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 September 30, 2024

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 001-39208

Beam Therapeutics Inc.

(Exact name of Registrant as specified in its Charter)

Delaware	**81-5238376**
(***State or other jurisdiction of incorporation or organization***)	(***I.R.S. Employer Identification No.***)
238 Main Street **Cambridge, MA**	**02142**
(***Address of principal executive offices***)	(***Zip Code***)

Registrant's telephone number, including area code: (857) 327-8775

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

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	**BEAM**	**Nasdaq Global Select Market**

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

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

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

The number of shares of registrant's common stock outstanding as of October 29, 2024 was 82,805,627.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Such forward-looking statements reflect, among other things:

- our current expectations and anticipated results of operations;
- our expectations regarding the initiation, timing, progress and results of our clinical trials, including our Phase 1/2 clinical trial designed to assess the safety and efficacy of BEAM-101 for the treatment of sickle cell disease, which we refer to as our BEACON trial, our Phase 1/2 clinical trial designed to assess the safety and efficacy of BEAM-201 for the treatment of relapsed, refractory T-cell acute lymphoblastic leukemia/T cell lymphoblastic lymphoma, our Phase 1/2 clinical trial designed to assess the safety and efficacy of BEAM-302 for the treatment of Alpha-1 Antitrypsin Deficiency, and our anticipated trial to assess the safety and efficacy of BEAM-301 for the treatment of glycogen storage disease type 1a;
- our expectations regarding the initiation, timing, progress and results of our research and development programs and preclinical studies;
- our ability to develop and maintain a sustainable portfolio of product candidates;
- our ability to develop life-long, curative, precision genetic medicines for patients through base editing;
- our ability to create a hub for partnering with other companies;
- our plans for preclinical studies for product candidates in our pipeline;
- our ability to advance any product candidates that we may develop and successfully complete any clinical trials or preclinical studies, including the manufacture of any such product candidates;
- our ability to pursue a broad suite of clinically validated delivery modalities;
- our expectations regarding our ability to generate additional novel lipid nanoparticles that we believe could accelerate novel nonviral delivery of gene editing or other nucleic acid payloads to tissues beyond the liver and our ability to expand the reach of our programs;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- developments related to our competitors and our industry;
- the expected timing, progress and success of our collaborations with third parties, including any future payments we may receive under our collaboration and license agreements, and our ability to identify and enter into future license agreements and collaborations;
- developments related to base editing technologies;
- our ability to successfully develop our delivery modalities and obtain and maintain approval for our product candidates;
- our ability to successfully maintain and expand our commercial-scale current Good Manufacturing Practice, or cGMP, manufacturing facility;
- regulatory developments in the United States and foreign countries;
- our ability to attract and retain key scientific and management personnel;
- our expectations regarding the strategic and other potential benefits of our acquisition of any additional technologies;
- our estimates regarding the period over which we believe that our existing cash, cash equivalents and marketable securities will be sufficient to fund our operating expenses and capital expenditure requirements; and
- the impact on our business of macro-economic conditions, as well as the prevailing level of macro-economic, business, and operational uncertainty, including as a result of geopolitical events or other global or regional events.

All of these statements are subject to known and unknown important risks, uncertainties and other factors that may cause our actual results, performance or achievements, market trends, or industry results to differ materially from those expressed or implied by such forward-looking statements. Therefore, any statements contained herein that are not statements of historical fact may be forward-looking statements and should be evaluated as such. Without limiting the foregoing, the words “anticipate,” “expect,” “suggest,” “plan,” “believe,” “intend,” “project,” “forecast,” “estimates,” “targets,” “projections,” “should,” “could,” “would,” “may,” “might,” “will,” and the negative thereof and similar words and expressions are intended to identify forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in “Risk Factors” in Part II, Item 1A of this Quarterly Report on Form 10-Q and “Risk Factors Summary” and “Risk Factors” in Part I, Item 1A. of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, or the 2023 Form 10-K. Unless legally required, we assume no obligation to update any such forward-looking information to reflect actual results or changes in the factors affecting such forward-looking information.

