submission, derivation proceeding or declaratory judgment action; provided, however, that the term Patent Challenge shall not include (i) Allergan or its Affiliates being an essential party in any patent interference proceeding before the United States Patent and Trademark Office, which interference Allergan or its Affiliates acts in good faith to try to settle, (ii) Allergan or its Affiliates, due to its status as an exclusive licensee of Patents other than the Editas Background Patents, being named by the licensor of such Patents as a real party in interest in such an interference, so long as Allergan or the applicable Affiliate either abstains from participation in, or acts in good faith to settle, the interference, (iii) any assertion by Allergan or its Affiliates relating to validity, patentability, scope, priority, construction, non-infringement, inventorship, ownership or enforceability as a defense in any legal proceeding, administrative proceeding or arbitration brought by Editas, its Licensee or assignee asserting infringement against Allergan or its Affiliates or (iv) any dispute or challenge brought by a Third Party which subsequently becomes an Affiliate of Allergan, provided Allergan causes such Third Party to take commercially reasonable steps to rescind such dispute or challenge within [**] days after such Third Party becomes an Affiliate of Allergan. For clarity, a Patent Challenge shall not include arguments made by Allergan that (a) distinguish the inventions claimed in Patents owned or controlled by Allergan ("Allergan Patents") from those claimed in the Editas Background Patents but (b) do not disparage the Editas Background Patents or raise any issue of Editas Background Patents' compliance with or sufficiency under applicable patent laws, regulations or administrative rules, in each case (i) in the ordinary course of ex parte prosecution of the Allergan Patents or (ii) in inter partes proceedings before the United States Patent and Trademark Office or other agency or tribunal in any jurisdiction (excluding interferences or derivation proceedings), or in arbitration, wherein the Allergan Patents have been challenged. [**].

"Patent Costs" means the reasonable fees and expenses paid to outside legal counsel, and filing, maintenance and other out-of-pocket expenses paid to Third Parties, incurred in

connection with the Prosecution and Maintenance of Patents, as determined in accordance with GAAP (as applicable).

"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.

"Phase 1 Clinical Trial" means a human clinical trial of a product in any country, the principal purpose of which is a preliminary determination of safety in healthy individuals or patients, that would satisfy the requirements of 21 C.F.R. 312.21(a), or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States, but excluding so-called "phase 0 trials" conducted using small doses in fewer than twenty (20) people.

"Phase 2 Clinical Trial" means a human clinical trial of a product in any country that would satisfy the requirements of 21 C.F.R. 312.21(b) and is intended to explore a variety of doses, dose response, and duration of effect, and to generate initial evidence of clinical safety and activity in a target patient population, or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States.

"Phase 3 Clinical Trial" means a human clinical trial of a product in any country that would satisfy the requirements of 21 C.F.R. 312.21(c) and is intended to (a) establish that the product is safe and efficacious for its intended use, (b) define warnings, precautions and adverse reactions that are associated with the product in the dosage range to be prescribed, and (c) support Regulatory Approval for such product.

"Profit-Sharing Option Information Package" means an information package provided by Allergan to Editas consisting of a copy of the first IND filed for the applicable Allergan Development Program and a preliminary, non-binding plan and, for the next [**] years, a budget for the clinical Development of Licensed Products in such Allergan Development Program, which plan and budget have been prepared in good faith by Allergan.

"Program" means any of the following: Collaboration Development Program, Allergan Development Program, Co-Co Program or Editas Program. "Programs" means all of the foregoing.

"Prosecution and Maintenance" or "Prosecute and Maintain" means, with regard to a Patent, the preparation, filing, prosecution and maintenance of such Patent, as well as re-examinations, reissues, appeals, and requests for patent term adjustments and patent term extensions with respect to such Patent, together with the initiation or defense of interferences, the initiation or defense of oppositions and other similar proceedings with respect to the particular Patent, and any appeals therefrom. For clarification, "Prosecution and Maintenance" or "Prosecute and Maintain" shall not include any other enforcement actions taken with respect to a Patent.

"Regulatory Approval" means the approval, license or authorization of the applicable Regulatory Authority for the marketing and sale of a product for a particular Indication in a country in the Territory.

"Regulatory Authority" means the FDA in the U.S. or any health regulatory authority in another country in the Territory that is a counterpart to the FDA and holds responsibility for granting Regulatory Approval in such country, including the EMA and any successor(s) thereto.

"Regulatory-Based Exclusivity" means with respect to a Licensed Product or Editas Product in a country in the Territory, that, with respect to such Licensed Product or Editas Product, (a) Allergan or Editas, as applicable, or any of such Party's Affiliates, Licensees, or Sublicensees has been granted the exclusive legal right by a Regulatory Authority (or is otherwise entitled to the exclusive legal right by operation of applicable Law) in such country to market and sell the Licensed Product or Editas Product, as applicable, in such country, or (b) the data and information submitted by Allergan or Editas, as applicable, or any of such Party's Affiliates, Licensees, or Sublicensees to the relevant Regulatory Authority for purposes of obtaining Regulatory Approval may not be disclosed, referenced, used or relied upon in any way by the relevant Regulatory Authority (including by relying upon the Regulatory Authority's previous findings regarding the safety or effectiveness of the Licensed Product) to support the Regulatory Approval or marketing of any product by a Third Party.

"Research Term" means seven (7) years from the Effective Date, provided that, if Editas has not delivered Option Packages that are deemed to satisfy the applicable Option Package Criteria by the ASC (pursuant to Section 2.2.2) for five (5) Collaboration Development Programs, then the Research Term shall automatically extend by one-year increments until such obligation is satisfied, up to a maximum of ten (10) years from the Effective Date.

"Rockefeller" means The Rockefeller University.

"Safety Concern" means any toxicity, serious adverse event, or other safety finding in any preclinical or clinical studies required by or performed for the purpose of submission to Regulatory Authorities that leads to a good faith determination by any data monitoring committee or by Regulatory Authorities that the Licensed Product exposes or could expose humans to an unacceptable safety risk in relation to therapeutic benefit.

"Second Field" means, with respect to the achievement of a Milestone Event in an Allergan Development Program, the second Field for which a Licensed Product (or a different Licensed Product within the same Allergan Development Program) achieves the same Milestone Event as that achieved for the First Field; provided that Development for the Licensed Product in the First Field has not been abandoned at the time such Milestone Event for such Licensed Product is achieved in the Second Field. First Field, Second Field and Third Field shall be determined on a Milestone Event-by-Milestone Event basis for each Allergan Development Program.

"Sublicensee" means, with respect to a particular Licensed Product or Editas Product, a Third Party to whom Allergan or Editas, as applicable, has granted a sublicense under any Know-How or Patents licensed to such Party pursuant to this Agreement, but excluding any Third Party acting solely as a distributor or manufacturer.

"Target" means any Genetic Material, the editing, modification, or other manipulation of which may be used to cure, mitigate, treat, or prevent any disease. An initial list of Targets that

may be designated as Targets of a Collaboration Development Program is set forth as Exhibit A-2, which list may be updated from time to time by mutual agreement of the Parties.

"Tax Treaty" means the Convention between the Government of the United States of America and the Government of Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income and Capital Gains, signed at Dublin on July 28, 1997, as amended and in effect from time to time.

"Territory" means the entire world.

"Third Field" means, with respect to the achievement of a Milestone Event in an Allergan Development Program, the third Field for which a Licensed Product (or a different Licensed Product within the same Allergan Development Program) achieves the same Milestone Event as that achieved for the First Field and the Second Field, provided that Development for the Licensed Product in the First Field and the Second Field has not been abandoned at the time such Milestone Event for such Licensed Product is achieved in the Third Field. First Field, Second Field and Third Field shall be determined on a Milestone Event-by-Milestone Event basis for each Allergan Development Program.

"Third Party" means any Person other than Editas or Allergan that is not an Affiliate of Editas or of Allergan.

"Utokyo" means the University of Tokyo.

"United States" or "U.S." means the United States of America and all of its territories and possessions.

"[**]" any Patent issuing from or reasonably expected to claim priority to or otherwise issue from a Patent application claiming priority to [**] and any foreign counterpart thereto.

"Valid Claim" means (a) a claim of an issued patent in the U.S. or in a jurisdiction outside the U.S., that has not expired, lapsed, been cancelled or abandoned, or been dedicated to the public, disclaimed, or held unenforceable, invalid, or cancelled by a court or administrative agency of competent jurisdiction in an order or decision from which no appeal has been or can be taken, including through opposition, reexamination, reissue or disclaimer, or (b) a claim of a pending patent application that is filed and being prosecuted in good faith and that has not been finally abandoned or finally rejected and which has been pending for no more than [**] years from the date of filing of the earliest patent application to which such pending patent application claims priority. (For clarity, a claim of an issued patent that ceased to be a Valid Claim before it issued because it had been pending for more than [**] years from the date of filing of the earliest patent application to which such pending patent application claims priority, but subsequently issued and is otherwise described by clause (a) of the foregoing sentence shall again be considered to be a Valid Claim once it issues. The same principle shall apply in similar circumstances such as if, for example (but without limitation), a final rejection of a claim is overcome.)

"Wageningen" means Wageningen University.

1.2 Additional Definitions. Each of the following definitions is set forth in the section of this Agreement indicated below:

| **Definition:** | **Section:** |
|---|---|
| Acquiring Party | 7.3(d) |
| Additional Third Party IP | 6.6.4(b)(i) |
| Agreement | Preamble |
| Allergan | Preamble |
| Allergan Indemnitee | 11.2 |
| Allergan-Prosecuted Joint CDP Patents | 8.2.3(a) |
| Alliance Steering Committee or ASC | 3.1 |
| Arbitration Request | 13.3 |
| Bankruptcy Code | 4.5 |
| Breaching Party | 12.5.1 |
| Chairperson | 3.1.1 |
| Claims | 11.1.1 |
| Co-Co Products | 5.2.3 |
| Co-Co Program | 5.2.3 |
| Collaboration Manager | 3.2 |
| [**] | 6.4.1(e) |
| Competing Acquired Program | 7.3(d) |
| Competing Acquirer Program | 7.3(e) |
| Competing Product Transaction | 7.3(d) |
| Confidential Information | 9.1 |
| Defense Proceeding | 8.2.1(a) |
| Development Plan | 2.1.1(c) |
| Disclosing Party | 9.1 |
| Editas | Preamble |
| Editas Indemnitee | 11.1.1 |
| Editas-Prosecuted Joint CDP Patents | 8.2.3(c) |
| Effective Date | Preamble |
| [**] | 6.4.1(e) |
| Existing Confidentiality Agreement | 9.1.4 |
| Extended Option Period | 4.1.2(b) |
| Extension Notice | 4.1.2(b) |
| GLP-Toxicology and Phase 1 Development Plan | 4.1.2(b) |
| HSR Extension Period | 4.1.5 |
| Indemnified Party | 11.3 |
| Indemnifying Party | 11.3 |
| [**] | 11.1.2 |
| Initial Option Period | 4.1.2(a) |
| JIPC | 3.1.6(b) |
| Joint Working Group | 3.1.6(a) |
| LCA10 Program Development Costs | 5.1.2 |

| Definition: | Section: |
|---|---|
| Losses | 11.1.1 |
| [**] | 11.1.3 |
| Milestone Event | 6.4.1(a) |
| Non-Breaching Party | 12.5.1 |
| Option | 4.1.1 |
| Option Extension Fee | 6.3 |
| Option Period | 4.1.2(c) |
| Partner Rejection Right | 5.2.2(a) |
| Party or Parties | Preamble |
| Payee | 6.9 |
| Payor | 6.9 |
| Phase 1 Data Package | 4.1.2(b) |
| Pre-GLP-Toxicology Development Plan | 4.1.2(b) |
| Profit-Sharing Agreement | 5.2.1 |
| Profit-Sharing Option | 5.2.1 |
| Receiving Party | 9.1 |
| Reference Date | 2.2.2(a) |
| Royalty Term | 6.6.4(a) |
| Second Request | 4.1.5 |
| Securities Laws | 9.3.4 |
| Subcommittee | 3.1.6(c) |
| Terminal Exercise Disqualification Programs | 4.1.2(a) |
| Transition Plan | 4.3.1 |
| [**] | 6.4.1(e) |
| UPC | 8.3.2(g) |
| [**] | 6.4.1(e) |
| VAT | 6.13 |
| Withholding Taxes | 6.12 |

## ARTICLE 2
## RESEARCH AND DEVELOPMENT

2.1 Collaboration Development Programs.

2.1.1 Editas Responsibility.

(a) Pursuant to this Agreement and as further provided in this ARTICLE 2, during the Research Term, Editas shall use Commercially Reasonable Efforts to Develop at least five (5) Collaboration Development Programs selected by the ASC from the list of proposed Targets set forth in Exhibit A-2 (as amended from time to time upon mutual agreement of the Parties) and to deliver Option Packages for such Collaboration Development Programs, as determined by the ASC (pursuant to Section 2.2.2). Upon selection of a Collaboration Development Program by the ASC, such Collaboration Development Program shall be added to Exhibit A-1.

(b) Editas shall have responsibility for the conduct of, and shall have sole responsibility for all Development Costs incurred in connection with, each Collaboration Development Program (including any Clinical Trials, submissions to Regulatory Authorities and Manufacture of CDP Products consistent with the parameters to be agreed upon by the Parties and set forth on Exhibit D) until such time that such program is no longer a Collaboration Development Program. Notwithstanding the foregoing, where Allergan possesses expertise that may facilitate Editas' Development under this Section 2.1.1, Editas may request Allergan to provide reasonable assistance to Editas during the conduct of a Collaboration Development Program. Such assistance shall be provided (i) pursuant to a separate material transfer agreement reasonably acceptable to the Parties and (ii) reimbursed by Editas at Allergan's cost.

(c) Prior to the commencement of a Collaboration Development Program, Editas shall prepare and deliver to the ASC, for the ASC's review and approval, a written Development plan for each particular Collaboration Development Program setting forth the discovery and research activities to be conducted by Editas in connection with such Collaboration Development Program (each, a "Development Plan"). In the event of a conflict between the terms of this Agreement and a Development Plan, the terms of this Agreement shall govern. Without limiting the foregoing, the Development Plan shall include development milestones and anticipated timelines therefor, including, with respect to the Development Plan for the LCA10 Program, a timeline with respect to a successful IND filing. Editas shall use Commercially Reasonable Efforts to achieve the development milestones and meet the timelines set forth in each Development Plan.

2.2 Delivery and Evaluation of Option Package.

2.2.1 Delivery of Option Package. On a Collaboration Development Program-by-Collaboration Development Program basis for Collaboration Development Programs not terminated pursuant to Section 3.1.4(e), promptly after generating and analyzing data that Editas believes, in its reasonable opinion, to satisfy the applicable Option Package Criteria, Editas shall provide the Option Package for the applicable Collaboration Development Program to Allergan's Collaboration Manager and to the ASC.

2.2.2 Evaluation of Option Package. Unless otherwise agreed by the Parties, the ASC will schedule an *ad hoc* meeting, not more than (i) [**] days after its receipt of the Option Package for LCA10 and (ii) [**] days after its receipt of each other Option Package, at which meeting the ASC shall review the Option Package and determine whether the data contained therein satisfies the applicable Option Package Criteria.

(a) If the ASC determines that the Option Package satisfies the Option Package Criteria, then the Initial Option Period with respect to the applicable Collaboration Development Program shall commence on the date the ASC makes such determination with the date of such determination to be accurately reflected in the minutes approved by each of the Parties in accordance with Section 3.1.3 (the "Reference Date").

(b) If the ASC determines that the Option Package does not satisfy the Option Package Criteria, then unless the Parties agree to amend the applicable Option Package Criteria such that the submitted Option Package meets such amended Option Package Criteria or

Allergan elects to accept the Option Package as delivered by Editas, Editas shall continue to use Commercially Reasonable Efforts to Develop or supplement such Option Package until the applicable Option Package Criteria have been satisfied. From and after the Reference Date, Editas shall have no further obligation to conduct additional Development activities with respect to the applicable Collaboration Development Program except (i) as may be requested by Allergan with respect to any Collaboration Development Program for which Allergan delivers an Extension Notice and pays an Option Extension Fee pursuant to Section 4.1.2(b) (subject to Allergan's reimbursement of Editas' Development Costs as set forth in Section 4.1.2(b)), (ii) as otherwise set forth in Section 5.1.2 with respect to the LCA10 Program, or (iii) as may otherwise be requested by Allergan pursuant to Section 5.1.4.

2.3 Regulatory Matters; Compliance.

2.3.1 Compliance. All of the pre-clinical activities and Clinical Trials to be conducted by the Parties under this Agreement shall be conducted in all material respects in compliance with applicable Laws, including all applicable cGMP requirements, good laboratory practice requirements and good clinical practice requirements.

2.3.2 Data Integrity. Each Party shall use Commercially Reasonable Efforts to carry out the Programs so as to collect and record any data generated therefrom in a manner consistent with regulatory requirements as set forth in Section 2.3.1 and Section 2.5.

2.3.3 Regulatory Filings. Editas shall own and maintain in its possession all regulatory filings for CDP Products, if any, until exercise of the Option with respect thereto by Allergan (if at all). Subject to Section 5.1.2 (with respect to the LCA10 Program), as soon as reasonably practicable after Allergan's exercise of the Option pursuant to Section 4.1 with respect to a Collaboration Development Program, Editas shall assign or transfer to Allergan the ownership and sponsorship of all regulatory filings for the applicable Licensed Products and shall provide Allergan with copies of such regulatory filings and all pre-clinical and clinical data and results. Thereafter, Allergan shall prepare, file and maintain all regulatory filings and Regulatory Approvals for Licensed Products.

2.4 Subcontracting. Allergan shall have the right to engage Affiliates or Third Party subcontractors to perform certain of its obligations under this Agreement. Editas shall have the right to subcontract its obligations under this Agreement to any Third Party subcontractors with Allergan's prior written consent, not to be unreasonably withheld, conditioned or delayed; provided that, such consent is not needed for any subcontracting to an Affiliate of Editas, to [**] or to any of the subcontractors set forth on Exhibit E. Any Affiliate or subcontractor to be engaged by a Party to perform a Party's obligations set forth in this Agreement shall meet the qualifications typically required by such Party for the performance of work similar in scope and complexity to the subcontracted activity; provided that, any Party engaging an Affiliate or subcontractor hereunder shall remain principally responsible and obligated for such activities. In addition, each Party engaging a subcontractor with respect to its obligations under any Program shall in all cases retain or obtain exclusive Control of any and all Know-How, Patents or other intellectual property created by or used with the relevant Party's permission by such subcontractor directly related to such subcontracted activity under the applicable Program.

2.5 Records and Audits. Editas shall, and shall require its Affiliates and permitted subcontractors to, maintain materially complete, current and accurate hard and/or electronic copies of records of all work conducted under each Collaboration Development Program including, all work conducted to prepare Option Packages, and all results, data, developments and Know-How made in conducting such activities. Such records shall accurately reflect all such work done and results achieved in sufficient detail and in good scientific manner appropriate for applicable patent and regulatory purposes. Allergan shall have the right to receive and retain a copy of all such records at reasonable times, upon reasonable prior written notice to Editas. Allergan shall also have the right to conduct reasonable quality assurance audits with respect to all facilities, operations and laboratories (and any records related thereto) operated by Editas, its Affiliates or its permitted subcontractors, where Development activities are conducted, as is reasonably necessary solely for the purpose of verifying Editas' compliance with this Agreement and applicable good laboratory practices, good clinical practices and other regulatory requirements in each country in the Territory. All audits initiated by Allergan will be conducted at Allergan's sole expense, upon reasonable prior notice to Editas, and during regular business hours.

## ARTICLE 3
## MANAGEMENT OF THE COLLABORATION

3.1 Alliance Steering Committee and Subcommittees. The Parties shall establish a committee (the "Alliance Steering Committee" or "ASC") as more fully described in this Section 3.1. The ASC shall have review, oversight and decision-making responsibilities for all Development activities performed under this Agreement, as more specifically provided herein. Each Party agrees to keep the ASC informed of its progress and activities under the Programs. The ASC may establish Subcommittees as set forth in Section 3.1.6.

3.1.1 Membership. The ASC shall be comprised of three (3) representatives (or such other number of representatives as the Parties may agree) from each of Allergan and Editas. Each Party shall provide the other with a list of its initial members of the ASC no later than [**] days prior to the first scheduled meeting of the ASC, which shall be no later than [**] days after the Effective Date. Each Party may replace any or all of its representatives on the ASC at any time upon written notice to the other Party in accordance with Section 13.8. Each representative of a Party shall have relevant expertise in pharmaceutical drug discovery and Development, and be suitable in seniority and experience and have been delegated the authority to make decisions on behalf of the applicable Party with respect to matters within the scope of the ASC's responsibilities. Any member of the ASC may designate a substitute to attend and perform the functions of that member at any meeting of the ASC. Each Party may, in its reasonable discretion, invite non-member representatives of such Party to attend meetings of the ASC as non-voting participants, subject to the confidentiality obligations of ARTICLE 9. The Parties shall designate a chairperson (the "Chairperson") to oversee the operation of the ASC, each such Chairperson to serve a [**] month term. The right to name the Chairperson shall alternate between the Parties, with [**] designating the first such Chairperson.

3.1.2 Meetings; Reports.

(a) Prior to the expiration of the Research Term, the ASC shall meet at least [**], and more or less frequently as the Parties mutually deem appropriate, on such dates and at such places and times as provided herein or as the Parties shall agree. After conclusion of the Research Term, and only if Allergan has exercised an Option, the ASC shall meet at least [**] in order to (i) support ongoing collaboration, communication, and information exchange among the Parties and (ii) provide Editas with an update regarding Allergan's efforts to Develop and Commercialize Licensed Products, including to review and discuss the reports provided to Editas pursuant to Section 3.1.2(b). Meetings of the ASC that are held in person shall alternate between the offices of the Parties, or such other location as the Parties may agree. ASC meetings may be conducted by telephone, videoconference or in person. The members of the ASC also may be polled or consulted from time to time by means of telecommunications, video conferences, electronic mail or correspondence, as deemed necessary or appropriate. Each Party will bear all expenses it incurs in regard to participating in all meetings of the ASC, including all travel and living expenses. Each Party may also call for special meetings of the ASC to discuss particular matters requested by such Party. The Collaboration Managers shall provide the members of the ASC with no less than [**] Business Days' notification of each regularly scheduled meeting and, to the extent reasonably practicable under the circumstances, no less than [**] Business Days' notification of any special meetings called by either Party.

(b) Allergan shall provide Editas with a written report summarizing (to the extent applicable) the activities of Allergan, its Affiliates, Licensees, and Sublicensees with respect to the Development of Licensed Products. Such written report shall be provided to Editas at least [**] Business Days prior to each ASC meeting and shall include: (i) material information, data and results relating to such Development activities, (ii) summaries regarding any Clinical Trial protocols, amendments to Clinical Trial protocols, any Clinical Trial reports filed with Regulatory Authorities and Clinical Trial results, (iii) discussion of material changes in the clinical Development plans for Licensed Products and the status of Clinical Trial enrollment and (iv) the status of regulatory filings and information regarding meetings with Regulatory Authorities. In addition, to the extent required by any applicable Existing In-License, Allergan shall also include in such written reports summaries of the activities of Allergan, its Affiliates, Licensees and Sublicensees with respect to the Commercialization of Licensed Products and Manufacturing of Licensed Products.

(c) Editas shall provide Allergan with a written report summarizing (to the extent applicable) the activities of Editas, its Affiliates, Licensees, and Sublicensees with respect to the Development of CDP Products. Such written report shall be provided to Allergan at least [**] Business Days prior to each ASC meeting and shall include: (i) material information, data, and results relating to such Development activities, (ii) discussion of any proposed material changes to any Development Plan, and (iii) the status of regulatory filings and information regarding meetings with Regulatory Authorities, if any.

(d) Neither Party shall have any obligation to provide the other Party the reports referenced in Sections 3.1.2(b) and 3.1.2(c), as applicable, following the dissolution of the ASC, provided that, thereafter Allergan shall provide Editas with (i) filings and correspondence with Regulatory Authorities that express a Safety Concern relating to Licensed Products, (ii) such information which is reasonably required by any Inbound Licensor pursuant to any In-License including, to the extent required by any applicable In-License, a written report

within [**] days at the end of each [**], summarizing (A) any Development efforts, (B) the status of regulatory filings and information regarding meetings with Regulatory Authorities, (C) Manufacturing efforts, (D) Commercialization efforts, and (E) information regarding the identity and summarizing the activities of Licensees and Sublicensees, in each case relating to a Licensed Product that is Covered by the applicable In-License; provided that Allergan shall have the right to redact such filings and correspondence to remove information that Allergan considers proprietary or (iii) [**] summary reports of the Development and Commercialization of any Co-Co Products.

3.1.3 Minutes. The Collaboration Manager from the Party other than the Party of the Chairperson, shall be responsible for preparing and circulating minutes of each meeting of the ASC, setting forth, *inter alia*, an overview of the discussions at the meeting and a list of any actions, decisions or determinations approved by the ASC and a list of any issues to be resolved by the Executive Officers pursuant to Section 3.1.5. Such minutes shall be effective only after approved by both Parties in writing. With the sole exception of specific items of the meeting minutes to which the members cannot agree and that are escalated to the Executive Officers as provided in Section 3.1.5, definitive minutes of all ASC meetings shall be finalized no later than [**] days after the meeting to which the minutes pertain. If, at any time during the preparation and finalization of the ASC minutes, the Parties do not agree on any issue with respect to the minutes, such issue shall be resolved by the escalation process set forth in Section 3.1.5. The decision resulting from the escalation process shall be recorded by the Collaboration Manager in amended finalized minutes for such meeting.

3.1.4 Responsibilities. The ASC shall perform the following functions, subject to the final decision-making authority of the respective Parties as set forth in Section 3.1.5:

(a) discuss and mutually agree upon the Target from the list of potential Targets in Exhibit A-2 and the initial Indication for a Gene Editing Therapy to be Developed under a Collaboration Development Program.

(b) prior to the designation of a Collaboration Development Program, review and agree upon target product profile, including vector selection, gene target sequence, applicable CRISPR Technology and nucleic acid sequence(s), and applicable intellectual property related to the Collaboration Development Program or reasonably expected to cover any Licensed Products developed thereunder (including applicable Editas CDP Patents and Editas Background Patents, In-Licenses and any necessary or useful intellectual property Controlled by a Third Party);

(c) prior to the designation of a Collaboration Development Program, customize the Core Option Package Criteria to establish the Option Package Criteria for such Collaboration Development Program, provided that, notwithstanding Section 3.1.5, such customization of the Option Package Criteria shall require the mutual written agreement of both Parties and, provided further, that if the ASC fails to reach consensus, the issue shall be escalated to the Executive Officers of the Parties for resolution of the Option Package Criteria pursuant to Section 3.1.5, and neither party shall have final decision-making authority over such decision. The Parties agree that within [**] days after the date of this Agreement, the ASC shall determine the Option Package Criteria for the LCA10 Program;

(d) review and provide comments on each Development Plan submitted by Editas pursuant to Section 2.2.1 and approve such Development Plan or recommend amendments or revisions thereto;

(e) review and monitor progress under each Collaboration Development Program and any reports or recommendations by the Joint Working Group, including the evaluation of data generated during the course of Editas' Development efforts under each such Collaboration Development Program, and mutually agree within [**] days after completion of item 2 of the Core Development Criteria [**] for such Collaboration Development Program based upon recommendations made to the ASC by the Joint Working Group whether or not to continue such Collaboration Development Program. Notwithstanding Section 3.1.5, if the ASC is not unanimous with respect to a decision to continue Development for such Collaboration Development Program within such [**] day period (after reviewing any proposed recommendation of the Joint Working Group and the then-available data and considering the likelihood of such Collaboration Development Program yielding data that will satisfy the applicable Option Package Criteria), such Collaboration Development Program shall be terminated. For clarity, a Collaboration Development Program terminated under this Section 3.1.4(e) shall not be deemed a Collaboration Development Program for purposes of determining whether Editas has satisfied its obligation to Develop five (5) Collaboration Development Programs;

(f) determine additional or replacement Collaboration Development Programs for inclusion on Exhibit A-1;

(g) within [**] days after an Option Package has been delivered by Editas, determine whether the Option Package satisfies the applicable Option Package Criteria, provided that, notwithstanding Section 3.1.5, if the ASC fails to reach consensus by the end of such [**]-day period, either Party shall have the right to refer such dispute in writing to the respective Executive Officers, and such Executive Officers shall attempt in good faith to resolve such dispute. If the Parties are unable to resolve a given dispute within [**] days after referring such dispute to the Executive Officers, then Allergan shall have final decision-making authority concerning whether such Option Package satisfies the applicable Option Package Criteria, which final decision making authority Allergan shall exercise in good faith based on the agreed Option Package Criteria;

(h) discuss and attempt to resolve any deadlock issues submitted to it by any Subcommittee in accordance with the procedures established in Section 3.1.5;

(i) serve as an information transfer vehicle, from time to time, to facilitate discussions regarding the Development of Licensed Products;

(j) periodically review and provide comments on the Development and post-approval status of each Licensed Product;

(k) review and discuss Co-Co Program Development plans and budgets, including the likelihood of whether Editas will want Allergan to submit a Profit-Sharing Option Information Package with respect to any Allergan Development Program;

(l) review and discuss Co-Co Program Commercialization plans;

(m) review, and provide a forum for the Parties to discuss and approve, any subcontractors through which Editas intends to conduct any Development or Manufacturing activities hereunder;

(n) review and discuss any potential In-Licenses and reports or recommendations of the JIPC;

(o) provide a forum for determining a publication strategy in relation to the Collaboration Development Programs and approve proposed publications;

(p) resolve disputes between the Parties with respect to the Co-Co Programs; and

(q) such other responsibilities as may be assigned to the ASC pursuant to this Agreement or as may be mutually agreed upon by the Parties from time to time.

For clarity, the ASC shall not have any authority beyond the specific matters set forth in this Section 3.1.4, and in particular shall not have any power to amend or modify the terms of this Agreement. In addition, (i) Allergan (and not Editas or the ASC) shall have the sole right to make decisions with respect to (1) the exercise of an Option, and (2) after exercise of an Option, subject to Allergan's diligence obligations in Section 5.1.1, and other obligations explicitly set forth in this Agreement, the Development, progression, Manufacture, and Commercialization of Licensed Products and (ii) subject to Section 3.1.4(e), Editas (and not Allergan or the ASC) shall have the sole right to make decisions with respect to which Collaboration Development Programs it Develops through delivery of the applicable Option Package. In any case where a matter within the ASC's authority arises, the ASC shall convene a meeting and consider such matter within [**] days after the matter is first brought to the ASC's attention, or, if earlier, at the next regularly-scheduled ASC meeting.

3.1.5 Decisions. Except as otherwise provided herein, with respect to a given Collaboration Development Program, all decisions of the ASC prior to Option exercise by Allergan shall be made by consensus, with each Party having one vote. If the ASC cannot agree on a matter within its authority hereunder within [**] days after it has met and attempted to reach such decision, then, either Party may, by written notice to the other, have such issue referred to the Executive Officers for resolution. The Parties' respective Executive Officers shall meet within [**] days after such matter is referred to them, and shall negotiate in good faith to resolve the matter. If the Executive Officers are unable to resolve the matter within [**] days after the matter is referred to them, then the issue shall be finally resolved as follows:

(a) Editas shall have final decision-making authority with respect to any disputes with respect to [**] and (ii) as otherwise set forth in Sections 3.1.4(c), 3.1.4(e) and 3.1.4(g), for which decision-making authority shall be as set forth therein;

(b) Allergan shall have final decision-making authority with respect to [**]; and

(c) Any dispute regarding a matter within the ASC's authority with respect to which final decision-making authority is not otherwise specified in this Section 3.1.5 shall, if not resolved by escalation to the respective Executive Officers of the Parties, be deadlocked until resolved by the mutual agreement of the Parties or by unanimous ASC consensus.

3.1.6 Subcommittee(s).

(a) The Parties shall establish a joint working group (the "Joint Working Group") within [**] days following the Effective Date. The Joint Working Group will be composed of an equal number of representatives from Editas and Allergan. The Joint Working Group will report to the ASC. The Joint Working Group, in particular, will be responsible for the oversight of the Development of each Collaboration Development Program using the applicable Development Plan and Option Package Criteria as the guidelines for the Development and providing the ASC with all relevant information and any recommendations necessary for the ASC to make its decisions under Section 3.1.4(e). The Joint Working Group will meet in person, by teleconference or by video-teleconference at least [**], or as otherwise scheduled by the ASC.

(b) Within [**] days of the Effective Date, the Parties will establish a joint intellectual property committee (the "JIPC") comprised of an equal number of representatives from each Party. The JIPC will report to the ASC, and any disagreement between the Parties' members on the JIPC shall be submitted for resolution to the ASC. The JIPC will provide a forum for discussing the preparation, filing, prosecution and maintenance of the Joint CDP Patents, Allergan CDP Patents to the extent Covering Genome Editing Technology, and Editas CDP Patents. The JIPC will be responsible for evaluating third party intellectual property for freedom to operate with respect to the Parties' Gene Editing Therapies, Collaboration Development Programs and Licensed Products and reporting their findings to the ASC and for discussing any challenges to any Third Party Patents that may Cover any Collaboration Development Programs or Licensed Products.

(c) From time to time, the ASC may establish additional subcommittees to oversee particular projects or activities, as it deems necessary or advisable (each, a "Subcommittee"). Each Subcommittee shall consist of such number of members as the ASC determines is appropriate from time to time. Such members shall be individuals with expertise and responsibilities in the relevant areas such as non-clinical Development, pharmacology, clinical Development, patents, process sciences, Manufacturing, quality, regulatory affairs, product Development or product Commercialization, as applicable to the stage of the project or activity.

3.1.7 Dissolution on Change of Control. Allergan may, in its sole discretion, dissolve the ASC in the event of a Change of Control.

3.2 Collaboration Managers. Promptly after the Effective Date, each Party shall appoint an individual (who may or may not be an existing member of the ASC) to act as collaboration manager for such Party (each, a "Collaboration Manager"). Each Collaboration Manager shall thereafter be permitted to attend meetings of the ASC, subject to the

confidentiality provisions of ARTICLE 9. The Collaboration Managers shall be the primary point of contact for the Parties regarding the activities contemplated by this Agreement and shall facilitate all such activities hereunder. The Collaboration Managers shall also be responsible for assisting the ASC in performing its oversight responsibilities. The name and contact information for each Party's Collaboration Manager, as well as any replacement(s) chosen by Editas or Allergan, in their sole discretion, from time to time, shall be promptly provided to the other Party in accordance with Section 13.8.

## ARTICLE 4
## GRANT OF RIGHTS TO ALLERGAN

4.1 Options.

4.1.1 Grant. Subject to the provision of this Section 4.1, Editas hereby grants to Allergan the exclusive option, exercisable on a Collaboration Development Program-by-Collaboration Development Program basis at Allergan's sole discretion, to obtain the exclusive license set forth in Section 4.2.1 as to such Collaboration Development Program and all Licensed Products arising therefrom (each, an "Option").

4.1.2 Option Exercise Period.

(a) Allergan shall have the right to exercise its Option with respect to any Collaboration Development Program at any time after the Effective Date until as follows (the "Initial Option Period"):

(i) if Editas delivers an Option Package for such Collaboration Development Program during the Research Term, the date that is [**] days after the ASC's determination that the applicable Option Package satisfies the Option Package Criteria therefor;

(ii) If Editas delivers an Option Package for such Collaboration Development Program during the Research Term but the ASC determines that such Option Package does not satisfy the Option Package Criteria and the Research Term has expired before Editas has updated and redelivered an Option Package which does meet the Option Package Criteria then:

(1) if Editas has agreed to update and redeliver such Option Package after the Research Term, the date that is [**] days after the ASC's determination that the updated Option Package for such Collaboration Development Program satisfies the Option Package Criteria, or

(2) if Editas has not agreed to update and redeliver such Option Package after the Research Term, the date that is [**] days after the expiration of the Research Term;

(iii) if Editas has not provided an Option Package prior to the end of the Research Term, the date that is [**] days after the expiration of the Research Term; provided that, this clause (iii) shall not apply to any Collaboration Development Program that is terminated (A) pursuant to Section 3.1.4(e), other than such Collaboration Development Program

for which Allergan voted against such termination or (B) by the mutual agreement in writing of the Parties (the programs described in (A) and (B), the "Terminal Exercise Disqualification Programs"). If Allergan exercises an Option with respect to a Collaboration Development Program prior to Editas' delivery of an Option Package therefor, then Editas shall be deemed to have delivered an Option Package for such Collaboration Development Program for purposes of determining whether Editas has satisfied its obligation to deliver Option Packages for five (5) Collaboration Development Programs.

(b) Allergan may extend the Initial Option Period with respect to any Collaboration Development Program by providing written notice to Editas (an "Extension Notice") at any time prior to the expiration of such Initial Option Period. Upon receipt by Editas of Allergan's written notice of its exercise of its extension rights pursuant to this Section 4.1.2(b), the Parties shall negotiate in good faith a mutually agreeable plan and budget for additional Development work necessary to advance such Collaboration Development Program: (i) to the commencement of the first GLP-Toxicology Study (the "Pre-GLP-Toxicology Development Plan"), if any, and (ii) through the completion of the first GLP-Toxicology and the completion of the first Phase 1 Clinical Trial (the "GLP-Toxicology and Phase 1 Development Plan"). After the Parties reach agreement on the Pre-GLP-Toxicology Development Plan, if any, and the GLP-Toxicology and Phase 1 Development Plan, Allergan shall pay to Editas the Option Extension Fee. Upon Allergan's payment of the Option Extension Fee pursuant to this Section 4.1.2(b), the period in which Allergan may exercise its Option with respect to such Collaboration Development Program shall be extended until the earlier of: (i) the end of the Research Term and (ii) the date that is [**] days after the end of the delivery of a Phase 1 Data Package (defined below) for the first Phase 1 Clinical Trial for a CDP Product for such Collaboration Development Program (the "Extended Option Period") and thereafter:

(i) Editas shall use Commercially Reasonable Efforts to complete the additional Development work set forth in the Pre-GLP-Toxicology Development Plan, if any, and shall solely bear the first [**] Dollars ($[**]) of Development Costs incurred by Editas in conducting such additional Development work (but in the event that Editas later exercises a Profit-Sharing Option as to such Collaboration Development Program, such amounts borne by Editas shall count as payments by Editas toward its Development Cost sharing obligations with respect to such Collaboration Development Program);

(ii) Allergan shall reimburse Editas for any Development Costs incurred by Editas in the performance of such additional Development work set forth in the Pre-GLP-Toxicology Development Plan which are in excess of [**] Dollars ($[**]). Allergan shall reimburse Editas for such Development Costs within [**] days after Allergan's receipt of each Editas invoice for such Development Costs (which invoice shall be provided [**]);

(iii) Editas may at its option conduct the additional Development work set forth in the GLP-Toxicology and Phase 1 Development Plan, and, subject to clause (iv) below, Editas shall solely bear all Development Costs incurred by Editas in conducting such additional Development work in accordance with the GLP-Toxicology and Phase 1 Development Plan through such time, if ever, as Allergan exercises its Option with respect to such Collaboration Development Program; and

(iv) If Allergan exercises its Option with respect to a Collaboration Development Program, Allergan shall reimburse Editas for any Development Costs incurred by Editas in the performance of such additional Development work set forth in the GLP-Toxicology and Phase 1 Development Plan prior to such Option exercise concurrently with Allergan's payment of the Option Exercise Fee therefor as set forth in Section 6.3.

(v) Without limiting the generality of the foregoing, Editas shall provide to Allergan additional data generated as a result of the activities set forth in the Pre-GLP-Toxicology Development Plan, if any, and, if Editas undertakes a GLP-Toxicology Study or a Phase 1 Clinical Trial for a CDP Product with respect to such Collaboration Development Program, Editas shall provide Allergan with the data from such GLP-Toxicology Study or Phase 1 Clinical Trial reasonably promptly after the conclusion thereof (the data from the Phase 1 Clinical Trial, the "Phase 1 Data Package").

(c) The Initial Option Period or the Extended Option Period, as applicable to a given Collaboration Development Program, together with any extensions pursuant to Section 4.1.5, is referred to herein as the "Option Period."

4.1.3 Exercise of Option. Allergan shall have the right to exercise the Option with respect to the applicable Collaboration Development Program by written notice to Editas and payment of the applicable Option Exercise Fee. Upon Allergan's exercise of an Option with respect to a Collaboration Development Program and receipt by Editas of the applicable Option Exercise Fee, (i) such Collaboration Development Program shall be designated as an Allergan Development Program and (ii) the applicable CDP Products shall be designated as Licensed Products.

4.1.4 Expiration or Termination of Option. With respect to a particular Collaboration Development Program, if Allergan does not (i) exercise the Option or deliver an Extension Notice and pay the Option Extension Fee within the applicable Initial Option Period or (ii) exercise the Option within the Extended Option Period after extending the Option Period in accordance with Section 4.1.2(b) then, as of the expiration of the Initial Option Period or Extended Option Period (as applicable, subject to any extensions pursuant to Section 4.1.5) (a) such Option shall terminate and be of no further force or effect, (b) the applicable Collaboration Development Program shall become an Editas Program, and (c) the provisions of Section 5.3.1 shall apply.

4.1.5 HSR. If Allergan reasonably determines in good faith prior to the expiration of the Initial Option Period or the Extended Option Period, as applicable, that the transactions to be consummated upon the exercise of such Option require HSR Filings, Allergan shall provide written notice of exercise of the Option to Editas prior to the end of the Option Period, which notice shall include Allergan's irrevocable binding commitment to complete the exercise of the Option, subject only to HSR Clearance, and the Option Period shall automatically be extended for an additional [**] days (the "HSR Extension Period"). If the exercise of the Option does not comply with the requirements of Section 4.1.3 and this Section 4.1.5, including, for example and without limitation, because it includes other conditions to the completion of the exercise of the Option other than the grant of HSR Clearance, then the Option shall expire at the end of the Option Period (without applicable extensions) unless Allergan exercises the Option in

compliance with Section 4.1.3 and this Section 4.1.5 prior to such expiration of the Option Period. If HSR Clearance is not granted within the HSR Extension Period, or if Allergan receives a Request for Additional Information and Documentary Material ("Second Request") from the FTC or the DOJ in connection with such filing, the HSR Extension Period shall be extended for an additional period of time (not to exceed an additional [**] days), to permit Allergan to obtain HSR Clearance. If Allergan elects to withdraw its request for HSR Clearance, the Option shall terminate, and Editas shall have the same rights as are set forth in Section 5.3.1 with respect to the applicable Collaboration Development Program. If HSR Clearance has not occurred by the end of the extended HSR Extension Period, Editas and Allergan shall promptly meet to discuss in good faith whether an additional extension of the HSR Extension Period is reasonable under the circumstances; provided that, if Editas and Allergan are unable to arrive at a mutually agreed additional extension or other resolution within an additional [**] days after expiration of the HSR Extension Period, then the Option shall terminate, and Editas shall have the same rights as are set forth in Section 5.3.1 with respect to the applicable Collaboration Development Program. In connection with obtaining HSR Clearance, Allergan and Editas shall use their respective commercially reasonable efforts to resolve as promptly as practicable any objections that may be asserted by the FTC or the DOJ with respect to the transactions notified in the HSR Filings. The foregoing provisions of this Section 4.1.5 notwithstanding, nothing in this Section 4.1.5 or otherwise in this Agreement shall require either Party to (a) offer, accept or agree to sell, divest (including through a license or a reversion of licensed or assigned rights), hold separate, transfer, or dispose of any assets, operations, rights, product lines, or businesses, or interests therein, of itself or any of its Affiliates (or consent to any of the foregoing actions), (b) offer, accept or agree to any restraint, prohibition or limitation on the ownership, operation or conduct of all or any portion of the businesses or assets of itself or any of its Affiliates in any part of the world, (c) respond to or certify substantial compliance with any Second Request, or (d) litigate or otherwise formally oppose any determination (whether judicial or administrative in nature) by a Governmental Authority seeking to impose any of the restrictions referenced in clause (a) or (b) above; provided, that (i) Allergan shall not be required to agree to or effectuate any remedy related to any Editas assets and (ii) Editas shall not agree to or effectuate any remedy without the prior written consent of Allergan. [**]. If HSR Filings are required, each Party shall use Commercially Reasonable Efforts to prepare and file its respective HSR Filing as promptly as is practicable and advisable, and [**]. In connection with obtaining HSR Clearance, each of Allergan and Editas shall (x) cooperate with each other in connection with any investigation or other inquiry relating to an HSR Filing and the transactions contemplated by this Agreement; (y) keep the other Party or its counsel informed of any material communication received from or given to the FTC or DOJ relating to the HSR Filings and the transactions contemplated by this Agreement (and provide a copy to the other Party if such material communication is in writing); and (z) permit the other Party or its counsel to review in advance, and in good faith consider the views of the other Party or its counsel concerning, any submission, filing or communication (and documents submitted therewith) intended to be given to the FTC or DOJ; provided, that after good faith consideration of any input from Editas, Allergan shall make the final determination as to the appropriate strategy relating to any filing or submission that is necessary under the HSR Act, including with respect to any filings, notifications, submissions and communications with or to the FTC or DOJ.

4.1.6 Tolling of Payment Obligations. If the exercise by Allergan of any Option under Section 4.1 requires the making of filings under the HSR Act, then all rights and

obligations related to the exercise of such Option (including payment of any Option Exercise Fee or other milestone) shall be tolled until the expiration or termination of the applicable HSR waiting period.

4.2 License Grants.

4.2.1 Licenses to Allergan With Respect to Licensed Products. Subject to the terms of this Agreement, upon (a) Allergan's exercise of an Option for a Collaboration Development Program pursuant to Section 4.1, and (b) Editas' receipt of the applicable Option Exercise Fee, Editas hereby grants to Allergan, and Allergan shall have, conditional upon such event, the exclusive right and license (even as to Editas and its Affiliates) in the Territory in any Field other than the Juno Field, with the right to grant sublicenses (subject to Section 4.2.4), under the Editas Background IP and Editas' interest in the CDP IP, to Develop, Commercialize, make, have made, use, offer for sale, sell and import Licensed Products arising from such Collaboration Development Program during the Term, provided that, Allergan shall not have the right to modify the DNA, RNA or nuclease protein component of a Licensed Product without the prior written consent of Editas, which consent shall not be unreasonably conditioned, withheld or delayed, if the purpose of such modification is to improve manufacturing capability, ocular delivery or ocular tolerability with respect to such Licensed Product.

4.2.2 Existing In-Licenses. Allergan acknowledges and agrees that the rights, licenses and sublicenses granted by Editas to Allergan in this Agreement (including any sublicense rights) are subject to the terms of the Existing In-Licenses and the rights granted to the Third Party counterparties thereunder, the scope of the licenses granted to Editas or the applicable Affiliate thereunder and the rights retained by such Third Party counterparties and any other Third Parties (including Governmental Authorities) set forth therein, including (a) Sections 2.1, 2.2, 2.5, 2.6 2.8, 2.9, 2.10 and 10.3.1.2 of the Cas9-I Agreement, (b) Sections 2.1, 2.2, 2.5, 2.6, 2.8, 2.9, 2.10 and 10.3.1.2 of the Cas9-II Agreement, (c) Sections 2.1, 2.2, 2.5, 2.6, 2.8, 2.9, 2.10 and 10.3.1.2 of the Cpf1 Agreement, (d) Sections 2.1(a), 2.3 and 2.4 of the 2014 MGH Agreement and (e) Sections 2.1(a), 2.3 and 2.4 of the 2016 MGH Agreement. At Editas' request, Allergan shall use Commercially Reasonable Efforts to, and cause its sublicensed Affiliates and all Sublicensees to use Commercially Reasonable Efforts to, take such actions, as may be required to assist Editas in complying with its obligations under the Existing In-Licenses, to the extent applicable to Allergan's rights or obligations under this Agreement, including (v) Sections 4.5.3, 8.1, 9.2.3 and 11.2 of the Cas9-I Agreement, (w) and Sections 4.5.3, 8.1, 9.2.3 and 11.2 of the Cas9-II Agreement, (x) Sections 4.4.3, 8.1, 9.2.3 and 11.2 of the Cpf1 Agreement, (y) Sections 10.5, 11.1, and 12.7 of the 2014 MGH Agreement and (z) Sections 10.5, 11.1, and 12.7 of the 2016 MGH Agreement.