When we use the terms “Beam,” the “Company,” “we,” “us” or “our” in this Quarterly Report on Form 10-Q, we mean Beam Therapeutics Inc. and its subsidiaries on a consolidated basis, unless the context indicates otherwise.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

Beam Therapeutics Inc.
Condensed Consolidated Balance Sheets
(*Unaudited*)
(in thousands, except share and per share amounts)

	September 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 230,203	$ 435,895
Marketable securities	695,554	753,981
Prepaid expenses and other current assets	19,777	21,167
Total current assets	945,534	1,211,043
Property and equipment, net	113,502	124,960
Restricted cash	6,549	8,719
Operating lease right-of-use assets	104,704	112,846
Other assets	1,078	2,146
Total assets	$ 1,171,367	$ 1,459,714
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,812	$ 1,617
Accrued expenses and other current liabilities	51,769	111,664
Current portion of derivative liabilities	8,400	10,800
Current portion of deferred revenue	89,327	68,706
Current portion of lease liability	12,936	12,778
Total current liabilities	166,244	205,565
Long-term lease liability	149,129	159,911
Contingent consideration liabilities	1,104	2,723
Long-term portion of deferred revenue	57,816	109,888
Long-term portion of derivative liabilities	5,276	—
Other liabilities	481	298
Total liabilities	380,050	478,385
Commitments and contingencies (See Note 7, *License agreements* and Note 8, *Collaboration and license agreements*)		
Stockholders' equity:		
Preferred stock, $0.01 par value; 25,000,000 shares authorized, and no shares issued or outstanding at September 30, 2024 and December 31, 2023, respectively	—	—
Common stock, $0.01 par value; 250,000,000 shares authorized, 82,558,883 and 81,632,496 issued and outstanding at September 30, 2024 and December 31, 2023, respectively	826	816
Additional paid-in capital	2,265,009	2,169,798
Accumulated other comprehensive (loss) income	1,759	604
Accumulated deficit	(1,476,277)	(1,189,889)
Total stockholders' equity	791,317	981,329
Total liabilities and stockholders' equity	$ 1,171,367	$ 1,459,714

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

Beam Therapeutics Inc.
Condensed Consolidated Statements of Operations and Other Comprehensive Loss
(*Unaudited*)
(in thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
License and collaboration revenue	$ 14,269	$ 17,193	$ 33,451	$ 61,517
Operating expenses:				
Research and development	94,258	100,050	266,117	297,304
General and administrative	26,515	25,410	82,865	73,556
Total operating expenses	120,773	125,460	348,982	370,860
Loss from operations	(106,504)	(108,267)	(315,531)	(309,343)
Other income (expense):				
Change in fair value of derivative liabilities	(200)	4,700	2,400	9,400
Change in fair value of non-controlling equity investments	(2,064)	(11,221)	(13,003)	(17,870)
Change in fair value of contingent consideration liabilities	(27)	6,002	1,619	7,877
Interest and other income (expense), net	12,127	12,698	38,166	34,612
Total other income (expense)	9,836	12,179	29,182	34,019
Net loss before income taxes	$ (96,668)	$ (96,088)	$ (286,349)	$ (275,324)
Provision for income taxes	—	—	(39)	—
Net loss	$ (96,668)	$ (96,088)	$ (286,388)	$ (275,324)
Unrealized gain (loss) on marketable securities	2,869	(9)	1,155	406
Comprehensive loss	$ (93,799)	$ (96,097)	$ (285,233)	$ (274,918)
Net loss per common share, basic and diluted	$ (1.17)	$ (1.22)	$ (3.49)	$ (3.63)
Weighted-average common shares outstanding, basic and diluted	82,410,095	79,024,647	82,141,383	75,902,612

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

Beam Therapeutics Inc.
Condensed Consolidated Statements of Stockholders' Equity
(*Unaudited*)
(in thousands, except share amounts)

	Common Stock		Additional Paid-in	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit	Equity
Balance at December 31, 2022	71,277,339	$ 712	$ 1,792,554	$ (2,430)	$ (1,057,362)	$ 733,474
Purchase of common stock under ESPP	65,620	1	1,707	—	—	1,708
Issuance of common stock from At-the-Market offering, net of issuance costs of $0.2 million	2,431,770	24	93,786	—	—	93,810
Vesting of restricted common stock	284,858	3	(3)	—	—	—
Stock-based compensation	—	—	23,917	—	—	23,917
Exercise of common stock options	375,805	4	3,388	—	—	3,392
Other comprehensive income (loss)	—	—	—	1,665	—	1,665
Net loss	—	—	—	—	(96,460)	(96,460)
Balance at March 31, 2023	74,435,392	$ 744	$ 1,915,349	$ (765)	$ (1,153,822)	$ 761,506
Issuance of common stock from At-the-Market offering, net of issuance costs of $5.1 million	3,387,358	34	107,149	—	—	107,183
Vesting of restricted common stock	63,154	1	(1)	—	—	—
Stock-based compensation	—	—	26,278	—	—	26,278
Exercise of common stock options	67,598	1	701	—	—	702
Other comprehensive income (loss)	—	—	—	(1,250)	—	(1,250)
Net loss	—	—	—	—	(82,776)	(82,776)
Balance at June 30, 2023	77,953,502	$ 780	$ 2,049,476	$ (2,015)	$ (1,236,598)	$ 811,643
Purchase of common stock under ESPP	64,783	1	1,323	—	—	1,324
Issuance of common stock from At-the-Market offering, net of issuance costs of $0.8 million	1,133,575	10	34,934	—	—	34,944
Vesting of restricted common stock	68,869	1	(1)	—	—	—
Stock-based compensation	—	—	25,835	—	—	25,835
Exercise of common stock options	161,303	2	1,290	—	—	1,292
Other comprehensive income (loss)	—	—	—	(9)	—	(9)
Net loss	—	—	—	—	(96,088)	(96,088)
Balance at September 30, 2023	79,382,032	$ 794	$ 2,112,857	$ (2,024)	$ (1,332,686)	$ 778,941