4.2.3 Termination of Existing In-Licenses. Allergan acknowledges and agrees that, if any of the licenses granted to Editas by Harvard and/or Broad under the Cas9-I Agreement, the Cas9-II Agreement and/or the Cpf1 Agreement is terminated, in whole or in part, including due to any failure by Editas and Allergan, and their Affiliates and Sublicensees, to meet any of the diligence obligations (including any diligence milestone) set forth in any of those Agreements, then Allergan's sublicense under such terminated license(s) shall automatically terminate [**] days following the effective date of termination of the Cas9-I Agreement, the Cas9-II Agreement and/or Cpfl Agreement, as applicable, subject to Allergan's right to receive a

direct license from Harvard and/or Broad pursuant to Section 10.3.1.2 of the Cas9-I Agreement, the Cas9-II Agreement and/or the Cpf1 Agreement, as applicable. In instances where an Existing In-License does not already provide the foregoing right, Editas will use Commercially Reasonable Efforts to secure written statements from each Inbound Licensor declaring that, should the Existing In-License be terminated, the applicable Inbound Licensor shall provide prompt notice thereof to Allergan and shall grant a direct license to Allergan on the same terms as those set forth in (a) this Agreement, or (b) the Existing In-License, in each case which apply to the Inbound Licensor's intellectual property that is sublicensed to Allergan under the Existing In-License, it being agreed that Editas shall not be required to make any additional payments or grant any concessions to such Inbound Licensor in order to secure such written statements.

4.2.4 Allergan's Sublicensing Rights.

(a) Allergan shall have the right to grant sublicenses under the rights granted to it under Sections 4.2.1 to any of its Affiliates and Third Parties. Allergan shall provide Editas with a fully-executed copy of any agreement (redacted as necessary to protect confidential or commercially sensitive information) reflecting any such sublicense promptly after the execution thereof. If Allergan grants a sublicense, the terms and conditions of this Agreement that are applicable to Sublicensees shall apply to such Sublicensee to the same extent as they apply to Allergan. Allergan assumes full responsibility, and shall remain primarily liable, for causing the performance of all obligations of each Allergan Affiliate and Sublicensee to which it grants a sublicense, and will itself pay and account to Editas for all payments due under this Agreement by reason of operation of any such sublicense. Notwithstanding the foregoing, unless and until the receipt of written agreement by the applicable Institutions to permit further sublicensing to a Third Party, Allergan shall not have the right to grant any sublicenses (other than to Affiliates of Allergan and other than as may be agreed in writing by the applicable Institutions, in each case subject to all restrictions on the granting of sublicenses herein). If Editas is unable to obtain written agreement from the applicable Institutions to allow for the further granting of sublicenses by Allergan under the Existing In-Licenses, then upon Allergan's request at any time during the Term, Editas shall grant, without further consideration, a direct license to any Third Party as Allergan directs, as and to the extent permitted under Editas' obligations to the applicable Institutions and provided such direct license is within the scope of Allergan's licenses granted under Section 4.2.1.

4.2.5 No Grant of Rights to Third Parties. Except for licenses to Institutions for research and education purposes or for non-exclusive licenses granted to a Third Party making a bona fide proposal to an Institution, in each case, as required under any Existing In-License, and except as may be permitted under the exceptions in Section 7.3, Editas shall not itself exercise, nor grant to any Third Party, rights to the Editas Background IP or Editas' interest in the CDP IP that are inconsistent with or that would interfere with the grant of the rights, Option and licenses granted or potentially to be granted to Allergan hereunder.

4.3 Technology Transfer after Option Exercise.

4.3.1 As soon as reasonably practicable after Editas receives payment of the Option Exercise Fee with respect to a Collaboration Development Program and in any event after receipt of such payment, the Parties shall agree to a plan ("Transition Plan") to transfer to

Allergan (or its designee) of all Development and Manufacturing activities then being undertaken by Editas. Editas shall transition all such activities to Allergan in accordance with the Transition Plan at Editas' own cost and expense. Without limiting the foregoing, Editas shall disclose and deliver to Allergan all tangible embodiments of all CDP Know-How in its possession and Control that are useful or necessary to research, develop, make, use, sell, offer for sale or import the Licensed Products in such Allergan Development Program, in each case to the extent not provided to Allergan prior to such Option exercise. Editas shall make such CDP Know-How available in a mutually agreed upon format and where feasible in electronic form; provided that, if Allergan requests a form other than the form in which Editas otherwise maintains such CDP Know-How then Allergan shall reimburse Editas for all Development Costs reasonably incurred by Editas in converting such CDP Know-How to the form requested by Allergan.

4.3.2 Without limiting the foregoing, Editas will provide reasonable assistance to Allergan or its designee in connection with understanding and using the Editas Know-How within the scope of the license granted under Section 4.2.1. In providing CDP Know-How under Section 4.3.1, Editas shall deliver written and electronic materials to Allergan, and assistance from its professional staff for meetings, telephone calls, and other reasonable assistance as requested by Allergan to enable it to understand and use such Know-How, provided that, for any request by Allergan which will require work by Editas that is not part of the work to be performed as part of the Transition Plan (or Editas' other obligations under this Agreement, including Section 4.3.1), the Parties shall agree upon a budget and Allergan shall reimburse Editas at the FTE Rate plus any direct out-of-pocket costs.

4.3.3 In addition, upon the reasonable request of Allergan, Editas shall reasonably cooperate with Allergan to transition the Manufacture of the applicable Licensed Products to a contract manufacturing organization designated by Allergan. Without limiting the generality of the foregoing, upon request by Allergan, Editas will deliver to Allergan (or its designee) all manufacturing batch records, Development reports, analytical results, filings and correspondence with any Regulatory Authority (including notes or minutes of any meetings with any Regulatory Authority), raw material and excipient sourcing information, quality audit findings and any other relevant technical information in Editas' possession and/or control relating to any Licensed Products, and Editas will reasonably assist Allergan in the transfer of manufacturing activities to a contract manufacturing organization designated by Allergan.

4.4 Rights Retained by the Parties. Any rights of Editas or Allergan, as the case may be, not expressly granted to the other Party pursuant to this Agreement shall be retained by such Party.

4.5 Section 365(n) of the Bankruptcy Code. All rights and licenses granted pursuant to any section of this Agreement, including pursuant to Section 4.2, are rights and licenses to "intellectual property" (as defined in Section 101(35A) of title 11 of the United States Code (the "Bankruptcy Code")). Each Party shall retain and may fully exercise all of its rights and elections under the Bankruptcy Code.

**ARTICLE 5**
**POST-EXERCISE ACTIVITIES**

5.1 Allergan Development and Commercialization.

5.1.1 After exercise of an Option with respect to a Collaboration Development Program, Allergan, either itself or by and through its Affiliates, Licensees, Sublicensees, or contractors, shall be responsible for all Development, Manufacturing, and Commercialization activities in connection with Licensed Products arising from such Collaboration Development Program (except as set forth below with respect to the LCA10 Program).

5.1.2 Allergan shall have sole decision-making authority with respect to the Development, Manufacturing, and Commercialization of any Licensed Product within an Allergan Development Program, without submitting such matter to the ASC or Executive Officers, provided that, if Allergan exercises its Option with respect to the LCA10 Program, Editas shall remain primarily responsible for conducting the LCA10 Program through the acceptance for filing of a first IND with respect to the LCA10 Program, but Allergan shall have final decision-making authority with respect to such additional Development activities (including any Development budget) following Allergan's exercise of its Option and Editas shall not submit an IND with respect to the LCA10 Program without Allergan's prior written approval of the form and content of such IND, which approval Allergan shall not withhold, delay or condition other than for a bona fide scientific or safety concern. Allergan shall reimburse Editas for all Development Costs incurred by Editas in conducting such post-exercise activities consistent with the approved Development budget (the "LCA10 Program Development Costs") within [**] days after Allergan's receipt of each Editas invoice for such LCA10 Program Development Costs (which invoice shall be provided [**]), and Editas shall consult with and reasonably consider any input of Allergan regarding the conduct of such activities. If Allergan exercises its Option with respect to the LCA10 Program, then Editas shall, except as may otherwise be agreed by the Parties, transfer the IND filed by Editas, following acceptance for filing thereof, to Allergan as requested by Allergan and thereafter Allergan shall, except as otherwise may be agreed by the Parties, have sole responsibility for conducting the LCA10 Program.

5.1.3 After Allergan's exercise of an Option (or, in the case of the LCA10 Program, after Editas' filing of an IND) with respect to a Collaboration Development Program, Allergan shall use its Commercially Reasonable Efforts to Develop and obtain Regulatory Approval for at least one (1) Licensed Product from such Allergan Development Program and, after receiving the applicable Regulatory Approval, to Commercialize at least one (1) Licensed Product from such Allergan Development Program in [**].

5.1.4 Subject to the reasonable availability of Editas resources, in addition to its obligation under Section 4.3, Editas shall continue to provide Development support for Allergan Development Programs as reasonably requested by Allergan after Allergan's exercise of the applicable Option. Prior to beginning any such Development support, Editas shall prepare a reasonable budget for Allergan's review and approval. Allergan shall reimburse Editas for all Development Costs incurred by Editas or any of its Affiliates in performing activities requested by Allergan under this Section 5.1.4 within [**] days after Allergan's receipt of each Editas invoice therefor provided such expenses are consistent with the approved budget.

5.1.5 Subject to applicable Law, Allergan shall provide Editas with copies of material filings submitted to and material correspondence with applicable Regulatory Authorities; provided that, with respect to filings made for Licensed Products that are not Co-Co Products, such filings and correspondence will be limited to those that express a Safety Concern relating to such Licensed Products and Allergan shall have the right to redact such filings and correspondence to remove information that Allergan considers proprietary.

5.2 Editas Profit-Sharing Options.

5.2.1 Profit-Sharing Option. Following Allergan's exercise of its Option as to each Collaboration Development Program, on an Allergan Development Program-by-Allergan Development Program basis, (a) Editas may request, and Allergan shall provide, within [**] days following the earliest date on which Allergan has exercised its Option with respect to such Allergan Development Program, a Profit-Sharing Option Information Package and (b) within [**] days of Allergan providing such Profit-Sharing Option Information Package, Editas shall have the right to elect, by written notice to Allergan of such election, to participate with Allergan in the profits and losses resulting from the Development and Commercialization in the United States of Licensed Products from the LCA10 Program and up to one additional Allergan Development Program of Editas' choosing (each, a "Profit-Sharing Option") in accordance with the terms and conditions set forth in an agreement (the "Profit-Sharing Agreement") to be negotiated in good faith between the Parties, which agreement shall be based on the terms and conditions substantially the same as those set forth on Exhibit F and consistent with this Agreement.

5.2.2 Approval of Profit-Sharing Option.

(a) Within [**] days following Editas' exercise of a Profit-Sharing Option, Allergan may request from Editas reasonable information regarding Editas' [**] for the purpose of determining whether Editas has [**] to satisfy its obligations as a profit and loss sharing partner in the United States with respect to the Development and Commercialization of Licensed Products from the applicable Allergan Development Program based on the budget set forth in the Profit-Sharing Option Information Package. If Allergan reasonably and in good faith believes that Editas does not have [**] to satisfy its obligations as a profit and loss sharing partner in the Development and Commercialization in the United States of Licensed Products from the applicable Allergan Development Program based on such budget, then such matter shall be referred to the Executive Officers for resolution. If the Executive Officers agree that Editas lacks the [**] or the Executive Officers are unable to agree with respect to such matter within [**] days after such referral, then Allergan may elect within [**] days thereafter, by written notice to Editas of such election, not to allow Editas to participate as a profit and loss sharing partner in the Development and Commercialization in the United States of Licensed Products from the applicable Allergan Development Program (the "Partner Rejection Right"), in which case Editas' exercise of such Profit-Sharing Option shall be cancelled as if such exercise had not occurred and Editas will receive an additional Profit-Sharing Option that it may exercise for a subsequent Allergan Development Program, subject to this Section 5.2.2.

(b) If Editas enters into a Change of Control, then Allergan may elect, by written notice to Editas, to not allow Editas (or its successor in interest, as applicable) to exercise any subsequent Profit-Sharing Option.

5.2.3 Effects of Exercising Profit-Sharing Option. If Editas exercises a Profit-Sharing Option as to an Allergan Development Program and Allergan has not exercised the Partner Rejection Right, then (a) such Allergan Development Program shall thereby be designated a "Co-Co Program" hereunder and Licensed Products from such Program shall thereby be designated "Co-Co Products" hereunder, (b) Allergan's obligation to pay the royalty set forth in Section 6.6.1 with respect to the applicable Co-Co Products in the United States shall terminate and the Parties shall equally share the Net Profits/Losses (as defined in the applicable Profit-Sharing Agreement) with respect to such Co-Co Products as set forth in the applicable Profit-Sharing Agreement and (c) Allergan's obligations to make milestone payments with respect to such Co-Co Products shall be modified as set forth in ARTICLE 6. Furthermore, upon Editas' exercise of the Profit-Sharing Option for an Allergan Development Program and provided that Allergan has not exercised the Partner Rejection Right, Editas shall reimburse Allergan for fifty percent (50%) of the Development Costs incurred by Allergan for the period from Allergan's exercise of the Option Package of such Allergan Development Program until Editas' exercise of the Profit-Sharing Option with respect to such Allergan Development Program, which, with respect to the LCA10 Program, shall include the LCA10 Program Development Costs Allergan paid to Editas under Section 5.1.2.

5.2.4 Termination of Profit-Sharing Agreement.

(a) If a Profit-Sharing Agreement is terminated as set forth in Section 12.2, as set forth below in this Section 5.2.4 or in accordance with the terms of such Profit-Sharing Agreement, then (a) the Co-Co Products from such Profit-Sharing Agreement shall be deemed Licensed Products hereunder for the remainder of the Term, (b) the Parties shall cease to share the Net Profits/Losses with respect to such Licensed Products and Allergan's obligation to pay the royalty set forth in Section 6.6.1 with respect to the applicable Licensed Products in the United States shall be reinstated and (c) Allergan's obligations to make milestone payments with respect to such Licensed Products shall thereafter be as set forth in ARTICLE 6 for Licensed Products that are not Co-Co Products; provided, that Allergan shall not have any obligation to make milestone payments with respect to milestones that occurred prior to the termination of the Profit-Sharing Agreement.

(b) In addition to the termination provisions of Section 12.2.1, Editas may terminate the Profit-Sharing Agreement for any or no reason (i) before Regulatory Approval of the Co-Co Product, by providing [**] months' written notice of termination to Allergan and (ii) after Regulatory Approval of the Co-Co Product, by providing [**] days' written notice of termination to Allergan. For the avoidance of doubt, if Editas elects to terminate a Profit-Sharing Agreement for convenience as set forth in this Section 5.2.4(b), Editas shall not be entitled to any refund or credit for amounts that it may have paid under such Profit-Sharing Agreement prior to termination (other than amounts that may be payable or creditable to Editas as a final reconciliation of its share of profits and losses through termination) and Editas' prior exercise of its Profit-Sharing Option with respect to such Allergan Development Program shall

continue to count as one of Editas' two (2) permitted exercises of Profit-Sharing Options under Section 5.2.1.

5.2.5 Responsibility for Development and Commercialization. Editas' exercise of a Profit-Sharing Option shall not alter Allergan's right to control all Development and Commercialization activities under the applicable Allergan Development Program or Allergan's obligations hereunder with respect to such Development and Commercialization.

5.3 Editas Programs.

5.3.1 Option Expiration. If the Option Period (including any applicable HSR Extension Period) for an Option with respect to a particular Collaboration Development Program expires without exercise by Allergan, then (i) such Collaboration Development Program shall become an Editas Program and the applicable CDP Products shall become Editas Products for which Editas shall, subject to Editas' obligations and Allergan's rights under ARTICLE 7 and provided that, there is no other Allergan Development Program directed at [**], have the right (but not the obligation), in its sole discretion, to Develop and Commercialize such Editas Product in the Territory in any Field, alone or through any Affiliate and, after the Research Term, with any Third Party, Licensee or Sublicensee, (ii) the obligations of Editas and rights of Allergan under ARTICLE 2 with respect to such Collaboration Development Program will terminate, and (iii) Allergan will have no further obligations to make any milestone, royalty or other payments to Editas under ARTICLE 6 with respect to such Collaboration Development Program, except for any such obligations that accrued prior to the date such Collaboration Development Program became an Editas Program.

5.3.2 Allergan Development Termination. After exercising an Option with respect to a particular Collaboration Development Program, Allergan may terminate this Agreement with respect to such Collaboration Development Program pursuant to Section 12.4. Upon such termination, the Licensed Products within such Allergan Development Program shall be deemed Editas Products for the remainder of the Term, such Allergan Development Program shall be deemed an Editas Program for the remainder of the Term and Sections 12.8.2(c), 12.8.2(e) and 12.8.2(f) shall apply.

## ARTICLE 6
## PAYMENTS

6.1 Initial Fee. In partial consideration for the Options granted to Allergan hereunder Allergan shall pay Editas a one-time, non-refundable, non-creditable payment of Ninety Million Dollars ($90,000,000) within ten (10) Business Days after the Effective Date after receipt of an invoice from Editas.

6.2 LCA10 Program IND Acceptance Payment. In partial consideration for the rights and licenses granted to Allergan hereunder, whether or not Allergan exercises its Option with respect to the LCA10 Program, Allergan shall pay Editas a one-time, non-refundable, non-creditable payment of Twenty-Five Million Dollars ($25,000,000) within forty-five (45) days following acceptance by the applicable Regulatory Authority of Editas' submission of an IND under the LCA10 Program.

6.3 Option-Related Fees. In partial consideration for the rights and licenses granted to Allergan hereunder, Allergan shall pay Editas the following non-refundable, non-creditable fees, on a Collaboration Development Program-by-Collaboration Development Program basis, as set forth below:

| Type of Fee | $ in Millions |
|---|---|
| Initial Option Exercise Fee (applies if Option is exercised during the Initial Option Period under Section 4.1.2(a)(i) or Section 4.1.2(a)(ii)(1)) | 15 |
| Option Extension Fee ("Option Extension Fee") | 5 |
| Extended Option Exercise Fee (applies if Option is exercised during the Extended Option Period) | 22.5 plus Editas' Development Costs incurred in conducting Development work [**] |
| Terminal Option Exercise Fee (applies in lieu of the initial Option Exercise Fee if Option is exercised at the end of the Research Term pursuant to Section 4.1.2(a)(ii)(2) or Section 4.1.2(a)(iii) if a Collaboration Development Program other than a Terminal Exercise Disqualification Program has not progressed to delivery of the Option Package which meets the Option Package Criteria) | [**] |

6.4 Clinical and Regulatory Milestone Fees.

6.4.1 Milestone Payments.

(a) In partial consideration for the rights and licenses granted to Allergan hereunder Allergan shall make the following non-refundable, non-creditable (except as set forth in Section 6.4.1(e)) milestone payments to Editas, on an Allergan Development Program-by-Allergan Development Program basis, within [**] days after the first achievement by Editas, Allergan, or their respective Affiliates, Licensees, or Sublicensees of the clinical or regulatory milestone events set forth in the tables in Section 6.4.2 and 6.4.3 below (each, a "Milestone Event").

(b) In the event a Milestone Event occurs in an Allergan Development Program, all prior Milestone Events that have not occurred shall be deemed to have occurred, and any payment(s) associated with such prior Milestone Events that have not previously been paid shall be due and payable with the payment associated with the Milestone Event that occurred; provided that, such deemed achievement of Milestone Events in such Allergan Development Program shall be determined on a Field-by-Field basis for each of the First Field, Second Field and Third Field; provided further that, if Development for a Licensed Product is abandoned in the First Field and thereafter, a Milestone Event is achieved by such Licensed Product in the Second Field, no payments shall be due for such Licensed Product in the Second Field with respect to any Milestone Event payments already paid with respect to such Licensed

Product in the First Field. Similarly if Development for a Licensed Product is abandoned in the Second Field and thereafter a Milestone Event is achieved by such Licensed Product in the Third Field, no payment shall be due for such Licensed Product in the Third Field with respect to any Milestone Event payments already paid with respect to such Licensed Product in the Second Field.

(c) If Editas does not timely exercise its Profit-Sharing Option with respect to an Allergan Development Program, the table in Section 6.4.2 shall apply. If Editas exercises its Profit-Sharing Option with respect to an Allergan Development Program, the table in Section 6.4.3 shall apply for so long as such Program remains a Co-Co Program (thereafter the table in Section 6.4.2 shall apply, but only with respect to Milestone Events achieved after termination of the Co-Co Program). If Allergan makes a milestone payment pursuant to the table in Section 6.4.2, which payment would not have been due pursuant to the table in Section 6.4.3 if Editas exercised its Profit-Sharing Option with respect to such Development Program prior to achievement of the applicable Milestone Event, then, in the event that Editas exercises its Profit-Sharing Option subsequent to Allergan making such milestone payment, Allergan shall have the right to offset any such milestone payment amounts paid against other payments due to Editas hereunder.

(d) For the avoidance of doubt, each milestone payment in the tables in Section 6.4.2 and Section 6.4.3 is eligible to be paid only once for each Allergan Development Program and, with respect to each Allergan Development Program, each milestone payment is due only once regardless of the number of Clinical Trials conducted under such Allergan Development Program, the number of Licensed Products under an Allergan Development Program or the number of times that a particular Milestone Event is achieved.

(e) Notwithstanding the foregoing, if Allergan has a good faith belief that [**] is necessary for the Manufacture or Commercialization of a Licensed Product or if a Third Party otherwise enforces or threatens in writing to enforce the [**] against Allergan, its Affiliates or Sublicensees in connection with the Manufacture or Commercialization of a Licensed Product ("[**]") in the US and Allergan has not obtained an [**] at or prior to the time of the First Commercial Sale of such Licensed Product in the US, Allergan shall have the right to [**] from its milestone payment for the [**] Milestone Event set forth in the table in Section 6.4.2 [**]. Similarly, if a [**] is not obtained by Allergan in a Major European Country at or prior to the time of the First Commercial Sale of such Licensed Product in such Major European Country, then Allergan shall have the right to [**] from its milestone payment for the [**] Milestone Event set forth in the table in Section 6.4.2 [**]. Each of the [**] and the [**] may hereinafter be referred to as a "[**]". Allergan shall have the right to [**] from the applicable [**] with respect to such Licensed Product. If the [**], then Allergan shall be permitted to [**] due to Editas pursuant to Section 6.6.1 in accordance with and subject to the limitations set forth in Section 6.6.4(b)(iv) and the milestone payments made pursuant to Section 6.5.2 with respect to the applicable Allergan Development Program, provided that no milestone payment pursuant to Section 6.5.2 shall be [**] the full amount set forth in Section 6.5.2 as a result of [**] under this Section 6.4.1(e). Upon [**], Allergan shall [**] the applicable [**] to Editas [**] pursuant to this Section 6.4.1(e) and Section 6.6.4(b)(iv). If no written claim has been made against Allergan, its Affiliates or Sublicensees within [**] after the First Commercial Sale of a Licensed

Product in the US or a Major European Country, Allergan shall [**] the applicable [**] to Editas [**] during such year pursuant to Section 6.6.4(b)(iv).