Beam Therapeutics Inc.
Condensed Consolidated Statements of Stockholders' Equity - Continued
(*Unaudited*)
(in thousands, except share amounts)

	Common Stock		Additional Paid-in	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit	Equity
Balance at December 31, 2023	81,632,496	$ 816	$ 2,169,798	$ 604	$ (1,189,889)	$ 981,329
Purchase of common stock under ESPP	76,461	1	1,397	—	—	1,398
Vesting of restricted common stock	420,579	4	(4)	—	—	—
Stock-based compensation	—	—	29,281	—	—	29,281
Exercise of common stock options	151,291	2	1,674	—	—	1,676
Other comprehensive income (loss)	—	—	—	(1,525)	—	(1,525)
Net loss	—	—	—	—	(98,669)	(98,669)
Balance at March 31, 2024	82,280,827	$ 823	$ 2,202,146	$ (921)	$ (1,288,558)	$ 913,490
Vesting of restricted common stock	72,040	1	(1)	—	—	—
Stock-based compensation	—	—	31,604	—	—	31,604
Exercise of common stock options	33,343	—	240	—	—	240
Other comprehensive income (loss)	—	—	—	(189)	—	(189)
Net loss	—	—	—	—	(91,051)	(91,051)
Balance at June 30, 2024	82,386,210	$ 824	$ 2,233,989	$ (1,110)	$ (1,379,609)	$ 854,094
Purchase of common stock under ESPP	58,726	1	1,223	—	—	1,224
Vesting of restricted common stock	82,739	1	(1)	—	—	—
Stock-based compensation	—	—	29,559	—	—	29,559
Exercise of common stock options	31,208	—	239	—	—	239
Other comprehensive income (loss)	—	—	—	2,869	—	2,869
Net loss	—	—	—	—	(96,668)	(96,668)
Balance at September 30, 2024	82,558,883	$ 826	$ 2,265,009	$ 1,759	$ (1,476,277)	$ 791,317

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

Beam Therapeutics Inc.
Condensed Consolidated Statements of Cash Flows
(*Unaudited*)
(in thousands)

	Nine Months Ended September 30, 2024	2023
Operating activities		
Net loss	$ (286,388)	$ (275,324)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	16,482	14,650
Amortization of investment discount (premiums)	(18,125)	(22,389)
Stock-based compensation expense	90,444	76,030
Change in operating lease right-of-use assets	7,193	7,117
Change in fair value of derivative liabilities	(2,400)	(9,400)
Change in fair value of contingent consideration liabilities	(1,619)	(7,877)
Change in fair value of non-controlling equity investments	13,003	17,870
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	2,458	(10,043)
Accounts payable	2,357	(5,810)
Accrued expenses and other liabilities	(53,610)	(2,738)
Operating lease liabilities	(9,676)	(7,161)
Deferred revenue	(31,451)	(60,016)
Other long-term liabilities	451	823
Net cash provided by (used in) operating activities	(270,881)	(284,268)
Investing activities		
Purchases of property and equipment	(5,976)	(30,143)
Purchases of marketable securities	(486,439)	(931,066)
Maturities of marketable securities	551,142	934,950
Net cash provided by (used in) investing activities	58,727	(26,259)
Financing activities		
Proceeds from issuance of common shares, net of commissions	—	236,568
Proceeds from issuances of stock under ESPP	2,622	3,032
Payment of equity offering costs	—	(631)
Repayment of equipment financings	(485)	(1,620)
Proceeds from exercise of stock options	2,155	5,386
Net cash provided by (used in) financing activities	4,292	242,735
Net change in cash, cash equivalents and restricted cash	(207,862)	(67,792)
Cash, cash equivalents and restricted cash—beginning of period	444,614	245,521
Cash, cash equivalents and restricted cash—end of period	$ 236,752	$ 177,729

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

Beam Therapeutics Inc.
Condensed Consolidated Statements of Cash Flows - Continued
(*Unaudited*)
(in thousands)

	Nine Months Ended September 30,	
	2024	2023
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 32	$ 140
Supplemental disclosure of noncash investing and financing activities:		
Property and equipment additions in accounts payable and accrued expenses	$ 451	$ 2,192
Operating lease liabilities arising from obtaining right-of-use assets	$ (1,010)	$ 744

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

1. Nature of the business and basis of presentation

Organization

Beam Therapeutics Inc., which we refer to herein as the "Company" or "Beam," is a biotechnology company committed to establishing the leading, fully integrated platform for precision genetic medicines. Beam's vision is to provide life-long cures to patients suffering from genetic diseases. The Company was incorporated on January 25, 2017 as a Delaware corporation and began operations in July 2017. Its principal offices are in Cambridge, Massachusetts.