(f) Notwithstanding anything to the contrary (but subject to the final sentence of this Section 6.4.1(f)), (i) the milestone payments for the [**] Milestone Event set forth in the tables in Sections 6.4.2 and 6.4.3 shall be reduced to (A) [**] percent ([**]%) of the amounts set forth in such tables if the First Commercial Sale in the US has not occurred on the date that is [**] months after Regulatory Approval in the US (but occurs prior to the date that is [**] months after Regulatory Approval in the US) or (B) [**] percent ([**]%) of the amounts set forth in such tables if the applicable First Commercial Sale in the US has not occurred on the date that is [**] months after Regulatory Approval in the US, provided that, in each case ((A) and (B)), Allergan, its Affiliate or Sublicensee had operational capability sufficient to supply launch quantities of such Licensed Product prior to the date that is [**] months after Regulatory Approval in the U.S. [**] in the US until after such date (and Allergan, its Affiliate or Sublicensee had made appropriate preparations for launch at the time such In-License was anticipated to be obtained) and (ii) the milestone payments for the [**] Milestone Event set forth in the tables in Section 6.4.2 and Section 6.4.3 shall be reduced to (A) [**] percent ([**]%) of the amounts set forth in such tables if the First Commercial Sale triggering such Milestone Event has not occurred on the date that is [**] months after the applicable Regulatory Approval and separate pricing approval in the applicable Major European Country (but occurs prior to the date that is [**] months after Regulatory Approval and separate pricing approval in such Major European Country) or (B) [**] percent ([**]%) of the amounts set forth in such tables if the First Commercial Sale triggering such Milestone Event has not occurred on the date that is [**] months after Regulatory Approval and separate pricing approval in the applicable Major European Country, provided that, in each case ((A) and (B)), Allergan, its Affiliate or Sublicensee had operational capability sufficient to supply launch quantities of such Licensed Product prior to the date that is [**] months after Regulatory Approval and separate pricing approval in the applicable Major European Country [**] in such Major European Country until after such date (and Allergan, its Affiliate or Sublicensee had made appropriate preparations for launch at the time such In-License was anticipated to be obtained). Notwithstanding anything to the contrary in the provisions of Sections 6.4.1(e) and 6.6.4(b)(iv) and this Section 6.4.1(f), in no event shall any of the milestone payments for the [**] Milestone Event set forth in the tables in Sections 6.4.2 and 6.4.3 be reduced to less than [**] percent ([**]%) of the amounts set forth in such tables.

6.4.2 Milestone Events for Allergan Development Program for which Editas has not exercised its Profit-Sharing Option:

| | **Milestone Event** | **Allergan Development Program for which Editas has <u>not</u> exercised its Profit-Sharing Option $ in Millions** | | |
|---|---|---|---|---|
| | | For the first Licensed Product within an Allergan Development Program which is directed to an Indication in the First Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Second Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Third Field to achieve said Milestone Event: |
| First Milestone Event | [**] | 8 | [**] | [**] |
| Second Milestone Event | [**] | [**] | [**] | [**] |
| Third Milestone Event | [**] | [**] | [**] | [**] |
| Fourth Milestone Event | [**] | [**] | [**] | [**] |
| Fifth Milestone Event | [**] | [**] | [**] | [**] |
| Sixth Milestone Event | [**] | [**] | [**] | [**] |
| Seventh Milestone Event | [**] | [**] | [**] | [**] |

[**].

6.4.3 Milestone Events for Allergan Development Program for which Editas has exercised its Profit-Sharing Option:

| | **Milestone Event** | **Allergan Development Program for which Editas has exercised its Profit-Sharing Option $ in Millions** | | |
|---|---|---|---|---|
| | | For the first Licensed Product within an Allergan Development Program which is directed to an Indication in the First Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Second Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Third Field to achieve said Milestone Event: |
| First Milestone Event | [**] | [**] | [**] | [**] |
| Second Milestone Event | [**] | [**] | [**] | [**] |
| Third Milestone Event | [**] | [**] | [**] | [**] |
| Fourth Milestone Event | [**] | [**] | [**] | [**] |
| Fifth Milestone Event | [**] | [**] | [**] | [**] |
| Sixth Milestone Event | [**] | [**] | [**] | [**] |

| | Milestone Event | Allergan Development Program for which Editas has exercised its Profit-Sharing Option $ in Millions | | |
|---|---|---|---|---|
| | | For the first Licensed Product within an Allergan Development Program which is directed to an Indication in the First Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Second Field to achieve said Milestone Event: | For the first Licensed Product within the same Allergan Development Program directed to an Indication in the Third Field to achieve said Milestone Event: |
| Seventh Milestone Event | [**] | [**] | [**] | [**] |

[**].

6.5 Commercial Milestone Fees.

6.5.1 In partial consideration for the rights and licenses granted to Allergan hereunder Allergan shall make the following non-refundable, non-creditable (except as set forth in Sections 6.4.1(e) and 6.6.4(b)(iv)) milestone payments to Editas, on an Allergan Development Program-by-Allergan Development Program basis, upon the first achievement by Allergan or its respective Affiliates, Licensees, or Sublicensees of the commercial milestone events set forth in the table in Section 6.5.2 under each Allergan Development Program. Payments due from Allergan to Editas under this Section 6.5 shall be paid concurrently with the royalty payment due to Editas under Section 6.6.1 with respect to the Calendar Quarter in which the applicable milestone is achieved. Each milestone payment in the table in Section 6.5.2 is eligible to be paid once for each Allergan Development Program. For clarity, with respect to each such Allergan Development Program, each milestone payment is due only once regardless of the number of Licensed Products Commercialized under such Allergan Development Program. For further clarity, when determining a commercial milestone for a particular Allergan Development Program, Net Sales from a Licensed Product arising from a different Allergan Development Program shall not be counted towards such commercial milestone.

6.5.2 Commercial Milestones:

| Commercial Milestone | $ in Millions |
|---|---|
| First calendar year in which aggregate world-wide Net Sales of Licensed Products under the applicable Allergan Development Program are greater than or equal to $[**] | [**] |
| First calendar year in which aggregate world-wide Net Sales of Licensed Products under the applicable Allergan Development Program are greater than or equal to $[**] | [**] |
| First calendar year in which aggregate world-wide Net Sales of Licensed Products under the applicable Allergan Development Program are greater than or equal to $[**] | [**] |
| **Total** | **90** |

6.6 Royalty Payments for Licensed Products.

6.6.1 In General. In partial consideration for the rights and licenses granted to Allergan hereunder Allergan shall pay Editas tiered royalties on Net Sales of Licensed Products at the royalty rates set forth in the table below, on a Licensed Product-by-Licensed Product basis. Payments due from Allergan to Editas under this Section 6.6.1 shall be paid within [**] days after the end of each Calendar Quarter.

| Annual Net Sales of Licensed Products | Royalty Rate Applicable to such Net Sales |
|---|---|
| Portion up to and including $[**] | [**]% |
| Portion greater than $[**] | [**]% |

6.6.2 At Allergan's request, no earlier than [**], the Parties shall in good faith negotiate a buy-down of Allergan's royalty obligations under Section 6.6.1 with respect to such Licensed Product. Such buy-down agreement shall permit Allergan to reduce each of the royalty rates in the royalty tiers set forth in Section 6.6.1 with respect to such Licensed Product by either [**] percent ([**]%) or [**] percent ([**]%) of Net Sales, as elected by Allergan, in exchange for [**]. In the event the Parties do not agree on such [**], they shall jointly engage a mutually agreeable independent Third Party [**].

6.6.3 In License Payments. The Party that is a party to each In-License shall, subject to Section 6.6.4(b), be responsible for making any In-License Payments due to the applicable Inbound Licensor arising under or in connection with such In-License, provided that, if Editas is the party to such In-License and fails to make such payment, then, in addition to any other rights or remedies available to Allergan at law or in equity, Allergan shall have the right to

make such payment on Editas' behalf and shall have the right to treat such payment as an In-License Payment made by Allergan pursuant to Section 6.6.4(b).

6.6.4 Royalty Term and Adjustments.

(a) Royalty Term. Allergan's royalty obligations to Editas under this Section 6.6.4(a) shall commence on a country-by-country and Licensed Product-by-Licensed Product basis on date of the first sale by Allergan, its Affiliates, Licensees, or Sublicensees of the relevant Licensed Product in the relevant country and shall expire on a country-by-country basis and Licensed Product-by-Licensed Product basis on the latest of the following, as applicable: (a) the expiration of Patent-Based Exclusivity with respect to such Licensed Product in such country, (b) the expiration of Regulatory-Based Exclusivity with respect to such Licensed Product in such country, and (c) the tenth ($10^{th}$) anniversary of the First Commercial Sale of such Licensed Product in such country by Allergan, its Affiliates, Licensees, or Sublicensees (the "Royalty Term"). The foregoing provisions of this Section 6.6 notwithstanding, the royalties payable with respect to Net Sales of Licensed Products shall be reduced, on a Licensed Product-by-Licensed Product and country-by-country basis, to [**] percent ([**]%) of the amounts otherwise payable pursuant to Section 6.6.1 (with respect to Licensed Products) during any portion of the Royalty Term when neither Patent-Based Exclusivity nor Regulatory-Based Exclusivity applies to such Licensed Product in such country.

(b) Future In-Licenses.

(i) If during the Term, a Party believes that a license to additional technology or intellectual property (including any Patents) is necessary or useful to Develop, Commercialize or Manufacture a CDP Product or a Licensed Product, including as part of settlement of any claim, litigation or administrative proceedings ("Additional Third Party IP"), such Party shall promptly provide to the other Party, via the ASC, a written description of such Additional Third Party IP together with the proposed licensing terms therefor. If the Parties are in agreement that Additional Third Party IP should be licensed, then the Parties shall discuss which Party shall lead such negotiations and thereafter, the designated Party shall use good faith efforts to license such Additional Third Party IP. The negotiating Party shall provide the other Party with a reasonable opportunity to review and comment on the proposed terms of such license that would be applicable to such other Party as a sublicensee thereunder, and shall reasonably consider and advocate for such comments when negotiating the terms of such license.

(ii) Notwithstanding the foregoing, Allergan shall have the right, without seeking the consent of the ASC, to independently negotiate a license to any Additional Third Party IP. In addition, Editas shall have the right, without seeking the consent of the ASC, to independently negotiate a license to (A) Know-How that relates to the Genome Editing Technology with applicability outside the Ocular Field or with applicability across the Ocular Field and other Fields and (B) Patents that claim or cover any of the Know-How described in clause (A). For clarity, Editas shall not, without Allergan's prior written consent, enter into any license agreement for Additional Third Party IP having applicability, or, which provides for license rights which are, solely within the Ocular Field, provided that, after the Research Term, Editas shall have the right to enter into license agreements for Additional Third Party IP having applicability outside the Allergan Development Program(s), including in the

Ocular Field. Each Party shall keep the other Party reasonably informed regarding any such independent negotiations; and provided further that if Editas is independently negotiating a license under this Section 6.6.4(b)(ii) which covers any Additional Third Party IP which may be applicable to any Collaboration Development Program or Allergan Development Program, then Editas shall provide Allergan with a reasonable opportunity to review and comment on the proposed terms of such license that would be applicable to Allergan as a sublicensee thereunder, and shall reasonably consider and advocate for such comments in negotiating the terms of such license.

(iii) If Editas obtains a license or other agreement to Additional Third Party IP (whether under Section 6.6.4(b)(i) or Section 6.6.4(b)(ii), Editas shall promptly provide to Allergan a written description of such Additional Third Party IP, together with a true and correct copy of such license or other agreement. If Allergan notifies Editas in writing after receipt thereof that Allergan elects to receive a sublicense of rights granted under such Third Party license agreement, then such Third Party license agreement shall be an "In-License" under this Agreement. Allergan shall, in addition to the other payments made by Allergan to Editas pursuant to this ARTICLE 6, pay to Editas [**] percent ([**]%) of the amounts payable by Editas pursuant to such In-License with respect to the Development, Commercialization and Manufacture of Licensed Products hereunder, and the Parties shall [**]. Editas shall use Commercially Reasonable Efforts to ensure that (A) the royalty payments applicable to the Licensed Products shall be no higher than those royalty payments applicable to any other products licensed thereunder (including any products of Editas' other licensees) and (B) the rights and obligations applicable to the Licensed Products shall be no more restrictive than those rights and obligations applicable to other products licensed thereunder (including any products of Editas' other licensees).

(iv) On a Licensed Product-by-Licensed Product basis, if Allergan directly obtains a license or other agreement to any [**] other Additional Third Party IP (whether under Section 6.6.4(b)(i) or Section 6.6.4(b)(ii)), such license shall automatically be deemed an "In-License" and Allergan shall have the right to (A) [**], deduct [**] percent ([**]%) of the amounts paid by Allergan under any In-License [**] from the applicable [**] with respect to the applicable Licensed Product as set forth in Section 6.4.1(e) and (B) deduct [**] percent ([**]%) of the amounts paid by Allergan under any In-License [**] (to the extent not deducted as described in the foregoing clause (A)) or other Additional Third Party IP from any royalty payments due to Editas under Section 6.6.1 with respect to the applicable Licensed Product and, solely with respect to Additional Third Party IP filed with a patent office in any jurisdiction on or prior to the Reference Date, any milestone payments due to Editas under Section 6.5.2 provided that no milestone payment pursuant to Section 6.5.2 shall be reduced to less than [**] percent ([**]%) of the full amount set forth in Section 6.5.2 as a result of any such deduction under this Section 6.6.4(b)(iv). In addition, on a Licensed Product-by-Licensed Product basis, Allergan shall have the right to deduct [**] percent ([**]%) of any costs, damages and expenses (including settlement payments) incurred by Allergan in connection with any claim, litigation or administrative proceedings or settlements thereof regarding any Patents a Third Party enforces or threatens in writing to enforce against Allergan, its Affiliates or Sublicensees in connection with the Manufacture or Commercialization of a Licensed Product from any royalty payments due to Editas under Section 6.6.1 with respect to the applicable Licensed Product(s) and, solely with respect to Additional Third Party IP filed with a patent

office in any jurisdiction on or prior to the Reference Date, any milestone payments due to Editas under Section 6.5.2 provided that no milestone payment pursuant to Section 6.5.2 shall be reduced to less than [**] percent ([**]%) of the full amount set forth in Section 6.5.2 as a result of any such deduction under this Section 6.6.4(b)(iv). [**]. If any amount that Allergan is entitled to deduct from the royalty payments due to Editas under Section 6.6.1 with respect to a Licensed Product is not fully offset against such royalty amounts as a result of the preceding sentence, such amount may be carried forward and applied to future periods until fully exhausted.

(c) Biosimilar Product Competition. If, on a Licensed Product-by-Licensed Product, country-by-country and Calendar Quarter-by-Calendar Quarter basis, Biosimilar Product Competition is present with respect to such Licensed Product in such country during such Calendar Quarter, then the royalties payable with respect to such Licensed Product pursuant to Section 6.6.1 in such country during such Calendar Quarter shall be reduced to [**] percent ([**]%) of the amounts otherwise payable pursuant to Section 6.6.1, provided that, in no event shall such royalty payments, as adjusted by Section 6.4.1(e) and this Section 6.6.4, be [**] it being understood that if, for a full subsequent Calendar Quarter, there are no Biosimilar Products being commercialized with respect to such Licensed Product in such country, then royalties shall once again be payable at the full rates set forth in Section 6.6.1. If any amount that Allergan is entitled to deduct from the royalty payments due to Editas under Section 6.6.1 with respect to a Licensed Product is not fully offset against such royalty amounts as a result of the proviso in the preceding sentence, such amount may be carried forward and applied to future periods until fully exhausted.

6.7 Royalty Payments for Editas Products.

6.7.1 Returned Collaboration Development Programs. With respect to any Allergan Development Program that (i) becomes an Editas Program subsequent to the [**], if Editas elects to Develop or Commercialize Editas Products, Editas shall pay Allergan a royalty, on an Editas Product-by-Editas Product basis, on Net Sales of such Editas Products by Editas, its Affiliates, Licensees, or Sublicensees at the rate of [**] percent ([**]%) of Net Sales, subject to the limitation in Section 6.7.2, and (ii) becomes an Editas Program prior to the [**], if Editas elects to Develop or Commercialize Editas Products, Editas shall pay Allergan a royalty, on an Editas Product-by-Editas Product basis, on Net Sales of such Editas Products by Editas, its Affiliates, Licensees, or Sublicensees at the rate of [**] percent ([**]%) of Net Sales, subject to the limitation in Section 6.7.2, provided that, as to the LCA10 Program, such royalty shall only become payable if the LCA10 Program becomes an Allergan Development Program and then the [**] occurs in such Allergan Development Program prior to such program becoming an Editas Program. Payments due from Editas to Allergan under this Section 6.7.1 shall be paid on a Calendar Quarter basis within [**] days after the end of such Calendar Quarter.

6.7.2 Royalty Term for Editas Products. Editas' royalty obligations to Allergan under this Section 6.7 shall commence on a country-by-country and Editas Product-by-Editas Product basis on the date of First Commercial Sale by Editas, its Affiliates, Licensees, or Sublicensees of the relevant Editas Product in the relevant country and shall expire on a country-by-country and Editas Product-by-Editas Product basis on the latest of the following, as applicable: (a) the expiration of Patent-Based Exclusivity with respect to such Editas Product in

such country, (b) the expiration of Regulatory-Based Exclusivity with respect to such Editas Product in such country, and (c) the tenth (10th) anniversary of the First Commercial Sale of such Editas Product in such country by Editas, its Affiliates, Licensees, or Sublicensees.

6.8 Reports; Development and Sales Milestones; Royalty Payments. Until the expiration of a Party's royalty and other payment obligations under this ARTICLE 6, such Party agrees to make written unaudited reports to the other Party within [**] days after the end of each Calendar Quarter covering sales of Licensed Products or Editas Products (as the case may be) on a product-by-product, country-by-country basis in the Territory by such Party, its Affiliates, Licensees, and Sublicensees during such Calendar Quarter. Each such written report shall provide (a) the Net Sales in Dollars and local currency for each Licensed Product in the Territory during the reporting period; (b) the royalties payable, in Dollars, which shall have accrued hereunder with respect to such Net Sales and (c) to the extent required under any applicable Existing In-License Covering a Licensed Product(s), the number of units of such Licensed Product(s) sold during the reporting period. In addition, each such written report shall contain such additional information as reasonably requested by Editas in order to satisfy Editas' reporting obligations to any of its Inbound Licensors. The information contained in each report under this Section 6.8 shall be considered Confidential Information of the Party providing the report. Concurrent with the delivery of each such report, the Party delivering such report shall make the royalty payment due the other Party under ARTICLE 6 for the Calendar Quarter covered by such report. In the case of transfers or sales of any Licensed Product or Editas Product (as applicable) between the royalty-paying Party and an Affiliate, Licensee or Sublicensee of such Party, a royalty shall be payable only with respect to the sale of such Licensed Product or Editas Product to an independent Third Party that is not an Affiliate, Licensee or Sublicensee of the seller.

6.9 Methods of Payments. All payments due from one Party (the "Payor") to the other Party (the "Payee") under this Agreement shall be paid in Dollars by wire transfer to a bank in the United States designated in writing by the Payee.

6.10 Accounting.

6.10.1 Payor agrees to keep, and to require its Affiliates, Licensees, and Sublicensees to keep, full, clear and accurate records for a minimum period of [**] years after the conclusion of the Calendar Year in which the relevant payment is owed pursuant to this Agreement, setting forth the sales and other disposition of Licensed Products and Editas Products sold or otherwise disposed of in sufficient detail to enable royalties and compensation payable to the Payee hereunder to be determined.

6.10.2 Payor further agrees, upon not less than [**] days prior written notice, to permit, and to require its Affiliates, Licensees, and Sublicensees to permit, the books and records relating to such Licensed Product and Editas Product to be examined by an independent accounting firm selected by Payee and reasonably acceptable to Payor for the purpose of verifying reports provided by Payor under this ARTICLE 6. Such audit shall not be performed more frequently than [**], and shall be conducted under appropriate confidentiality provisions, for the sole purpose of verifying the accuracy and completeness of all financial, accounting and numerical information and calculations provided under this Agreement. The independent

accounting firm shall have reasonable access, on reasonable notice and during Payor's normal business hours to individuals, records and responses to questions from auditors in a timely manner and have the right to make copies of relevant portions of Payor's books and records; provided that, any such copies shall be the Confidential Information of Payor, shall be protected by appropriate confidentiality obligations and shall not be shared with Payee or any other Person.

6.10.3 Such examination is to be made at the expense of Payee, except if the results of the audit reveal an underpayment of royalties, milestones, or other payments to Payee under this Agreement of [**] percent ([**]%) or more in any Calendar Year, in which case reasonable audit fees for such examination shall be paid by Payor.

6.11 Currency. All amounts payable and calculations hereunder shall be in Dollars. When conversion of payments from any foreign currency is required to be undertaken by the Payor, the USD equivalent shall be calculated using Payor's then-current standard exchange rate methodology as applied in its external reporting.

6.12 Taxes and Withholding. Each Party shall be responsible for its own taxes, duties, levies, imposts, assessments, deductions, fees, withholdings or similar charges imposed on or measured by net income or overall gross income (including branch profits), gross receipts, capital, ability or right to do business, property, and franchise or similar taxes pursuant to applicable Law. If the Payor is required to deduct or withhold from any payment due hereunder any taxes, duties, levies, imposts, assessments, deductions, fees, and other similar charges by applicable Law or any Governmental Authority ("Withholding Taxes"), then the Payor shall pay such Withholding Taxes to the applicable Governmental Authority and make the payment to the Payee of the net amount due after deduction or withholding of such taxes, and such Withholding Taxes shall be treated for all purposes of this Agreement as having been paid to the Payee hereunder. Notwithstanding the foregoing, if the Payor is required to deduct or withhold Withholding Taxes from any payment due hereunder and any portion of such payment (a "Pass-Through Amount") is required to be paid to a licensor under an Existing In-License, then the Pass-Through Amount shall be treated as a separate payment and such Pass-Through Amount shall be increased so that the net amount thereof payable to the Payee, after the deduction of all Withholding Taxes directly related to such Pass-Through Amount, equals the Pass-Through Amount; provided, however, that Payee shall take all reasonable best efforts necessary to obtain any lawful reductions or eliminations of such Withholding Taxes available under applicable Law. The Payor shall submit reasonable proof of payment of any Withholding Taxes within a reasonable period of time after such Withholding Taxes are remitted to the Governmental Authority. The Parties shall reasonably cooperate to eliminate or minimize any Withholding Taxes. Except for Pass-Through Amounts, the Payor shall provide to the Payee reasonable prior notice of its intention to withhold in order to allow the Payee reasonable opportunity to provide sufficient information or documentation to eliminate or minimize Withholding Taxes. The Payor shall reasonably provide sufficient documentation to enable the Payee to receive any credits available under applicable tax Laws. Payee shall indemnify and hold harmless Payor for any taxes, including Withholding Taxes, Payee owes to a Governmental Authority for which Payor is held responsible and for which prior withholding has not been made (provided that, subject to Editas' representation as to its status as beneficial owner and its United States tax residency as of the Effective Date set forth below being correct, Allergan shall not withhold any Withholding Taxes from the upfront payment set forth in Section 6.1 and such indemnity and hold harmless

obligations shall not apply to any Withholding Taxes on the upfront payment set forth in Section 6.1), and Payor shall hold Payee harmless for any fees, penalties and interest that are imposed on Payee arising out of Payor's failure to withhold and remit Withholding Taxes to Governmental Authorities in accordance with this Section 6.12 and applicable Laws, unless such failure arises from the acts or omissions of Payee (for example, the provision of incorrect beneficial owner information or invalid forms). Editas represents and agrees that it is the beneficial owner of the payments to which it is entitled under this Agreement, that, as of the Effective Date and until and unless it notifies Allergan of a change in its residency status, it is a resident of the United States by virtue of the applicable Law of the United States, that it qualifies for benefits as a resident of the United States under the Tax Treaty, including without limitation Articles 4 and 23 thereof, and that it does not have a fixed base, office or permanent establishment in Ireland through which it carries on a trade or business.

6.13 Value Added Tax. Notwithstanding anything contained in Section 6.12, this Section 6.13 shall apply with respect to any value added tax, ad valorem, goods and services or similar tax chargeable on the supply or deemed supply of goods or services, sales and use taxes, transaction taxes, consumption taxes and other similar taxes required by applicable Law including any interest, penalties or other additions to tax thereon, required under applicable Law ("VAT"). All payments required under this Agreement are exclusive of VAT. If any VAT is required in respect of any such payment under applicable Law, the Payor shall pay VAT at the applicable rate in respect of such payment as follows: (a) where the liability to collect, account for, or remit such VAT is a liability of the Payee, following the receipt of a valid VAT invoice in the appropriate form issued by the Payee in respect of such payment, such VAT to be payable on the later of the due date of the payment to which such VAT relates and [**] days after the receipt by the Payor of the applicable valid invoice relating to that VAT payment (provided, however, that the Payee shall return such VAT within a reasonable period of time to the extent that Payee actually receives under applicable Law a refund or recovery of such VAT) or (b) where the liability to collect, account for, or remit such VAT is a liability of the Payor, timely account and pay for all applicable VAT to the proper tax authority. If the liability to collect, account for, or remit such VAT is a liability of Payee, the Payor shall not be responsible for any penalties, interest, and other additions thereon resulting from the failure by the Payee to collect (if not included on a valid VAT invoice) or remit any such VAT.

6.14 Late Payments. Any undisputed amount owed by Payor to Payee under this Agreement that is not paid on or before the date such payment is due shall bear interest at a rate per annum equal to the lesser of the prime or equivalent rate per annum quoted by *The Wall Street Journal* on the first Business Day after such payment is due, plus [**] percent ([**]%), or the highest rate permitted by applicable Law, calculated on the number of days such payments are paid after such payments are due and compounded monthly. Interest shall not accrue on undisputed amounts that were paid after the due date as a result of mistaken Payee actions (*e.g.*, if a payment is late as a result of Payee providing an incorrect account for receipt of payment). In addition, the Payor shall reimburse the Payee for all costs, including attorneys' fees and legal expenses, incurred in the collection of late payments; provided that, the foregoing shall not apply to payments disputed in good faith by the Payor unless the Payee is successful in such dispute or the Payor ceases to dispute such payments.

**ARTICLE 7**
**EXCLUSIVITY**

7.1 During the Research Term.

7.1.1 Editas. Except pursuant to this Agreement, during the Research Term, neither Editas nor any of its Affiliates shall, except as otherwise permitted in Section 7.3, (a) either alone or with or for any Third Party, Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field, or (b) grant a license or sublicense to Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field.

7.1.2 Allergan. Except pursuant to this Agreement, during the Research Term, neither Allergan nor any of its Affiliates shall, except as otherwise permitted in Section 7.3, (a) either alone or with or for any Third Party, Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field directed to (i) any Ocular Indication to which any Gene Editing Therapy in any non-terminated Collaboration Development Program is directed or (ii) the same Target to which any Gene Editing Therapy in any non-terminated Collaboration Development Program is directed, or (b) grant a license or sublicense to Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field directed to (i) any Ocular Indication to which any Gene Editing Therapy in any non-terminated Collaboration Development Program is directed or (ii) the same Target to which any Gene Editing Therapy in any non-terminated Collaboration Development Program is directed.

7.2 After the Research Term. Except pursuant to this Agreement, after the Research Term and during the Term, neither Party nor any of its respective Affiliates shall, except as otherwise permitted in Section 7.3, (a) either alone or with or for any Third Party, Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field directed to (i) any Ocular Indication to which any Licensed Product is directed or (ii) any Target to which any Licensed Product is directed, or (b) grant a license or sublicense to Develop, Manufacture or Commercialize any Gene Editing Therapy in the Ocular Field directed to (i) any Ocular Indication to which any Licensed Product is directed or (ii) any Target to which any Licensed Product is directed.

7.3 Exceptions.

(a) Subject to Section 2.4, the restrictions set forth in Section 7.1 and 7.2 shall not restrict either Party or its Affiliates from using Third Party contractors to perform Development, Manufacturing or Commercialization activities that such Party is permitted to perform directly under this Agreement.

(b) The restrictions set forth in Section 7.1.1(b) and 7.2(b) are subject to any requirement in an Existing In-License that permits the upstream licensor of any In-License to grant rights or licenses [**] to Third Parties. In the event that an Inbound Licensor provides Editas with a Proposed Product Notice or a Proposed Broad Target Notice (each as defined in the applicable Existing In-License) for a potential product [**], Editas shall promptly notify Allergan and the Parties shall thereafter meet and discuss the matter and take such actions as the

Parties mutually agree are reasonably necessary to avoid the loss of rights to such potential product or target.

(c) The restrictions set forth in Sections 7.1.1 and 7.2 shall not restrict Editas and its Affiliates, alone or with or for Juno Therapeutics, Inc., from performing their obligations under that certain Collaboration and License Agreement by and between Editas and Juno Therapeutics, Inc., dated May 26, 2015 (amended by the parties from time to time), with respect to the use of [**].

(d) In the event that either Party (the "Acquiring Party") acquires all or substantially all of the business or assets of a Third Party (in each case whether by merger, stock purchase, change of control or purchase of assets), and such Third Party or any of its Affiliates is, prior to or as of the date of such transaction, engaged in any activities that would violate Sections 7.1 or 7.2, as applicable, if conducted by the Acquiring Party (such transaction, a "Competing Product Transaction" and such activities, a "Competing Acquired Program"), which Competing Acquired Program is not the primary asset or business purchased under the Competing Product Transaction, the Acquiring Party shall promptly provide written notice to the other Party of such Competing Product Transaction within [**] Business Days after the closing of such transaction. The Acquiring Party shall (a) segregate the Competing Acquired Program from the Development and Commercialization activities under this Agreement, including, to the extent practicable, by establishing separate teams and (b) use good faith, diligent efforts to prevent any Confidential Information of the other Party from being disclosed to, or used by, individuals conducting any activities with respect to the Competing Acquired Program. Subject to compliance with this Section 7.3(d), the Acquiring Party's activities with respect to any Competing Acquired Program shall not be a breach of this ARTICLE 7.

(e) In the event that any Third Party acquires all or any part of either Party (in each case whether by merger, stock purchase, change of control or purchase of assets), and, after the closing of such transaction, such Third Party or any of its Affiliates engages in any activities that would violate Sections 7.1 or 7.2, as applicable, if conducted by such acquired Party (such activities, a "Competing Acquirer Program"), such acquired Party shall (a) segregate the Competing Acquirer Program from the Development and Commercialization activities under this Agreement, including, to the extent practicable, by establishing separate teams and (b) use good faith, diligent efforts to prevent any Confidential Information of the other Party from being used by individuals conducting any activities with respect to the Competing Acquirer Program. Subject to the acquired Party's compliance with this Section 7.1.2(e), the activities of such Party's Third Party acquirer with respect to any Competing Acquirer Program shall not be a breach of this ARTICLE 7.

(f) The restrictions set forth in Section 7.1.1(a) shall not restrict Editas and its Affiliates (other than with or for a Third Party) from Developing or Manufacturing any Editas Product; provided that Editas may not Commercialize any such Editas Product until after the Research Term and only if, at such time, there is no other Licensed Product directed at (i) the same Ocular Indication at which such Editas Product is directed or (ii) the same Target at which such Editas Product is directed, unless such Editas Product is directed at such Target for an Indication outside the Ocular Field.

(g) After the seventh ($7^{th}$) anniversary of the Effective Date, the restrictions set forth in Section 7.1.1 shall not restrict Editas and its Affiliates, whether alone or with or for any Third Party, as to any CDP Product as to which Allergan does not exercise its Option within the Initial Option Period or the Extended Option Period, as applicable.

(h) The restrictions set forth in Section 7.2 shall not apply as to any Editas Product, provided that, there is no other Licensed Product at such time directed at [**].

## ARTICLE 8
## OWNERSHIP OF INTELLECTUAL PROPERTY RIGHTS

8.1 Ownership of Inventions; Disclosure.

8.1.1 Ownership. Title to all Inventions and other intellectual property made solely by employees or agents of Editas in the course of activities conducted pursuant to any Collaboration Development Program shall be owned by Editas; title to all Inventions and other intellectual property made solely by employees or agents of Allergan in the course of activities conducted pursuant to any Collaboration Development Program shall be owned by Allergan; title to all Inventions and other intellectual property made jointly by employees or agents of Allergan and Editas in the course of performing, or in connection with, any Collaboration Development Program shall be owned jointly by Allergan and Editas. Inventorship of Inventions and other intellectual property made pursuant to this Agreement shall be determined in accordance with the patent laws of the United States. Except as expressly provided in this Agreement, neither Party shall have any obligation to account to the other for profits, or to obtain any approval of the other Party to license or exploit jointly-owned subject matter, by reason of joint ownership thereof, and each Party hereby waives any right it may have under the laws of any jurisdiction to require any such consent or accounting. For the avoidance of doubt, any jointly-owned Inventions and other intellectual property shall be deemed to be covered by the license granted under Section 4.2.1 and subject to the terms of this Agreement, including ARTICLE 7.

8.1.2 Disclosure of Inventions. Editas shall promptly disclose to Allergan any Inventions made in connection with any Collaboration Development Program or Allergan Development Program. Allergan shall promptly disclose to Editas any Inventions made in connection with any Collaboration Development Program that Cover Genome Editing Technology. In connection with any license granted by Allergan to Editas under Section 12.8.2(e) and upon such license taking effect, Allergan shall disclose any Inventions that Cover Genome Editing Technology made in connection with any Allergan Development Program that is terminated by Allergan.

8.1.3 Background IP. Each Party shall retain ownership of intellectual property rights existing as of the Effective Date, or developed or acquired independently of any Collaboration Development Program, and nothing in this Agreement shall assign any ownership to the other Party with respect to such intellectual property rights.

8.2 Patent Prosecution.

8.2.1 Editas CDP Patents.

(a) Editas shall be responsible, at its expense, and shall have the exclusive right for preparing, filing, Prosecuting and Maintaining the Editas CDP Patents and for conducting any opposition, reexamination request, nullity action, interference, or other attack upon the validity, title or enforceability thereof (each, a "Defense Proceeding") relating thereto (except that in connection with any counterclaims brought in actions subject to Section 8.3.2(a), the Party with responsibility for such action pursuant to Section 8.3.2(a) shall have responsibility for such Defense Proceedings). Without limiting the foregoing, Editas shall, to the extent practicable, Prosecute and Maintain the Editas CDP Patents and conduct the actions in the immediately preceding sentence for at least the following countries: [**]. To the extent that Editas CDP Patents relate to CDP Products, Editas shall keep Allergan fully informed with respect to (a) the issuance of patents filed by Editas pursuant to this Section 8.2.1(a) and (b) the abandonment of any Patent or Patent application maintained by Editas pursuant to this Section 8.2.1. Without limiting the foregoing, Editas shall (i) provide Allergan with copies of the text of the applications for Editas CDP Patents specifically relating to CDP Products arising in Collaboration Development Programs to which Allergan retains Option rights or in Allergan Development Programs as soon as practicable but at least [**] days before filing, except for urgent filings in which case Editas shall provide copies as soon as practicable before, simultaneously with or immediately after filing; (ii) provide Allergan with a copy of each submission made to and material document received from a patent authority, court or other tribunal regarding such Editas CDP Patents reasonably promptly after making such filing or receiving such material document, including a copy of each application as filed together with notice of its filing date and application number; (iii) keep Allergan advised of the status of all material communications, actual and prospective filings or submissions regarding such Editas CDP Patents, and shall give Allergan copies of any such material communications, filings and submissions proposed to be sent to any patent authority or judicial body; and (iv) consider in good faith and reasonably incorporate Allergan's comments on the material communications, filings and submissions for such Editas CDP Patents.

(b) Editas shall notify Allergan as to any decision to abandon, to cease Prosecution and Maintenance of, or not to continue to pay the expenses of Prosecution and Maintenance of, any such Editas CDP Patent in any country in which it was filed. Editas will provide such notices at least [**] days prior to any filing or payment due date, or any other due date that requires action, in connection with such Editas CDP Patent. Thereafter, Allergan may, upon written notice to Editas, in Editas' name and at Allergan's sole cost, control the filing for, Prosecution and Maintenance of such Editas CDP Patent thereafter. Allergan will keep Editas reasonably informed of the status of the Editas CDP Patents. Any claims under an Editas CDP Patent for which Allergan controls the filing, Prosecution and Maintenance pursuant to this Section 8.2.1(b) shall not be deemed a Valid Claim for purposes of determining expiration of Patent Based Exclusivity under Section 6.6.4(a).

8.2.2 Allergan CDP Patents. Allergan shall be responsible, at its expense, and shall have the exclusive right, but not the obligation, for preparing, filing, Prosecuting and Maintaining the Allergan CDP Patents and for conducting Defense Proceedings relating thereto.

8.2.3 Joint CDP Patents.

(a) Allergan shall be responsible for preparing, filing, Prosecuting and Maintaining Joint CDP Patents specifically relating to CDP Products arising in Collaboration Development Programs to which Allergan retains Option rights or in Allergan Development Programs (the "Allergan-Prosecuted Joint CDP Patents") and for conducting any Defense Proceedings relating thereto. The Parties shall [**] related to the Allergan-Prosecuted Joint CDP Patents. Allergan shall keep Editas fully informed with respect to (a) the issuance of any Allergan-Prosecuted Joint CDP Patent and (b) the abandonment of Allergan-Prosecuted Joint CDP Patent. Without limiting the foregoing, Allergan shall (i) provide Editas with copies of the text of the applications for such Allergan-Prosecuted Joint CDP Patents as soon as practical but at least [**] days before filing, except for urgent filings in which case Allergan shall provide copies as soon as practical before, simultaneously with or immediately after filing; (ii) provide Editas with a copy of each submission made to and material document received from a patent authority, court or other tribunal regarding any such Allergan-Prosecuted Joint CDP Patents reasonably promptly after making such filing or receiving such material document, including a copy of each application as filed together with notice of its filing date and application number; (iii) keep Editas advised of the status of all material communications, actual and prospective filings or submissions regarding such Allergan-Prosecuted Joint CDP Patents, and shall give Editas copies of any such material communications, filings and submissions proposed to be sent to any patent authority or judicial body; and (iv) consider in good faith Editas' comments on the material communications, filings and submissions for such Allergan-Prosecuted Joint CDP Patents.

(b) Allergan shall notify Editas as to any decision to abandon, to cease Prosecution and Maintenance of, or not to continue to pay the expenses of Prosecution and Maintenance of, any Allergan-Prosecuted Joint CDP Patent in any country in which it was filed. Allergan will provide such notices at least [**] days prior to any filing or payment due date, or any other due date that requires action, in connection with such Allergan-Prosecuted Joint CDP Patent. Thereafter, Editas may, upon written notice to Allergan, in both Parties' names and at Editas' sole cost, control the filing for, Prosecution and Maintenance of such Allergan-Prosecuted Joint CDP Patents thereafter. Editas will keep Allergan reasonably informed of the status of the Allergan-Prosecuted Joint CDP Patents.

(c) Editas shall be responsible for preparing, filing, prosecuting and maintaining Joint CDP Patents other than the Joint CDP Patents for which Allergan has such responsibility pursuant to Section 8.2.3(a) (the "Editas-Prosecuted Joint CDP Patents") and for conducting any Defense Proceedings relating thereto. The Parties shall [**] related to the Editas-Prosecuted Joint CDP Patents. Editas shall keep Allergan fully informed with respect to (a) the issuance of Editas-Prosecuted Joint CDP Patents and (b) the abandonment of any Editas-Prosecuted Joint CDP Patent. Without limiting the foregoing, Editas shall (i) provide Allergan with copies of the text of the applications for such Editas-Prosecuted Joint CDP Patents as soon as practical but at least [**] days before filing, except for urgent filings in which case Editas shall provide copies as soon as practical before, simultaneously with or immediately after filing; (ii) provide Allergan with a copy of each submission made to and material document received from a patent authority, court or other tribunal regarding any such Editas-Prosecuted Joint CDP Patents reasonably promptly after making such filing or receiving such material document, including a copy of each application as filed together with notice of its filing date and application number; (iii) keep Allergan advised of the status of all material communications, actual and

prospective filings or submissions regarding such Editas-Prosecuted Joint CDP Patents, and shall give Allergan copies of any such material communications, filings and submissions proposed to be sent to any patent authority or judicial body; and (iv) consider in good faith Allergan's comments on the material communications, filings and submissions for such Editas-Prosecuted Joint CDP Patents.

(d) Editas shall notify Allergan as to any decision to abandon, to cease Prosecution and Maintenance of, or not to continue to pay the expenses of Prosecution and Maintenance of, any Editas-Prosecuted Joint CDP Patent in any country in which it was filed. Editas will provide such notices at least [**] days prior to any filing or payment due date, or any other due date that requires action, in connection with such Editas-Prosecuted Joint CDP Patents. Thereafter, Allergan may, upon written notice to Editas, in both Parties' names and at Allergan's sole cost, control the filing for, Prosecution and Maintenance of such Editas-Prosecuted Joint CDP Patent thereafter. Allergan will keep Editas reasonably informed of the status of the Editas-Prosecuted Joint CDP Patents. Any claims under an Editas-Prosecuted Joint CDP Patents for which Allergan controls the filing, Prosecution and Maintenance pursuant to this Section 8.2.3(d) shall not be deemed a Valid Claim for purposes of determining expiration of Patent Based Exclusivity under Section 6.6.4(a).

8.2.4 Cooperation. Each Party shall reasonably cooperate with and assist the other Party in connection with the activities of such Party under this Section 8.2 upon the reasonable request of the other Party, including by making scientists and scientific records reasonably available and the execution of all such documents and instruments and the performance of such acts as may be reasonably necessary in order to permit the other Party to continue any filing, prosecution, maintenance or extension of such patents and patent applications.

8.2.5 Patent Term Extension**.** Allergan shall have the sole right to make decisions regarding, and Allergan shall have the sole right to apply for, patent term extensions in the Territory, including in the United States with respect to extensions pursuant to 35 U.S.C. § 156 *et. seq.* and in other jurisdictions pursuant to supplementary protection certificates, and in all jurisdictions with respect to any other extensions that are now or become available in the future, wherever applicable, for CDP Patents with respect to Licensed Products, in each case including whether or not to so apply; provided, that, Allergan shall consult with Editas to determine the course of action with respect to such filings. Editas shall provide prompt and reasonable assistance, as requested by Allergan, including by taking such action as is required under any applicable Law to obtain such extension or supplementary protection certificate. With respect to Editas Background Patents, Allergan may notify Editas in writing of its interest in seeking patent term extensions in the Territory, including in the United States with respect to extensions pursuant to 35 U.S.C. § 156 *et. seq.* and in other jurisdictions pursuant to supplementary protection certificates, and in all jurisdictions with respect to any other extensions that are now or become available in the future, wherever applicable, for one or more Editas Background Patent. To the extent that Editas has the right to make decisions regarding and applying for patent term extensions under an applicable In-License, Editas shall exercise its rights to extend such Patents as directed by Allergan. To the extent that Editas does not have such right under an applicable In-License but can or is otherwise not prohibited from requesting patent term extensions under such In-License, Editas shall request such patent term extension

under such In-License and if the Inbound Licensor under such In-License consents, then Editas shall exercise its rights to extend such Patents as directed by Allergan. Notwithstanding the foregoing, with respect to Patents licensed by Editas under the 2014 MGH Agreement or 2016 MGH Agreement, Editas shall exercise its rights to extend such Patents with respect to any Allergan Development Program as directed by Allergan.

8.3 Enforcement and Defense.

8.3.1 Notice. Each Party shall promptly notify the other of any knowledge it acquires of any actual or potential infringement of the Editas Background Patents or Editas CDP Patent or Joint CDP Patent with respect to any Competitive Product, in each case by a Third Party.

8.3.2 Actions.

(a) If any Editas Background Patent, Editas CDP Patent or Joint CDP Patent, including any Patent that is licensed through an In-License, is infringed by the manufacture, use, offer for sale, sale or importation of a Competitive Product by a Third Party in any country in the Territory, which Competitive Product is competitive with a Licensed Product, then Allergan shall have the primary right, but not the obligation, to institute, prosecute, and control any action or proceeding with respect to such infringement of such patent, by counsel of its own choice. If in any such proceeding brought by Allergan, Editas is required to join for standing purposes or in order for Allergan to commence or continue any such proceeding, then Editas shall join such proceeding, at Allergan's expense, and shall be represented in such proceeding by counsel of Editas' choice. The exercise by Allergan of the right to bring an infringement action shall be subject to and consistent with the terms of all applicable In-Licenses; provided that, if, under the terms of an applicable In-License, Editas has an applicable enforcement right that it cannot delegate to Allergan then, at Allergan's request and expense, Editas shall exercise such rights in such infringement action as directed by Allergan. If Allergan does not take action in the prosecution, prevention, or termination of any infringement pursuant to this Section 8.3.2(a), and has not commenced negotiations with the suspected infringer for the discontinuance of said infringement, within [**] days after receipt of notice of the existence of an infringement (or in cases where there is a relevant statutory period during which an infringement action must be commenced that would expire prior to the expiration of such [**] day period and of which Editas has notified Allergan promptly after it becomes aware, [**] days prior to the expiration of such relevant statutory period), Editas and Allergan shall meet and discuss Allergan's reasons for not initiating a lawsuit or otherwise making or prosecuting a claim. If after having given due consideration to Allergan's reasons, Editas (or an Inbound Licensor) desires to initiate a lawsuit or otherwise make or prosecute a claim of infringement with respect to the Competitive Product, Editas shall so notify Allergan and Editas (or an Inbound Licensor) may thereafter institute, prosecute, and control such action. If in any such proceeding Allergan is required to join for standing purposes or in order for Editas (or an Inbound Licensor) to commence or continue any such proceeding, then Allergan shall join such proceeding, at Editas' (or Inbound Licensor's, as applicable) expense, and shall be represented in such proceeding by counsel of Allergan's choice.

(b) Any and all expenses, including reasonable attorneys' fees, incurred by Editas (or an Inbound Licensor, as applicable) with respect to the prosecution, adjudication and/or settlement of a suit in accordance with this section, including any related appeals, shall be paid entirely by Editas (or an Inbound Licensor, as applicable).

(c) The party initiating the suit shall have the sole and exclusive right to elect counsel for any suit initiated by it pursuant to Section 8.3.2(a); provided that such counsel is reasonably acceptable to the other Party. The other Party (and/or an Inbound Licensor) shall have the right to participate in and be represented by counsel of its own selection and at its own expense in any suit instituted under Section 8.3.2(a) by the other Party for infringement.

(d) Each Party agrees to cooperate fully in any action under this Section 8.3.2 that is controlled by the other Party, including executing legal papers and cooperating in the prosecution as may be reasonably requested by the Controlling Party.

(e) If any Joint CDP Patent is infringed by the manufacture, use, offer for sale, sale or importation of a Competitive Product by a Third Party in any country in the Territory, which Competitive Product is competitive with an Editas Product, then Editas shall have the sole right, but not the obligation, to institute, prosecute, and control any action or proceeding with respect to such infringement of such patent, by counsel of its own choice. If in any such proceeding Allergan is required to join for standing purposes or in order for Editas to commence or continue any such proceeding, then Allergan shall join such proceeding, at Editas' expense, and shall be represented in such proceeding by counsel of Allergan's choice.

(f) Unless otherwise agreed by the Parties in writing, the amount of any recovery from a proceeding brought under Section 8.3.2 shall first be applied to the out-of-pocket costs of such action by the Party prosecuting the applicable action, and (A) if the prosecuting Party is the Party (together with its Affiliates, Licensees, and Sublicensees) Commercializing the applicable Licensed Product or Editas Product affected by the infringing Competitive Product, any remaining recovery amount shall be treated as Net Sales hereunder and the prosecuting Party shall pay royalties thereon in accordance with Section 6.6.1 or 6.7, as applicable, or (B) otherwise, any remaining recovery amount shall be allocated first, such percentage owed to the Inbound Licensor pursuant to the applicable Existing In-License, and then, of the remaining amount, [**] percent ([**]%) to the prosecuting Party and [**] percent ([**]%) to the other Party. If in connection with a proceeding brought under Section 8.3.2, an In-License counterparty is entitled to a portion of any recovery that is greater than the portion of the recovery payable, after costs, to Editas, the Parties will meet and agree in good faith on an alternative sharing of such recovery to that set forth in the immediately preceding sentence that takes into account the amounts payable to the applicable In-License counterparties and results in an equitable allocation of the amounts remaining to Allergan and Editas after payment of such amounts to the applicable In-License counterparties.

(g) For avoidance of doubt, in the event that the European Unified Patent Court ("UPC") comes into existence, the decision on whether to opt-in or opt-out of the UPC for any CDP Patents shall be made by Allergan in Allergan's sole discretion; provided that,

as to CDP Patents specifically relating to an Editas Product, Editas shall make such decision from and after the time the applicable product becomes an Editas Product.

8.3.3 Defense. With respect to any defense or declaratory judgment actions relating to an Editas CDP Patent, an Allergan CDP Patent and Joint CDP Patent, including any Defense Proceeding, the Party with responsibility for the prosecution of such Patent shall have the first right, but not the obligation, to assume the defense thereof at its sole cost and expense. With respect to any Defense Proceeding relating to a Joint CDP Patent, if the Party with responsibility for the prosecution of the Joint CDP Patent declines to assume the defense of such Patent, then the other Party shall have the right, but not the obligation, to assume the defense thereof at its sole cost and expense. For the avoidance of doubt, with respect to any Defense Proceeding relating to Editas CDP Patents, Editas shall have the sole right, but not the obligation to assume the defense thereof at its sole cost and expense; provided, that Allergan has the right, at its sole cost and expense, to join any such defense with counsel of its choice. With respect to any Defense Proceeding relating to Allergan CDP Patents, Allergan shall have the sole right, but not the obligation to assume the defense thereof at its sole cost and expense. Each Party agrees to render such reasonable assistance as the defending Party may request, at the defending Party's expense, with respect to actions brought pursuant to this Section 8.3.3.

8.4 Infringement Claimed by Third Parties.

8.4.1 In the event a Third Party commences, or threatens to commence, any proceeding against a Party to this Agreement alleging infringement of a Third Party's intellectual property by the Manufacture, Commercialization use, sale, offer for sale, export and/or import by Allergan, its Affiliates, Licensees, or Sublicensees of any Licensed Product, the Party against whom such proceeding is threatened or commenced shall give prompt notice to the other Party.

8.4.2 Unless the Party against whom such proceeding is filed [**], such Party shall control the defense and settlement of any such proceeding under this Section 8.4.2 at its own cost.

8.5 Patent Challenge.

8.5.1 Allergan shall comply with Section 4.5.3 of the Cas9-I Agreement, Section 4.5.3 of the Cas9-II Agreement, Section 4.4.3 of the Cpf1 Agreement, Section 10.5 of the 2014 MGH Agreement and Section 10.5 of the 2016 MGH Agreement and acknowledges that any breach by Allergan or its Affiliates or sublicensees of such provisions shall entitle the Inbound Licensor to certain remedies which if enforced by such Inbound Licensor shall be passed through to Allergan with respect to the Patents licensed under such Existing In-Licenses.

8.5.2 For any Patent Challenge with respect to a Patent that is not subject to Section 8.5.1, in the event that Allergan or any of its Affiliates, brings, assumes or participates in or that knowingly, willfully or recklessly assists in bringing a Patent Challenge (except if Allergan is required to participate in such Patent Challenge pursuant to a subpoena or court order or participates in a proceeding that is initiated by a patent office and not at the instigation of Allergan), then (a) Allergan shall provide Editas with at least [**] days' notice prior to taking any such action, (b) the exclusive licenses granted in this Agreement may, as of the date of

initiation of said challenge or opposition, upon notice by Editas to Allergan, be converted by Editas at its option into non-exclusive licenses for the remainder of the Term solely with respect to the country in which Allergan or any of its Affiliates brings such Patent Challenge, and in such event Editas shall have the right to grant licenses under the Editas Background Patents to Third Parties in the Field in such country, subject to the then-existing non-exclusive license provided herein; and (c) at any time after the Patent Challenge is brought, Editas may, at its option, terminate this Agreement according to Section 12.6; provided that, if any of subsections (a) through (c) are held invalid or unenforceable for any reason, such invalidity or unenforceability shall not affect any of the other said subsections.

8.6 Marking. To the extent required under any applicable Existing In-License, Allergan or any of its Affiliates, Licensees or Sublicensees shall mark all Licensed Products Covered by such Existing In-License sold or otherwise disposed of in such a manner to conform with the patent laws and practice of the country to which such Licensed Products are shipped or in which such Licensed Products are sold for purposes of ensuring maximum enforceability of Patents in such country.

## ARTICLE 9
## CONFIDENTIALITY

9.1 Confidentiality; Exceptions. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing, the Parties agree that the receiving Party (the "Receiving Party") shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Agreement any Know-How or other confidential and proprietary information and materials, patentable or otherwise, in any form (written, oral, photographic, electronic, magnetic, or otherwise) which is disclosed to it by the other Party (the "Disclosing Party") or otherwise received or accessed by a Receiving Party in the course of performing its obligations or exercising its rights under this Agreement, including trade secrets, Know-How, inventions or discoveries, proprietary information, formulae, processes, techniques and information relating to a Party's past, present and future marketing, financial, and Development activities of any product or potential product or useful technology of the Disclosing Party and the pricing thereof (collectively, "Confidential Information"), except to the extent that it can be established by the Receiving Party that such Confidential Information:

9.1.1 was in the lawful knowledge and possession of the Receiving Party prior to the time it was disclosed to, or learned by, the Receiving Party, or was otherwise developed independently by the Receiving Party, as evidenced by written records kept in the ordinary course of business, or other documentary proof of actual use by the Receiving Party;

9.1.2 was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party;

9.1.3 became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the Receiving Party in breach of this Agreement; or

9.1.4 was disclosed to the Receiving Party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the Disclosing Party not to disclose such information to others.

For the avoidance of doubt, any information disclosed by Editas to Allergan prior to the Effective Date pursuant to the Mutual Confidential Disclosure Agreement by and between Editas and Allergan, Inc. dated as of August 18, 2016 (the "Existing Confidentiality Agreement") shall be Confidential Information of Editas and Editas Know-How for all purposes under this Agreement.

9.2 Authorized Disclosure. Except as expressly provided otherwise in this Agreement, a Receiving Party may use and disclose Confidential Information of the Disclosing Party as follows: (a) under appropriate confidentiality provisions similar to those in this Agreement, in connection with the performance of its obligations or exercise of rights granted or reserved in this Agreement (including the rights to Develop and Commercialize Licensed Products and to grant licenses and sublicenses hereunder); or (b) to the extent such disclosure is reasonably necessary in filing or prosecuting patent, copyright and trademark applications, prosecuting or defending litigation, complying with applicable governmental regulations, seeking and obtaining Regulatory Approval, conducting non-clinical activities or clinical trials, preparing and submitting INDs to Regulatory Authorities, or is otherwise required by Law, the rules of a recognized stock exchange or automated quotation system applicable to such Party; provided, however, that if a Receiving Party is required by Law to make any such disclosure of a Disclosing Party's Confidential Information it will, except where impracticable, give reasonable advance notice to the Disclosing Party of such disclosure requirement and, if requested by the Disclosing Party, cooperate with the Disclosing Party to secure confidential treatment of such Confidential Information required to be disclosed; or (c) in communication with existing or prospective investors, consultants, advisors, licensees, or collaborators or others on a need to know basis, in each case under appropriate confidentiality provisions substantially equivalent to those of this Agreement; or (d) to the extent mutually agreed to in writing by the Parties.

9.3 Press Release; Disclosure of Agreement.

9.3.1 Use of Names. Neither Party shall use the name, symbol, trademark, trade name or logo of the other Party or its Affiliates in any press release, publication or other form of public disclosure without the prior written consent of the other Party in each instance (such consent not to be unreasonably withheld or delayed), except for those disclosures for which consent has already been obtained. In addition, Allergan shall not, use or register the name "The Broad Institute, Inc.," "Wyss Institute for Biologically Inspired Engineering at Harvard University," "President and Fellows of Harvard College," "Massachusetts Institute of Technology," "The Rockefeller University," "University of Tokyo," "TODAI TLO, Ltd.," "Wageningen University," "Wageningen University & Research," "University of Iowa Research Foundation," "University of Iowa," "The General Hospital Corporation," "Massachusetts General Hospital," "MGH" or any variation, adaptation, or abbreviation thereof (alone or as part of another name) or any logos, seals, insignia or other words, names, symbols or devices that identify such Persons or any of such Persons' schools, units, divisions or affiliates or any trustee, director, officer, staff member, employee, student or other agent of such Person ("Institution Names") for any purpose except with the prior written approval of, and in accordance with

restrictions required by, such Person. Without limiting the foregoing, Allergan shall cease all use of Institution Names as permitted under or in connection with this Agreement on the termination or expiration of this Agreement except as otherwise approved in writing by the applicable Institution or MIT, as applicable. Allergan shall not use or register the name "Howard Hughes Medical Institute" or any variation, adaptation, or abbreviation thereof (alone or as part of another name) or any logos, seals, insignia or other words, names, symbols or devices that identify HHMI or any unit of HHMI ("HHMI Names") or of any HHMI employee (including [**]) in a manner that reasonably could constitute an endorsement of a commercial product or service; but that use for other purposes, even if commercially motivated, is permitted provided that (1) the use is limited to accurately reporting factual events or occurrences, and (2) any reference to an HHMI Name or any HHMI employees (including [**]) in press releases or similar materials intended for public release is approved by HHMI in advance.

9.3.2 Press Releases and Publicity Related to this Agreement. Except with respect to the press releases attached to this Agreement as Exhibit H, each Party agrees not to issue any press release or other public statement, whether oral or written, disclosing the existence of this Agreement, the terms hereof or any information relating to this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed.

9.3.3 Public Disclosures and Publications Related to Collaboration Development Programs and/or Licensed Products**.** Any proposed public disclosure (whether written, electronic, oral or otherwise) by Editas relating to any Collaboration Development Program or a Licensed Product shall require the prior written consent of Allergan; provided, that the foregoing shall not apply to information which is in the public domain.

9.3.4 Disclosures Required By Law. Notwithstanding the provisions of Sections 9.3.1, 9.3.2, and 9.3.3, each Party may make any disclosures required of it to comply with any duty of disclosure it may have pursuant to law or governmental regulation or pursuant to the rules of any recognized stock exchange ("Securities Laws"). In the event of a disclosure required by Securities Laws, the Parties shall coordinate with each other with respect to the timing, form and content of such required disclosure. If so requested by the other Party, the Party subject to such obligation shall reasonably cooperate with efforts undertaken by the requesting Party to obtain an order protecting to the maximum extent possible the confidentiality of such provisions (including financial terms) of this Agreement as reasonably requested by the other Party. If the Parties are unable to agree on the form or content of any required disclosure, such disclosure shall be limited to the minimum appropriate disclosure, as reasonably determined by the disclosing Party in consultation with its legal counsel. Without limiting the foregoing, each Party shall consult with the other Party on the provisions of this Agreement, together with exhibits or other attachments attached hereto, to be redacted in any filings made by Editas or Allergan with the Securities and Exchange Commission (or other regulatory body) or as otherwise required by law.

9.3.5 No Liability for Public Disclosures by Other Party**.** Nothing in this Agreement shall be construed to impose upon either Party any liability or other obligation (either to the other Party or to any other Person) with respect to any press release, publication or other form of public disclosure or statement of the other Party.

9.4 Termination of Prior Agreement. This Agreement supersedes and replaces the Existing Confidentiality Agreement. All information exchanged between the Parties under the Existing Confidentiality Agreement shall be deemed Confidential Information hereunder and shall be subject to the terms of this ARTICLE 9.

9.5 Remedies. Each Party shall be entitled to seek, in addition to any other right or remedy it may have, at Law or in equity, a temporary injunction, without the posting of any bond or other security, enjoining or restraining the other Party from any violation or threatened violation of this ARTICLE 9.

9.6 Publications. Neither Party nor its Affiliates shall publish or publicly disclose the results of any of the Development or Commercialization activities conducted by either Party under this Agreement without the prior written consent of the other Party, except as expressly permitted in this Agreement. The Parties recognize that it may be useful or required by Allergan or required by Editas pursuant to its Existing In-Licenses to publish or publicly disclose the results of Development work on Allergan Development Programs or be useful or required by Editas to publish or publicly disclose the results of Development work on Editas Programs, and (i) Allergan (and its Affiliates, Licensees, and Sublicensees) shall be free to publish or publicly disclose such results relating to Allergan Development Programs and (ii) Editas shall be permitted to publish or publicly disclose such results to the extent required by the terms of its Existing In-Licenses or relating to Editas Programs, subject, in each case, to the prior review by the other Party for patentability and protection of its Confidential Information as described in this Section 9.6. The Party that desires to publish results hereunder shall provide the other Party with a copy of such proposed abstract, manuscript, or presentation no less than [**] days ([**] days in the case of abstracts) prior to its intended submission for publication. The reviewing Party shall respond in writing promptly and in no event later than [**] days ([**] days in the case of abstracts) after receipt of the proposed material, with one or more of the following: (a) comments on the proposed material, which the publishing Party must consider in good faith, (b) a specific statement of concern, based upon the need to seek patent protection or to block publication if the reviewing Party determines that the proposed disclosure is intellectual property that should be maintained as a trade secret, or (c) an identification of the reviewing Party's Confidential Information that is contained in the material reviewed. In the event of concern over patent protection or whether maintaining a trade secret would be a priority, the publishing Party agrees not to submit such publication or to make such presentation that contains such information until the reviewing Party is given a reasonable period of time, and in no event less than [**] days, to seek patent protection for any material in such publication or presentation which it believes is patentable or to resolve any other issues or to abandon such proposed publication or presentation if the reviewing Party reasonably determines in good faith that maintaining such information as a trade secret is a commercially-reasonable priority. Any Confidential Information of the reviewing Party shall, if requested by the reviewing Party, be removed. Furthermore, with respect to any proposed abstracts, manuscripts or summaries of presentations by investigators or other Third Parties, such materials shall be subject to review under this Section 9.6 to the extent that Allergan or Editas (as the case may be) has the right to do so. Notwithstanding the foregoing, (i) prior to and after the exercise of the relevant Option to a given Collaboration Development Program by Allergan, any proposed publication by Editas relating to such Collaboration Development Program or corresponding CDP Product(s) shall be subject to review by Allergan in accordance with this Section 9.6, but after the expiration of the

relevant Option Period (including any applicable HSR Extension Period) without exercise by Allergan or after the termination of an Allergan Development Program which then reverts to Editas as an Editas Program, Editas shall then be free to publish or publicly disclose any results that relate to any applicable Editas Program or Editas Products without any review by Allergan under this Section 9.6, and (ii) after the exercise by Allergan of its Option to a Collaboration Development Program (and subject to clause (i) with respect to any termination of such program by Allergan), except as required by applicable Law, Allergan shall have the right to make any such publication relating to such Collaboration Development Program or corresponding Licensed Products that describes work solely carried out by or on behalf of Allergan, its Affiliates, Licensees, and Sublicensees without any review by Editas under this Section 9.6.

## ARTICLE 10
## REPRESENTATIONS AND WARRANTIES

10.1 Representations and Warranties of Both Parties. Each Party hereby represents and warrants to the other Party, as of the Effective Date, that:

10.1.1 such Party is duly organized, validly existing and in good standing under the Laws of the jurisdiction of its incorporation and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

10.1.2 such Party has taken all necessary action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

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

10.1.4 the execution, delivery and performance of this Agreement by such Party does not conflict with any agreement or any provision thereof, or any instrument or understanding, oral or written, to which it is a party or by which it is bound, nor violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over such Party;

10.1.5 no government authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, under any applicable Laws currently in effect, is or will be necessary for, or in connection with, the transaction contemplated by this Agreement or any other agreement or instrument executed in connection herewith, or for the performance by it of its obligations under this Agreement and such other agreements except as may be required to obtain HSR Clearance, to conduct Clinical Trials or to seek or obtain Regulatory Approvals; and

10.1.6 it has not (i) employed and has not used a contractor or consultant that has employed, any individual or entity debarred by the FDA (or subject to a similar sanction of EMA), or (ii) employed any individual who or entity that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA), in the conduct of any pre-clinical activities or clinical studies of Genome Editing Technology.

10.2 Representations and Warranties of Editas. Editas hereby represents and warrants to Allergan, as of the Effective Date and, to the extent pertinent to the Collaboration Development Program for which an Option Package is delivered, as of the date of delivery of an Option Package (subject to any disclosures in such Option Package which disclosures shall be deemed to be exceptions to such representations and warranties) that:

10.2.1 Except as indicated in Exhibit I, Editas is the sole and exclusive owner of, or otherwise Controls via an exclusive license to, the Editas Background Patents listed in Exhibit I and, as of the Effective Date Editas has no contractual or payment obligation to any Person with respect to such Editas Background Patents except for the Existing In-Licenses;

10.2.2 Editas has the right to grant all rights and licenses it purports to grant to Allergan with respect to the Editas Background IP and Editas' interest in the CDP IP under this Agreement;

10.2.3 Editas has not granted any right or license to any Third Party relating to any of the Editas Background IP or Editas' interest in the CDP IP that conflicts or interferes with any of the rights or licenses granted or to be granted to Allergan hereunder pursuant to the exercise of any Option to any Collaboration Development Program;

10.2.4 No claim or litigation has been brought or asserted against Editas or, to its knowledge, any Third Party by any Person alleging that the Editas Background IP or Editas' Genome Editing Technology is infringing or if practiced or commercialized will infringe the rights of any Third Party;

10.2.5 To its knowledge, the Editas Background Patents are valid and enforceable and Editas has complied (and to its knowledge its Inbound Licensors have complied) with all applicable Laws and duties of candor with respect to the filing, prosecution and maintenance of the Editas Background Patents. Editas has paid (and to its knowledge its Inbound Licensors have paid) all maintenance and annuity fees with respect to the Editas Background Patents due as of the Effective Date. Except as Editas has disclosed to Allergan as of the Effective Date, to Editas' knowledge, no dispute regarding inventorship of an Editas Background Patent has been alleged or threatened;

10.2.6 To its knowledge as of the Effective Date, the Commercialization (except for the Manufacturing of a CRISPR Gene Editing Therapy other than a CRISPR Gene Editing Therapy in the LCA10 Program) of Gene Editing Therapies using CRISPR as Developed by Editas hereunder during the Term is not reasonably expected to require a license from any Third Party under any Third Party Patent, other than Patents licensed under the Existing In-Licenses and [**], excluding [**]; and

10.2.7 Editas represents and warrants that it has, as of the Effective Date, provided to Allergan all material information in its possession regarding the safety and efficacy of the Gene Editing Therapies which may be the subject of a Collaboration Development Program and will, as of the time of Editas' delivery of an Option Package, provide to Allergan all material information in its possession regarding the safety and efficacy of the Gene Editing Therapies which are the subject of the applicable Collaboration Development Program covered

by such Option Package, except to the extent that any of the foregoing would not be reasonably expected to have a material adverse effect on the applicable Collaboration Development Program.

10.3 Mutual Covenants. Each Party hereby covenants to the other Party that:

10.3.1 All employees, officers and consultants of a Party or its Affiliates who are or will be working under this Agreement or who otherwise have access to any Confidential Information of the other Party shall have executed and delivered to such Party an assignment or other agreement, requiring such Person to protect the confidentiality of any such Confidential Information to which such Person may have access;

10.3.2 All employees, officers and consultants of a Party or its Affiliates who are or could reasonably be expected to develop inventions or discoveries during the conduct of any activities under this Agreement shall have executed and delivered to such Party an assignment or other agreement requiring such Person to assign all right, title and interest in and to their inventions and discoveries, whether or not patentable, to such Party as the sole owner thereof, including any CDP Patents (unless such an assignment is not required under applicable Law);

10.3.3 Such Party will not (a) employ or use any contractor or consultant that employs, any individual or entity debarred by the FDA (or subject to a similar sanction of EMA) or, (b) employ any individual who or entity that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA), in each of clauses (a) and (b) in the conduct of its activities under any Program. Each Party agrees to inform the other Party in writing promptly if it or any such Person who is performing services hereunder is debarred or is subject to an FDA debarment investigation or proceeding (or similar proceeding of EMA) or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of its or its Affiliates' knowledge, is threatened, relating to the debarment or conviction of it or any such Person performing services hereunder;

10.3.4 Such Party shall (a) perform its activities pursuant to this Agreement in compliance in all material respects with good laboratory practices and good clinical practices and cGMP, in each case as applicable under applicable Laws; and (b) with respect to any biological samples obtained from humans, obtain the appropriate informed consents in advance for the use of all such human biological samples, and use such samples at all times within the scope of the relevant informed consents; and

10.3.5 Neither Party shall, during the Term, grant any right or license to any Third Party relating to any of the intellectual property rights it owns or Controls which would conflict with any of the rights or licenses granted or to be granted to the other Party hereunder pursuant to the provisions of ARTICLE 4, ARTICLE 5 or ARTICLE 12.

10.4 Additional Editas Covenants. Additionally, Editas covenants to Allergan that:

10.4.1 During the Term, Editas will not grant any right or license to any Third Party relating to any of the Editas Background IP or Editas' interest in the CDP IP that conflicts or interferes with any of the rights or licenses granted or to be granted to Allergan hereunder pursuant to the exercise of any Option to any Collaboration Development Program;

10.4.2 Within [**] days after the Effective Date, Editas shall use Commercially Reasonable Efforts to [**].

10.4.3 During the Term, Editas shall maintain each of the In-Licenses (other than In-Licenses entered into by Allergan pursuant to Section 6.6.4(b)(iv)) in good standing and shall not take any action, or omit or fail to take any action (including making necessary payments), which would result in a breach or early termination of any such In-Licenses or any rights thereunder, except in each case to the extent the same would not adversely affect Allergan's rights or license hereunder, and provided that, Editas' obligations with respect to [**] pursuant to this Agreement. Editas covenants that it shall not amend, modify or supplement the terms of, or waive any rights under, any In-License (other than In-Licenses entered into by Allergan pursuant to Section 6.6.4(b)(iv)) without the prior written consent of Allergan where and to the extent that any such amendment or waiver would adversely affect the rights and licenses granted to Allergan pursuant to this Agreement. Editas shall promptly notify Allergan upon receipt by Editas of any notice from any Inbound Licensor of any actual or alleged breach under any In-License that could result in the termination of such agreement or a material reduction or other material limitation in Editas' rights thereunder to the extent the same would adversely affect Allergan's rights or license hereunder, and Editas shall promptly cure any such breach within the allotted cure period [**]; and

10.4.4 As of the date Editas delivers an Option Package to the ASC for a Collaboration Development Program, such Option Package shall, to Editas' knowledge, have identified all intellectual property under which a license from a Third Party is or may be required for the Commercialization of the Licensed Products as Developed by Editas thereunder, other than the In-Licenses existing as of such date.

10.5 Disclaimer. Except as otherwise expressly set forth in this Agreement, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY THAT ANY PATENTS ARE VALID OR ENFORCEABLE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Without limiting the generality of the foregoing, except as otherwise expressly set forth in this Agreement, each Party disclaims any warranties with regards to: (a) the success of any study or test commenced under this Agreement, (b) the safety or usefulness for any purpose of the technology or materials it provides or discovers under this Agreement; or (c) the validity, enforceability, or non-infringement of any intellectual property rights or technology it provides or licenses to the other Party under this Agreement.

**ARTICLE 11**
**INDEMNIFICATION; INSURANCE**

11.1 Indemnification by Allergan. Allergan shall indemnify, defend and hold harmless:

11.1.1 Editas and its Affiliates, and their respective directors, officers, employees and agents, (each, an "Editas Indemnitee") from and against any and all liabilities, damages, losses, costs and expenses, including the reasonable fees of attorneys and other professional Third Parties (collectively, "Losses"), arising out of or resulting from any and all Third Party suits, claims, actions, proceedings or demands ("Claims") based upon:

(a) the negligence, recklessness or wrongful intentional acts or omissions of Allergan or its Affiliates and its or their respective directors, officers, employees and agents, in connection with Allergan's performance of its obligations or exercise of its rights under this Agreement;

(b) any breach of any representation or warranty or express covenant made by Allergan under ARTICLE 10 or any other provision under this Agreement;

(c) failure by Allergan to comply with any Law; or

(d) the Development that is actually conducted by or on behalf of Allergan (excluding any Development carried out by or on behalf of Editas hereunder), the handling and storage by or on behalf of Allergan of any chemical agents or other compounds for the purpose of conducting Development by or on behalf of Allergan, and the Manufacture, marketing, Commercialization and sale by Allergan, its Affiliates, Licensees, or Sublicensees (excluding Editas) of any Licensed Product (other than a Co-Co Product in the US), including [**], except, in each case, to the extent any such Losses or Claims (i) result from the gross negligence or willful misconduct of an Editas Indemnitee, (ii) arises from the breach of any representation or warranty or obligation under this Agreement by Editas and/or (iii) are subject to indemnification by Editas under Section 11.2;

11.1.2 [**].

11.1.3 [**].

11.2 Indemnification by Editas. Editas shall indemnify, defend and hold harmless Allergan and its Affiliates, and their respective directors, officers, employees and agents (each, an "Allergan Indemnitee"), from and against any and all Losses, arising out of or resulting from any and all Claims based upon:

11.2.1 the negligence, recklessness or wrongful intentional acts or omissions of Editas or its Affiliates or its or their respective directors, officers, employees and agents, in connection with Editas' performance of its obligations or exercise of its rights under this Agreement;

11.2.2 any breach of any representation or warranty or express covenant made by Editas under ARTICLE 10 or any other provision under this Agreement;

11.2.3 failure by Editas to comply with any Law; or

11.2.4 the Development actually conducted by or on behalf of Editas (excluding any Development carried out by Third Parties on behalf of Allergan), the handling and storage by or on behalf of Editas of any chemical agents or other compounds for the purpose of conducting Development by or on behalf of Editas, and the Manufacture, marketing, Commercialization and sale by Editas, its Affiliates, Licensee or Sublicensee (excluding Allergan) of any Editas Product [**], except, in each case, to the extent any such Losses or Claims (i) result from the gross negligence or willful misconduct of an Allergan Indemnitee, (ii) arises from the breach of any representation or warranty or obligation under this Agreement by Allergan and/or (iii) are subject to indemnification by Allergan under Section 11.1.

11.3 Procedure. A Person entitled to indemnification under this ARTICLE 11 (an "Indemnified Party") shall give prompt written notification to the Person from whom indemnification is sought (the "Indemnifying Party") of the commencement of any action, suit or proceeding relating to a Third Party claim for which indemnification may be sought or, if earlier, upon the assertion of any such claim by a Third Party (it being understood and agreed, however, that the failure by an Indemnified Party to give notice of a Third-Party claim as provided in this Section 11.3 shall not relieve the Indemnifying Party of its indemnification obligation under this Agreement except and only to the extent that such Indemnifying Party is actually damaged as a result of such failure to give notice). Within [**] days after delivery of such notification, the Indemnifying Party may, upon written notice thereof to the Indemnified Party, assume control of the defense of such action, suit, proceeding or claim with counsel reasonably satisfactory to the Indemnified Party. If the Indemnifying Party does not assume control of such defense, the Indemnified Party shall control such defense and, without limiting the Indemnifying Party's indemnification obligations, the Indemnifying Party shall reimburse the Indemnified Party for all costs and expenses, including attorney fees, incurred by the Indemnified Party in defending itself within [**] days after receipt of any invoice therefor from the Indemnified Party. The Party not controlling such defense may participate therein at its own expense; provided that, except with respect to [**], if the Indemnifying Party assumes control of such defense and the Indemnified Party in good faith concludes, based on advice from counsel, that the Indemnifying Party and the Indemnified Party have conflicting interests with respect to such action, suit, proceeding or claim, the Indemnifying Party shall be responsible for the reasonable fees and expenses of one counsel to the Indemnified Party in connection therewith. The Party controlling such defense shall keep the other Party advised of the status of such action, suit, proceeding or claim and the defense thereof and shall consider recommendations made by the other Party with respect thereto. The Indemnified Party shall not agree to any settlement of such action, suit, proceeding or claim without the prior written consent of the Indemnifying Party, which shall not be unreasonably withheld, delayed or conditioned. The Indemnifying Party shall not agree to any settlement of such action, suit, proceeding or claim or consent to any judgment in respect thereof that does not include a complete and unconditional release of the Indemnified Party from all liability with respect thereto, that imposes any liability or obligation on the Indemnified Party or that acknowledges fault by the Indemnified Party without the prior written consent of the Indemnified Party.

11.4 Insurance.

11.4.1 Beginning at the time any Licensed Product is being Commercialized by Allergan, or by an Affiliate of Allergan, Allergan Sublicensee or agent of Allergan, Allergan shall, at its sole cost and expense, procure and maintain commercial general liability insurance and product liability insurance in amounts not less than $[**] per incident and $[**] annual aggregate and naming Editas, [**]. During clinical trials of any Licensed Product, [**].

11.4.2 If Allergan elects to self-insure all or part of the limits described above in Section 11.4.1 (including deductibles or retentions that are in excess of $[**] annual aggregate) such self-insurance must be acceptable to Editas, [**] in their sole discretion. The minimum amounts of insurance coverage required shall not be construed to create a limit of Allergan's liability with respect to its indemnification obligations under this Agreement.

11.4.3 Allergan shall provide Editas with written evidence of such insurance upon request of Editas, and shall [**]. Allergan shall provide Editas with written notice at least [**] days prior to the cancellation, non-renewal or material change in such insurance.

11.4.4 Allergan shall maintain such commercial general liability insurance beyond the expiration or termination of this Agreement during: (a) the period that any Licensed Product is being commercially distributed or sold by Allergan, or an Affiliate of Allergan, Allergan Sublicensee or agent of Allergan; and (b) a reasonable period after the period referred to in (a) above, which in no event shall be less than [**] years.

11.5 LIMITATION OF LIABILITY. EXCEPT FOR A BREACH OF ARTICLE 7 OR ARTICLE 9 OR FOR CLAIMS OF A THIRD PARTY THAT ARE SUBJECT TO INDEMNIFICATION UNDER THIS ARTICLE 11, NEITHER EDITAS NOR ALLERGAN, NOR ANY OF THEIR RESPECTIVE AFFILIATES, LICENSEES, OR SUBLICENSEES, WILL BE LIABLE TO THE OTHER PARTY TO THIS AGREEMENT, ITS AFFILIATES OR ANY OF THEIR LICENSEES OR SUBLICENSEES FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OR LOST PROFITS OR ROYALTIES, LOST DATA OR COST OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, WHETHER LIABILITY IS ASSERTED IN CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY) OR CONTRIBUTION, AND IRRESPECTIVE OF WHETHER THAT PARTY OR ANY REPRESENTATIVE OF THAT PARTY HAS BEEN ADVISED OF, OR OTHERWISE MIGHT HAVE ANTICIPATED THE POSSIBILITY OF, ANY SUCH LOSS OR DAMAGE.

## ARTICLE 12
## TERM AND TERMINATION

12.1 Term; Expiration. This Agreement shall become effective on the Effective Date and, unless earlier terminated pursuant to this ARTICLE 12, shall expire as follows:

12.1.1 If Allergan does not exercise an Option, the date that is forty-five (45) days after the expiration of the Research Term;

12.1.2 On a Licensed Product-by-Licensed Product or Editas Product by-Editas Product and country-by-country basis, on the date of the expiration of all payment obligations under this Agreement with respect to such Licensed Product or Editas Product in such country; and

12.1.3 In its entirety upon the expiration of all payment obligations under this Agreement with respect to the last Licensed Product or Editas Product in all countries in the Territory.

The period from the Effective Date until the date of expiration of this Agreement in its entirety, or, as applicable to a given Licensed Product, Editas Product, Collaboration Development Program or Allergan Development Program, until the date of the expiration of this Agreement in part with respect to such Licensed Product, Editas Product, Collaboration Development Program or Allergan Development Program, may be referred to herein as the "Term."

12.2 Termination of Profit-Sharing Agreement.

12.2.1 Allergan shall have the right to terminate any Profit-Sharing Agreement in the event that Editas breaches its payment obligations thereunder (other than with respect to payments that are the subject of a good faith dispute by Editas), and such breach shall have continued for [**] days after written notice thereof was provided to Editas by Allergan.

12.2.2 Editas shall have the right, at its sole discretion, to terminate any Profit-Sharing Agreement for any or no reason as set forth in Section 5.2.4.

12.3 Termination of Research Term. Allergan shall have the right to terminate the Research Term (a) on a Collaboration Development Program-by-Collaboration Development Program basis upon written notice to Editas in the event of a Change of Control or (b) for all Collaboration Development Programs; provided that, Allergan shall not have any right to exercise Option(s) for such Collaboration Development Program(s) following such termination(s) including any rights to exercise an Option by payment of the "Terminal Option Exercise Fee" described in the table in Section 6.3.

12.4 Allergan Unilateral Termination Rights. Allergan shall have the right, at its sole discretion, exercisable at any time during the Term, to terminate this Agreement on an Allergan Development Program-by-Allergan Development Program basis, upon ninety (90) days' prior written notice to Editas.

12.5 Termination for Cause.

12.5.1 Termination for Material Breach. Either Party (the "Non-Breaching Party") may, without prejudice to any other remedies available to it under applicable Law or in equity, terminate this Agreement on a Program-by-Program basis if the other Party (the "Breaching Party") shall have materially breached or defaulted in the performance of its obligations hereunder with respect to such Program, and such default shall have continued for [**] days (or, in the case of a payment breach, [**] days) after written notice thereof was provided to the Breaching Party by the Non-Breaching Party, such notice describing the alleged

breach. Subject to Section 12.5.2, any such termination of this Agreement under this Section 12.5.1 shall become effective at the end of such [**] day or [**] day (as applicable) cure period, unless the Breaching Party has cured such breach or default prior to the expiration of such cure period, or if such breach is not susceptible to cure within such cure period even with the use of Commercially Reasonable Efforts, the Non-Breaching Party's right to termination shall be suspended only if and for so long as the Breaching Party has provided to the Non-Breaching Party a written plan that is reasonably calculated to effect a cure, such plan is acceptable to the Non-Breaching Party, and the Breaching Party commits to and does carry out such plan; provided that, in no event shall such suspension of the Non-Breaching Party's right to terminate extend beyond [**] days after the original cure period. The right of either Party to terminate this Agreement, or a portion of this Agreement, as provided in this Section 12.5.1 shall not be affected in any way by such Party's waiver or failure to take action with respect to any previous default. Notwithstanding anything to the contrary herein and without limiting Allergan's rights and remedies hereunder, if Editas materially breaches this Agreement during the Research Term, the Research Term shall automatically be extended pro-rata for each day that Editas remains in breach; provided that, no such extension shall extend the Research Term beyond the earlier of (a) the delivery by Editas of Option Packages that are deemed to satisfy the applicable Option Package Criteria by the ASC (pursuant to Section 2.2.2) for five (5) Collaboration Development Programs or (b) the tenth ($10^{th}$) anniversary of the Effective Date.

12.5.2 Disagreement. If the Parties reasonably and in good faith disagree as to whether there has been a material breach, the Party that seeks to dispute that there has been a material breach may contest the allegation in accordance with Section 13.1. The cure period for any allegation made in good faith as to a material breach under this Agreement will, subject to Sections 12.5.1 and 13.3.3, run from the date that written notice was first provided to the Breaching Party by the Non-Breaching Party.

12.6 Termination for Patent Challenge by Allergan. In the event that Allergan directly or indirectly brings, assumes, or participates in, or knowingly, willfully or recklessly assists in bringing, a Patent Challenge, then Editas shall be entitled to terminate this Agreement in its entirety immediately upon written notice to Allergan.

12.7 Termination of Licensed Product due to Safety Concern. Allergan may terminate this Agreement with respect to an Allergan Development Program or Licensed Product at any time after Allergan's exercise of the Option with respect to such Allergan Development Program if a Safety Concern arises with respect to such Allergan Development Program or Licensed Product.

12.8 Effect of Expiration or Termination.

12.8.1 Expiration. After the expiration of the Term pursuant to Section 12.1, the following terms shall apply:

(a) After expiration of the Term with respect to any Licensed Product in a country pursuant to Section 12.1.2, Allergan's rights and licenses with respect to such Licensed Product in such country shall survive as fully-paid up, non-royalty bearing, rights and licenses.

(b) After expiration of the Term with respect to an Editas Product in a country pursuant to Section 12.1.2, Editas' rights and licenses with respect to such Editas Product in such country shall survive as fully-paid up, non-royalty bearing, rights and licenses.

12.8.2 Termination by Allergan for Convenience or for Safety Concern; Termination by Editas for Cause or for Patent Challenge. If (i) Editas terminates an Allergan Development Program or the entire Agreement pursuant to Section 12.5.1 or 12.6, or (ii) Allergan terminates an Allergan Development Program pursuant to Section 5.3.2, 12.4 or 12.7:

(a) All Options with respect to the terminated Allergan Development Program(s) (or in the case of termination of the entire Agreement, all Options) that are unexercised as of the effective date of termination shall terminate and be of no force or effect.

(b) All licenses granted to Allergan pursuant to Section 4.2.1 with respect to all Licensed Products in the terminated Allergan Development Programs(s) (or in the case of termination of the entire Agreement, all licenses with respect to all Allergan Development Programs) shall be terminated and of no further force or effect (except with respect to Allergan's sell-off right below).

(c) Allergan will have no further obligations to make any milestone, royalty or other payments to Editas under ARTICLE 6 with respect to any terminated Collaboration Development Program, except for any such obligations that accrued prior to the date such Collaboration Development Program became an Editas Program and with respect to payment obligations accruing from Allergan's sell-off right.

(d) Solely in the case of a termination by Editas for cause pursuant to Section 12.5.1, Allergan, its Affiliates and its Sublicensees shall have the right to sell off any Licensed Products that have been manufactured or are in the process of being manufactured at the time of termination provided that, such sales are made in the normal course consistent with Allergan's past practice and Allergan continues to comply with all of its payment, reporting and audit obligations under ARTICLE 6 with respect to Licensed Products.

(e) With respect to any Licensed Product in a terminated Allergan Development Program, such Licensed Product shall become an Editas Product (or in the case of termination of the entire Agreement, all Licensed Products shall become Editas Products) and if and only if there is no other Allergan Development Program or Licensed Product directed at [**], Allergan hereby grants Editas an exclusive, royalty bearing (to the extent set forth in Section 6.7) right and license, including the right to grant sublicenses under Allergan's interest in the CDP IP relating to or Covering such Editas Products, to make and have made, use, Develop, offer for sale, sell, import and otherwise Commercialize Editas Products in any Field in the Territory. For the avoidance of doubt, Editas shall not be granted any rights to Prosecute, Maintain or enforce the licensed CDP IP to the extent not allocated to Editas under Section 8. The royalty obligations (if any) set forth in Section 6.7 shall apply with respect to Licensed Products from terminated Collaboration Development Program Commercialized by Editas, alone or with any Third Party or through any Affiliate, Licensee or Sublicensee, as Editas Products.

(f) Allergan shall deliver to Editas, at Editas' cost and expense, copies of the Know-How in its possession and Control that is material to the Licensed Products in such Allergan Development Program. In addition, upon the reasonable request of Editas, Allergan shall reasonably cooperate, at Editas' cost and expense, with Editas to transition the Manufacture of the applicable Editas Products to a contract manufacturing organization designated by Editas.

12.8.3 Termination by Allergan for Cause. If Allergan terminates this Agreement with respect to one or more Allergan Development Programs for Editas' material breach pursuant to Section 12.5.1:

(a) Allergan shall have the right to retain any license granted in Section 4.2.1 with respect to the Licensed Products arising from each applicable terminated Allergan Development Program for which Allergan had already exercised its Option; provided that, Allergan continues to comply with all of its payment (subject to its rights under Section 13.2), reporting and audit obligations under ARTICLE 6 with respect to Licensed Products; and

(b) Subject to the applicable terms of any In-License, Allergan shall no longer have any obligations with respect to diligence or to use Commercially Reasonable Efforts with respect to any Licensed Products resulting from any Allergan Development Program that was terminated by Allergan pursuant to Section 12.5.1.

12.9 Accrued Rights; Surviving Provisions of the Agreement.

12.9.1 Termination, relinquishment or expiration of this Agreement for any reason shall be without prejudice to any rights that shall have accrued to the benefit of any Party prior to such termination, relinquishment or expiration including the payment obligations under ARTICLE 6 hereof, and any and all damages or remedies arising from any breach hereunder. Such termination, relinquishment or expiration shall not relieve any Party from obligations which are expressly indicated to survive termination of this Agreement.

12.9.2 The provisions of Articles 9 and 11, and Sections 4.2.1 (only to the extent that the applicable license is retained after termination pursuant to Section 12.8.3(a) or as necessary for Allergan to exercise its sell-off right under Section 12.8.2(d)), 4.2.2 (to the extent applicable to the other sections in this Section 12.9.2), 4.2.4 (if and to the extent that Section 4.2.1 survives) and 4.2.5 (if and to the extent that Section 4.2.1 survives), 4.4, 4.5, 6.8-6.14 (for final accounting), 8.1.1, 8.1.3, 12.8, 12.9, 13.1, 13.2, 13.3, 13.4, 13.5, 13.7, 13.8, 13.10, 13.11, 13.12, 13.13, 13.14, 13.15, 13.17, 13.18 (to the extent applicable to the other sections in this Section 12.9.2), 13.19 and 13.20, and any applicable definitions in ARTICLE 1, including any other provision surviving by operation of the foregoing surviving provisions, shall survive the termination of this Agreement in its entirety or expiration of this Agreement for any reason, in accordance with their respective terms and conditions, and for the duration stated, and where no duration is stated, shall survive indefinitely. ARTICLE 9 shall survive for a period of [**] years after the effective date of termination of this Agreement.

**ARTICLE 13**
**MISCELLANEOUS**

13.1 Dispute Resolution. Except for the matters expressly provided in Section 3.1.5, if a dispute between the Parties arises under this Agreement, either Party shall have the right to refer such dispute in writing to the respective Executive Officers, and such Executive Officers shall attempt in good faith to resolve such dispute. If the Parties are unable to resolve a given dispute pursuant to this Section 13.1 within [**] days after referring such dispute to the Executive Officers, either Party may have the given dispute settled by binding arbitration pursuant to Section 13.3.

13.2 Right to Set-Off. Without limiting either Party's rights under law or in equity, either Party may exercise a right of set-off against any and all amounts due to such Party as determined by a final judgment of a court or arbitrator of competent jurisdiction.

13.3 Arbitration Request. If a Party intends to begin an arbitration to resolve a dispute arising under this Agreement, such Party shall provide written notice (the "Arbitration Request") to the other Party of such intention and a statement of the issues for resolution. From the date of the Arbitration Request and until such time as the dispute has become finally settled, the running of the time periods as to which Party must cure a breach of this Agreement becomes suspended as to any breach that is the subject matter of the dispute.

13.3.1 Additional Issues. Within [**] days after the receipt of the Arbitration Request, the other Party may, by written notice, add additional issues for resolution in a statement of counter-issues.

13.3.2 No Arbitration of Patent Issues. Any dispute, controversy or claim relating to the scope, validity, enforceability or infringement of any Patents Covering the Manufacture, use, importation, offer for sale or sale of Licensed Products shall be submitted to a court of competent jurisdiction in the country in which such Patents were granted or arose.

13.3.3 Arbitration Procedure. Any arbitration pursuant to this ARTICLE 13 will be held in New York, New York, United States unless another location is mutually agreed by the Parties. The arbitration will be governed under the rules of the International Chamber of Commerce, to the exclusion of any inconsistent state Law. The Parties shall mutually agree on the rules to govern discovery and the rules of evidence for the arbitration within [**] days after the Arbitration Request. If the Parties fail to timely agree to such rules, the United States Federal Rules of Civil Procedure will govern discovery and the United States Federal Rules of Evidence will govern evidence for the arbitration. The arbitration will be conducted by three (3) arbitrators, of which each Party shall appoint one, and the arbitrators so appointed will select the third and final arbitrator. The arbitrators shall have experience of pharmaceutical licensing disputes. The arbitrator may proceed to an award, notwithstanding the failure of either Party to participate in the proceedings. The arbitrator shall, within [**] days after the conclusion of the arbitration hearing, issue a written award and statement of decision describing the essential findings and conclusions on which the award is based, including the calculation of any damages awarded. The arbitrator shall be limited in the scope of his or her authority to resolving only the specific matter which the Parties have referred to arbitration for resolution and shall not have

authority to render any decision or award on any other issues. Subject to Section 11.5, the arbitrator shall be authorized to award compensatory damages, but shall not be authorized to award punitive, special, consequential, or any other similar form of damages, or to reform, modify, or materially change this Agreement. The arbitrator also shall be authorized to grant any temporary, preliminary or permanent equitable remedy or relief the arbitrator deems just and equitable and within the scope of this Agreement, including an injunction or order for specific performance. The award of the arbitrator shall be the sole and exclusive remedy of the Parties, except for those remedies that are set forth in this Agreement or which apply to a Party by operation of the applicable provisions of this Agreement, and the Parties hereby expressly agree to waive the right to appeal from the decisions of the arbitrator, and there shall be no appeal to any court or other authority (government or private) from the decision of the arbitrator. Judgment on the award rendered by the arbitrator may be enforced in any court having competent jurisdiction thereof, subject only to revocation of the award on grounds set forth in the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

13.3.4 Costs. Each Party shall bear its own attorneys' fees, costs, and disbursements arising out of the arbitration, and shall pay an equal share of the fees and costs of the arbitrator; provided, however, that the arbitrator, in his or her award, shall be authorized to determine whether a Party is the prevailing Party, and if so, to award to that prevailing Party reimbursement for its reasonable attorneys' fees, costs and disbursements (including, for example, expert witness fees and expenses, transcripts, photocopy charges and travel expenses).

13.3.5 Preliminary Injunctions. Notwithstanding anything in this Agreement to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the award of the arbitrator on the ultimate merits of any dispute.

13.3.6 Confidentiality. All proceedings and decisions of the arbitrator shall be deemed Confidential Information of each of the Parties, and shall be subject to ARTICLE 9.

13.4 Governing Law. This Agreement and any dispute arising from the performance or breach hereof shall be governed by and construed and enforced in accordance with the Laws of the State of New York without reference to conflicts of laws principles; provided that, with respect to matters involving the enforcement of intellectual property rights, the Laws of the applicable country shall apply. The provisions of the United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement or any subject matter hereof.

13.5 Assignment. Neither Party may assign this Agreement without the consent of the other Party, except as otherwise provided in this Section 13.5. Either Party may assign this Agreement in whole or in part to any Affiliate of such Party without the consent of the other Party; provided that, such assigning Party provides the other Party with written notice of such assignment and the assignee agrees in writing to assume performance of all assigned obligations; further provided that, if any Assignment by Allergan to an Affiliate would change the assigning Party's jurisdiction of incorporation or residence for tax purposes and result in Withholding Taxes that did not exist prior to such assignment, then the amount of any payment by such

Affiliate hereunder shall be increased so that the net amount payable to Editas after the deduction of all incremental Withholding Taxes incurred as a result of such assignment equals the amount of the payment that would otherwise have been payable but for such assignment. Further, each Party may assign this Agreement, and all of its rights and obligations, without the consent of the other Party to its successor in interest by way of merger, acquisition, or sale of all or substantially all of its business or assets to which this Agreement relates; provided that, such assigning Party provides the other Party (and, in the case of Allergan as the assigning Party, Harvard and Broad) with written notice of such assignment within [**] days after such assignment, merger, acquisition or sale and the assignee agrees in writing to assume performance of all assigned obligations. Notwithstanding anything to the contrary herein, Editas shall not assign this Agreement unless such assignee also assumes Editas' rights and obligations under all In-Licenses and is assigned all of Editas' rights under the Editas Background IP and CDP IP. Similarly, Editas shall not assign its rights under the Editas Background IP and the CDP IP to an Affiliate or Third Party without also assigning its rights under this Agreement to such Affiliate or Third Party. The terms of this Agreement shall be binding upon and shall inure to the benefit of the successors, heirs, administrators and permitted assigns of the Parties. Any purported assignment in violation of this Section 13.5 shall be null and void. If a Party assigns this Agreement in whole or in part to an Affiliate or Third Party as permitted by this Section 13.5, (x) the assigning Party shall thereafter remain primarily liable for the performance by such assignee of all of such Party's financial obligations hereunder and the other Party may enforce such financial obligations against the assigning Party without first seeking to obtain performance from the assignee or exercising any other remedy or right that the enforcing Party may have, (y) the assigning Party shall thereafter remain primarily liable for causing such assignee to perform all of the assigning Party's non-financial obligations hereunder and the other Party may enforce such obligation against the assigning Party to cause the performance by such assignee of such non-financial obligations without first seeking to obtain performance from the assignee or exercising any other remedy or right that the enforcing Party may have and (z) if the Party other than the assigning Party decides to proceed first to exercise any other remedy or right, or to proceed against another Person, the assigning Party shall nonetheless remain primarily liable for the performance of such assignee of all of the assigning Party's financial obligations hereunder with respect to this Agreement and for causing such assignee to perform all of the assigning Party's non-financial obligations hereunder with respect to this Agreement.

13.6 Performance Warranty. Each Party hereby acknowledges and agrees that it shall be responsible for the full and timely performance as and when due under, and observance of all the covenants, terms, conditions and agreements set forth in this, Agreement by its Affiliate(s), Licensees, and Sublicensees.

13.7 Force Majeure. No Party shall be held liable or responsible to the other Party nor be deemed to be in default under, or in breach of any provision of, this Agreement for failure or delay in fulfilling or performing any obligation (other than a payment obligation) of this Agreement when such failure or delay is due to force majeure, and without the fault or negligence of the Party so failing or delaying. For purposes of this Agreement, force majeure is defined as causes beyond the control of the Party, including acts of God; material changes in Law; actions or failures in action by relevant Governmental Authorities; war; civil commotion; destruction of production facilities or materials by fire, flood, earthquake, explosion or storm; shortages of supply; labor disturbances; epidemic; and failure of public utilities or common

carriers. In such event Editas or Allergan, as the case may be, shall immediately notify the other Party of such inability and of the period for which such inability is expected to continue. The Party giving such notice shall thereupon be excused from such of its obligations under this Agreement as it is thereby disabled from performing for so long as it is so disabled for up to a maximum of ninety (90) days, after which time Editas and Allergan shall promptly meet to discuss in good faith how to best proceed in a manner that maintains and abides by the Agreement. Without limiting the foregoing, if claims excuse for any failure to perform during the Research Term, the Research Term shall automatically be extended pro-rata for each day that Editas claims such excuse. To the extent possible, each Party shall use reasonable efforts to minimize the duration of any force majeure.

13.8 Notices. Any notice or request required or permitted to be given under or in connection with this Agreement shall be deemed to have been sufficiently given if in writing and personally delivered or sent by certified mail (return receipt requested), facsimile transmission (receipt verified), or overnight express courier service (signature required), prepaid, to the Party for which such notice is intended, at the address set forth for such Party below:

| | |
|---|---|
| If to Editas, addressed to: | Editas Medicine, Inc.<br>11 Hurley Street<br>Cambridge, MA 02141<br>Attn: Chief Executive Officer<br>Copy to: Legal Affairs<br>Facsimile: [**] |
| with a copy to: (which shall not constitute notice) | Wilmer Cutler Pickering Hale and Dorr LLP<br>60 State Street<br>Boston, MA 02109<br>Attention: Steven D. Barrett, Esq.<br><br>E-mail: Steven.Barrett@wilmerhale.com<br>Telephone: (617) 526-6000<br>Facsimile: (617) 526-5000 |
| If to Allergan, addressed to: | Allergan Pharmaceuticals International Ltd.<br>Clonshaugh Industrial Estate<br>Coolock<br>Dublin 17, Ireland<br>Attention: General Manager<br>Facsimile: [**] |
| with copy to: (which shall not constitute notice) | Allergan Pharmaceuticals International Limited<br>Clonshaugh Industrial Estate<br>Coolock<br>Dublin 17, Ireland<br>Attention: Secretary |

Facsimile: [**]

Allergan plc
Morris Corporate Center III
400 Interpace Parkway
Parsippany, NJ 07054
Attention: General Counsel
Facsimile: [**]

or to such other address for such Party as it shall have specified by like notice to the other Parties, provided that, notices of a change of address shall be effective only upon receipt thereof. If delivered personally or by facsimile transmission, the date of delivery shall be deemed to be the date on which such notice or request was given. If sent by overnight express courier service, the date of delivery shall be deemed to be the next business day after such notice or request was deposited with such service. If sent by certified mail, the date of delivery shall be deemed to be the third (3rd) Business Day after such notice or request was deposited with the U.S. Postal Service.

13.9 Export Clause. Each Party acknowledges that the Laws of the United States restrict the export and re-export of commodities and technical data of United States origin. Each Party agrees that it will not export or re-export restricted commodities or the technical data of the other party in any form without the appropriate United States and foreign government licenses.

13.10 Waiver. Neither Party may waive or release any of its rights or interests in this Agreement except in writing. The failure of either Party to assert a right hereunder or to insist upon compliance with any term of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition. No waiver by either Party of any condition or term in any one or more instances shall be construed as a continuing waiver of such condition or term or of another condition or term.

13.11 Severability. If any provision hereof should be held invalid, illegal or unenforceable in any jurisdiction, the Parties shall negotiate in good faith a valid, legal and enforceable substitute provision that most nearly reflects the original intent of the Parties and all other provisions hereof shall remain in full force and effect in such jurisdiction and shall be liberally construed in order to carry out the intentions of the Parties hereto as nearly as may be possible. Such invalidity, illegality or unenforceability shall not affect the validity, legality or enforceability of such provision in any other jurisdiction.

13.12 Entire Agreement. This Agreement, together with the Schedules and Exhibits hereto, set forth all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto and supersede and terminate all prior agreements and understanding between the Parties. In particular, and without limitation, this Agreement supersedes and replaces the Existing Confidentiality Agreement and any and all term sheets relating to the transactions contemplated by this Agreement and exchanged between the Parties prior to the Effective Date. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as set forth herein and therein. No subsequent alteration, amendment, change or addition to

this Agreement shall be binding upon the Parties hereto unless reduced to writing and signed by the respective authorized officers of the Parties.

13.13 Independent Contractors. Nothing herein shall be construed to create any relationship of employer and employee, agent and principal, partnership or joint venture between the Parties. Each Party is an independent contractor. Neither Party shall assume, either directly or indirectly, any liability of or for the other Party. Neither Party shall have the authority to bind or obligate the other Party and neither Party shall represent that it has such authority.

13.14 Headings; Construction; Interpretation. Headings used herein are for convenience only and shall not in any way affect the construction of or be taken into consideration in interpreting this Agreement. The terms of this Agreement represent the results of negotiations between the Parties and their representatives, each of which has been represented by counsel of its own choosing, and neither of which has acted under duress or compulsion, whether legal, economic or otherwise. Accordingly, the terms of this Agreement shall be interpreted and construed in accordance with their usual and customary meanings, and each of the Parties hereto hereby waives the application in connection with the interpretation and construction of this Agreement of any rule of Law to the effect that ambiguous or conflicting terms or provisions contained in this Agreement shall be interpreted or construed against the Party whose attorney prepared the executed draft or any earlier draft of this Agreement. Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to any Article, Section, subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement. Except where the context otherwise requires, (a) any definition of or reference to any agreement, instrument or other document refers to such agreement, instrument other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or therein), (b) any reference to any Law refers to such Law as from time to time enacted, repealed or amended, (c) the words “herein,” “hereof” and “hereunder,” and words of similar import, refer to this Agreement in its entirety and not to any particular provision hereof, (d) the words “include,” “includes,” “including,” “exclude,” “excludes,” and “excluding,” shall be deemed to be followed by the phrase “but not limited to,” “without limitation” or words of similar import, and (e) the word “or” is used in the inclusive sense (and/or).

13.15 Financial Books and Records. Any financial books and records to be maintained under this Agreement by a Party or its Affiliates, Licensees, or Sublicensees and subject to an audit right hereunder shall be maintained in accordance with GAAP.

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

13.17 Parties in Interest. All of the terms and provisions of this Agreement shall be binding upon, and shall inure to the benefit of and be enforceable by the Parties hereto and their respective successors, heirs, administrators and permitted assigns.

13.18 Intended Third Party Beneficiaries.

13.18.1 Allergan acknowledges and agrees that for so long as any Editas Background IP is licensed by Editas from [**]

13.18.2 Allergan acknowledges and agrees that for so long as any Editas Background IP is licensed by Editas from [**].

13.19 Performance by Affiliates. To the extent that this Agreement imposes obligations on Affiliates of a Party, such Party agrees to cause its Affiliates to perform such obligations.

13.20 Counterparts. This Agreement may be signed in counterparts, each and every one of which shall be deemed an original, notwithstanding variations in format or file designation which may result from the electronic transmission, storage and printing of copies from separate computers or printers. Facsimile signatures and signatures transmitted via PDF shall be treated as original signatures. The Parties agree that execution shall be performed as follows: first, Allergan shall sign its counterpart and deliver such counterpart to Editas and second, Editas shall sign its counterpart and deliver such counterpart to Allergan.

*[Signature page to follow]*

IN WITNESS WHEREOF, and intending to be legally bound hereby, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date.

**EDITAS MEDICINE, INC.**

By: /s/ Katrine Bosley
Name: Katrine Bosley
Title: President & CEO

**ALLERGAN PHARMACEUTICALS INTERNATIONAL LIMITED**

By: /s/ Patrick O'Donnell
Name: Patrick O'Donnell
Title: Director

**Exhibits**

Exhibit A-1 – Collaboration Development Programs

Exhibit A-2 – Targets

Exhibit B – Core Option Package Criteria

Exhibit C – Existing In-Licenses

Exhibit D – Manufacturing Requirements

Exhibit E – Permitted Subcontractors

Exhibit F – Profit-Sharing Agreement Terms

Exhibit G – Exhibit for Section 10.2.6

Exhibit H – Press Release

Exhibit I– Existing Editas Background Patents

**Exhibit A-1**

**Collaboration Development Programs**

[purposefully left blank as of the Effective Date]

**Exhibit A-2**

**Targets**

| | **Gene/Target** |
|---|---|
| 1. | LCA10 |
| 2. | CEP290 |

[**]

**Exhibit B**

**Core Option Package Criteria**

| **Core Option Package Criteria** | **On a program-by-program basis, further items for discussion at ASC** |
|---|---|
| [**] | [**] |
| [**] | [**] |
| [**] | [**] |
| [**] | [**] |
| [**] | |

**Exhibit C**

**Existing In-Licenses**

1. Amended and Restated Cas9-I License Agreement by and between President and Fellows of Harvard College, the Broad Institute, Inc. and Editas Medicine, Inc., dated December 16, 2016, as amended by Amendment 1 dated March 3, 2017

2. Cas9-II License Agreement by and between the Broad Institute, Inc. and Editas Medicine, Inc., dated December 16, 2016

3. Cpf1 License Agreement by and between the Broad Institute, Inc. and Editas Medicine, Inc., dated December 16, 2016

4. Exclusive Patent License Agreement (MGH Agreement No. A221317; MGH Case Nos. [**]) by and between The General Hospital Corporation, d/b/a Massachusetts General Hospital, and Editas Medicine, Inc., dated August 29, 2014, as amended by the First Amendment, dated June 29, 2015 and the Second Amendment, dated November 17, 2016

5. Exclusive Patent License Agreement (MGH Agreement No. A224596; MGH Case Nos. [**]) by and between The General Hospital Corporation, d/b/a Massachusetts General Hospital, and Editas Medicine, Inc., dated August 2, 2016

**Exhibit D**

**Manufacturing Requirements**

[purposefully left blank as of the Effective Date]

**Exhibit E**

**Permitted Subcontractors**

[**]

**Exhibit F**

**Profit Sharing-Agreement Terms**

All capitalized terms used but not otherwise defined in this Exhibit F will have the meanings ascribed to them in the Strategic Alliance and Option Agreement (the "Alliance Agreement").

1. Agreement: Upon the timely exercise by Editas of a Profit-Sharing Option, the Parties shall negotiate in good faith the terms of a Profit-Sharing Agreement for the applicable Co-Co Product.

2. Development and Commercialization. Allergan shall be solely responsible for all aspects of Commercialization of the Co-Co Products including planning and implementation, booking of sales, pricing and reimbursement using Commercially Reasonable Efforts in accordance with its internal practices and operating procedures. Notwithstanding the foregoing, on [**] basis, Allergan shall provide a Development and Commercialization budget to the ASC (or to Editas if the ASC no longer exists) for review and comment. Allergan and Editas will each be responsible for fifty (50%) of the Development responsibilities for the Co-Co Products pursuant to mutually agreed plans and budgets; provided, that if the Parties are unable to agree on the applicable Development plan and/or Commercialization budget, Allergan's decision shall govern.

3. Co-Co Territory: U.S., provided however, that global Development Costs incurred for Development activities that support Regulatory Approval in the U.S. shall be included as part of the Development Costs for the Co-Co Product(s) (the "Co-Co Territory").

4. Term: For so long as the Co-Co Product(s) are sold in the U.S., unless earlier terminated in accordance with the Alliance Agreement.

5. Allocation and Reconciliation of Net Profits/Losses; Patent Enforcement Recoveries:

   a. Costs. "Development and Commercialization Costs" means all Development and Commercialization costs incurred by Allergan and its Affiliates, Licensees, or Sublicensees with respect to such Co-Co Product in the Co-Co Territory subsequent to Allergan's exercise of its Option with respect thereto in accordance with Section 4.1.3 of the Alliance Agreement, including any such Losses arising from Claims based on Development, Manufacture, marketing, Commercialization and sale of a Co-Co Product in the Co-Co Territory, including any claims of intellectual property infringement and/or product liability.

   b. Allocation: Editas and Allergan shall each receive (in the case of profits) or pay (in the case of losses), as applicable, fifty percent (50%) of net profit and losses (the "Net Profits/Losses") with respect to each Co-Co Product in the Territory. The Profit-Sharing Agreement will specify the accounting, reporting, and payment process for such profits and losses. All royalty, milestone and other payments to a Third Party made by either Party under Third Party agreements (including, but not limited to, Existing In-Licenses) with respect to Co-Co Product(s) in the Co-Co Territory shall be deemed deducted in calculating the Net Profits/Losses. If any such Third Party payments are made for rights

that relate both to the Co-Co Product(s) in the Co-Co Territory and to other product(s) and/or territory(ies), only an equitable allocation of such costs shall be calculated as part of the Net Profits/Losses. The allocations and limitations on such sharing set forth in Section 6.6.4 of the Alliance Agreement shall not apply to such sharing of costs with respect to Co-Co Product(s) under the Profit-Sharing Agreement.

c. U.S. Reporting Gross Revenues and Shared Expenses: Within [**] days after the end of each Calendar Quarter, Allergan shall submit to Editas a report evidencing the calculation of the Net Profits/Losses including, if reasonably required to satisfy Editas's tax reporting obligations and if such information is reasonably available to Allergan, such calculation on a state-by-state basis. All reports under this Section shall be considered Confidential Information of Allergan, subject to the terms and conditions of ARTICLE 9 of the Alliance Agreement.

d. Payment. Within [**] days after delivery by Allergan of a report to Editas (as set forth above), Editas or Allergan, as the case may be, shall pay the applicable payments due to the other Party. The Parties shall have the audit rights set forth in Section 6.10 of the Alliance Agreement.

6. Permitted Disclosures. In addition to any disclosures which are required by Law (and which shall be governed by Section 9.3.4 of the Agreement), either Party may issue press releases with respect to the following matters the terms of which shall be subject to the reasonable review, comment and approval of the other Party:

a. the commencement and "top-line" results of clinical studies of any Co-Co Product;

b. the filing for or receipt of Regulatory Approval with respect to any Co-Co Product; and

c. the presence and participation of the Parties at scientific or financial forums relating to Co-Co Products.

**Exhibit G**

**Exhibit for Section 10.2.6**

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. A total of three pages were omitted. [**]

**Exhibit H**

**Press Release**

# Allergan and Editas Medicine Enter into Strategic R&D Alliance to Discover and Develop CRISPR Genome Editing Medicines for Eye Diseases

*– Brings Together Eye Care and CRISPR Innovators to Develop Transformative Medicines for Patients –*

*– Provides Allergan Exclusive Access to Multiple Editas Medicine Ocular Programs Based on its Unparalleled CRISPR Genome Editing Platform –*

*– Reinforces Allergan's Continued Commitment to Developing Innovative Treatments for Unmet Needs in Eye Care –*

**DUBLIN, IRELAND and CAMBRIDGE, MASS. – March 14, 2017 –** Allergan plc (NYSE: AGN), a leading global pharmaceutical company, and Editas Medicine, Inc. (NASDAQ:EDIT), a leading genome editing company, today announced that Allergan's wholly-owned subsidiary, Allergan Pharmaceuticals International Limited, and Editas Medicine have entered into a strategic research and development alliance under which Allergan will receive exclusive access and the option to license up to five of Editas Medicine's genome-editing ocular programs, including its lead program for Leber Congenital Amaurosis (LCA10), which is currently in pre-clinical development.

The agreement covers early stage, first-in-class ocular programs targeting serious diseases based on Editas Medicine's unparalleled CRISPR genome editing platform, including CRISPR/Cas9 and CRISPR/Cpf1. Editas Medicine's lead program is being developed for the potential treatment of LCA10, a rare, inherited retinal degenerative disease that appears in childhood and leads to blindness.

"The CRISPR genome editing platform holds the potential to transform the treatment of many genetic and non-genetically derived diseases, including diseases and conditions of the eye," said David Nicholson, Chief Research and Development Officer, Allergan. "The Allergan team is excited to work with colleagues at Editas Medicine to develop and potentially deliver game-changing treatment for retinal diseases like LCA10. This program is highly complementary to our ongoing eye care development programs where unmet medical need exists for patients."

"Allergan has long been a leader in advancing innovative therapies to treat eye diseases," said Katrine Bosley, President and Chief Executive Officer, Editas Medicine. "Working together with Allergan through their Open Science R&D model significantly enhances our ability to develop genome editing medicines to help patients with serious eye diseases. This alliance is highly aligned with our strategy to build our company for the long-term and to realize the broad potential of our genome editing platform to treat serious diseases."

CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) is a dynamic, versatile tool that can be programmed to target specific stretches of genetic code and edit DNA at precise locations in the human genome. The technology allows researchers to permanently modify genes and has the potential to create medicines with a durable treatment effect.

Under the terms of the agreement, Editas Medicine will receive an upfront payment of $90 million for the development of five candidate programs. Editas Medicine has the potential to earn additional payments for achieving important near-term milestones specifically related to LCA10. Allergan will have the option to license up to five programs under the agreement and will be responsible for development and commercialization of the optioned products, subject to Editas' option right to co-develop and co-promote up to two optioned products in the United States. Editas Medicine will also be eligible to receive development and commercial milestones, as well as royalty payments on a per-program basis.

**Conference Call Information**

Editas Medicine and Allergan will host a conference call on Tuesday, March 14, 2016, at 4:30 p.m. ET to discuss the alliance. To access the call, please dial (877) 809-6321 and provide the passcode 88272560.

**About the CRISPR Genome Editing Technology**

The CRISPR technology targets specific stretches of genetic code and allows editing of DNA at precise locations in the human genome. Cas9 and Cpf1 are both enzyme/guide RNA complexes that use traditional RNA/DNA base-pairing to precisely locate specific DNA sequences with the goal of modifying or 'editing' a disease-associated or therapeutic genomic location. By changing the composition of the guide RNA, the Cas9 or Cpf1 nuclease complex can be reprogrammed to target different DNA sequences and can be engineered to perform a wide range of genome editing functions, including 'cutting and removing', 'cutting and revising', and 'cutting and replacing' genomic sequences. In this way, genome editing has the potential to treat a broad range of genetically-defined and genetically-treatable diseases.

**About Leber Congenital Amaurosis**

Leber Congenital Amaurosis, or LCA, is a group of inherited retinal dystrophies caused by mutations in at least 18 different genes. It is the most common cause of inherited childhood blindness, with an incidence of two to three per 100,000 live births worldwide. Symptoms of LCA appear within the first year of life, resulting in significant vision loss and blindness. The most common form of the disease, referred to as LCA10, is a monogenic disorder caused by mutations in the CEP290 gene and represents approximately 20-30 percent of all LCA subtypes.

**About Allergan plc**

Allergan plc (NYSE: AGN), headquartered in Dublin, Ireland, is a bold, global pharmaceutical company. Allergan is focused on developing, manufacturing and commercializing branded pharmaceuticals, devices and biologic products for patients around the world.

Allergan markets a portfolio of leading brands and best-in-class products for the central nervous system, eye care, medical aesthetics and dermatology, gastroenterology, women's health, urology and anti-infective therapeutic categories.

Allergan is an industry leader in Open Science, the Company's R&D model, which defines our approach to identifying and developing game-changing ideas and innovation for better patient care. This approach has led to Allergan building one of the broadest development pipelines in the pharmaceutical industry with 70+ mid-to-late stage pipeline programs in development.

Our Company’s success is powered by our more than 16,000 global colleagues’ commitment to being Bold for Life. Together, we build bridges, power ideas, act fast and drive results for our customers and patients around the world by always doing what is right.

With commercial operations in approximately 100 countries, Allergan is committed to working with physicians, healthcare providers and patients to deliver innovative and meaningful treatments that help people around the world live longer, healthier lives every day.

For more information, visit Allergan’s website at www.Allergan.com.

**About Editas Medicine**

Editas Medicine is a leading genome editing company dedicated to treating patients with genetically-defined diseases by correcting their disease-causing genes. The Company was founded by world leaders in genome editing, and its mission is to translate the promise of genome editing science into a broad class of transformative genomic medicines to benefit the greatest number of patients.

**Allergan Forward-Looking Statements**

Statements contained in this press release that refer to future events or other non-historical facts are forward-looking statements that reflect Allergan's current perspective of existing trends and information as of the date of this release. Except as expressly required by law, Allergan disclaims any intent or obligation to update these forward-looking statements. Actual results may differ materially from Allergan's current expectations depending upon a number of factors affecting Allergan's business. These factors include, among others, the difficulty of predicting the timing or outcome of FDA approvals or actions, if any; the impact of competitive products and pricing; market acceptance of and continued demand for Allergan's products; difficulties or delays in manufacturing; and other risks and uncertainties detailed in Allergan's periodic public filings with the Securities and Exchange Commission, including but not limited to Allergan's Annual Report on Form 10-K for the year ended December 31, 2016. Except as expressly required by law, Allergan disclaims any intent or obligation to update these forward-looking statements.

**Editas Forward-Looking Statements**

This press release contains forward-looking statements and information within the meaning of The Private Securities Litigation Reform Act of 1995. The words ‘‘anticipate,’’ ‘‘believe,’’ ‘‘continue,’’ ‘‘could,’’ ‘‘estimate,’’ ‘‘expect,’’ ‘‘intend,’’ ‘‘may,’’ ‘‘plan,’’ ‘‘potential,’’ ‘‘predict,’’ ‘‘project,’’ ‘‘target,’’ ‘‘should,’’ ‘‘would,’’ and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The Company may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various factors, including: uncertainties inherent in the initiation and completion of preclinical studies and clinical trials and clinical development of the Company’s product candidates; availability and timing of results from preclinical studies and clinical trials; whether interim results from a clinical trial will be predictive of the final results of the trial or the results of future trials; expectations for regulatory approvals to conduct trials or to market products and availability of funding sufficient

for the Company's foreseeable and unforeseeable operating expenses and capital expenditure requirements. These and other risks are described in greater detail under the caption "Risk Factors" included in the Company's most recent Annual Report on Form 10-K, which is on file with the Securities and Exchange Commission, and in other filings that the Company may make with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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**Exhibit I**

**Existing Editas Background Patents**
(as of the Effective Date)

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. A total of 54 pages were omitted. [**]

**Exhibit 31.1**

**CERTIFICATIONS**

I, Katrine S. Bosley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Editas Medicine, 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. 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

    c. 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 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 15, 2017

By: /s/ Katrine S. Bosley
Katrine S. Bosley
Chief Executive Officer
(Principal Executive Officer)

**Exhibit 31.2**

**CERTIFICATIONS**

I, Andrew A.F. Hack, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Editas Medicine, 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. 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

    c. 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 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 15, 2017

By: /s/ Andrew A. F. Hack
Andrew A.F. Hack, M.D., Ph.D.
Chief Financial Officer
(Principal Financial 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 Editas Medicine, Inc. (the "Company") for the period ended March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers 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 her or 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.

Date: May 15, 2017

By: /s/ Katrine S. Bosley
Katrine S. Bosley
President and Chief Executive Officer

Date: May 15, 2017

By: /s/ Andrew A.F. Hack
Andrew A.F. Hack, M.D., Ph.D.
Chief Financial Officer