Liquidity and capital resources

Since its inception, the Company has devoted substantially all of its resources to building its base editing platform and advancing development of its portfolio of programs, establishing and protecting its intellectual property, conducting research and development activities, making arrangements to conduct manufacturing activities with contract manufacturing organizations, organizing and staffing the Company, establishing and maintaining internal manufacturing capabilities, conducting clinical trials, maintaining its facilities and new facility build-outs, business planning, raising capital and providing general and administrative support for these operations. The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry including, but not limited to, technical risks associated with the successful research, development and manufacturing of product candidates, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations and the ability to secure additional capital to fund operations. Current and future programs will require significant research and development efforts, including extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

In April 2021, the Company entered into an at the market, or ATM, sales agreement, or the Sales Agreement, with Jefferies LLC, or Jefferies, pursuant to which the Company was entitled to offer and sell, from time to time at prevailing market prices, shares of the Company's common stock having aggregate gross proceeds of up to $300.0 million. The Company agreed to pay Jefferies a commission of up to 3.0% of the aggregate gross sale proceeds of any shares sold by Jefferies under the Sales Agreement. Between April 2021 and July 2021, the Company sold 2,908,009 shares of its common stock under the Sales Agreement at an average price of $103.16 per share for aggregate gross proceeds of $300.0 million, before deducting commissions and offering expenses payable by the Company.

In July 2021 and May 2023, the Company and Jefferies entered into amendments to the Sales Agreement to provide for increases in the aggregate offering amount under the Sales Agreement, such that as of May 10, 2023, the Company may offer and sell shares of common stock having an aggregate offering price of up to an additional $800.0 million. As of September 30, 2024, the Company has sold 10,860,992 additional shares of its common stock under the amended Sales Agreement at an average price of $51.93 per share for aggregate gross proceeds of $564.0 million, before deducting commissions and offering expenses payable by the Company.

Since its inception, the Company has incurred substantial losses and had an accumulated deficit of $1.5 billion as of September 30, 2024. The Company expects to generate operating losses and negative operating cash flows for the foreseeable future.

The Company expects that its cash, cash equivalents, and marketable securities as of September 30, 2024 of $925.8 million will be sufficient to fund its operations for at least the next 12 months from the date of issuance of these financial statements. The Company will need additional financing to support its continuing operations and pursue its growth strategy. Until such time as the Company can generate significant revenue from product sales, if ever, it expects to finance its operations through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. The Company may be unable to raise additional funds or enter into such other agreements when needed on favorable terms or at all. The inability to raise capital as and when needed would have a negative impact on the Company's financial condition and its ability to pursue its business strategy. The Company will need to generate significant revenue to achieve profitability, and it may never do so.

2. Summary of significant accounting policies

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2023, and notes thereto, which are included in the Company's Annual Report on Form 10-K that was filed with the Securities and Exchange Commission, or the SEC, on February 27, 2024, or the 2023 Form 10-K. Since the date of those financial statements, there have been no material changes to the Company's significant accounting policies.

Basis of presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles, or GAAP. Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification, or ASC, and Accounting Standards Update, or ASU, of the Financial Accounting Standards Board, or FASB.

Principles of consolidation

The accompanying condensed consolidated financial statements include the results of operations of the Company and its wholly-owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation.

Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities as of and during the reporting period. The Company bases its estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. Significant estimates and assumptions reflected in these condensed consolidated financial statements include, but are not limited to, incremental borrowing rate used in the calculation of lease liabilities, research and development expenses, stock-based compensation, contingent consideration liabilities, success payments, settlement payments and certain judgments regarding revenue recognition. Actual results could differ from these estimates.

Recently announced accounting pronouncements

In November 2023, the FASB issued ASU 2023-07*, Segment Reporting (Topic 280).* The amendments in this update expand segment disclosure requirements, including new segment disclosure requirements for entities with a single reportable segment among other disclosure requirements. This update is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740).* The amendments in this update expand income tax disclosure requirements, including additional information pertaining to the rate reconciliation, income taxes paid, and other disclosures. This update is effective for annual periods beginning after December 15, 2024. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements.

Cash, cash equivalents, and restricted cash

Cash and cash equivalents consist of standard checking accounts, money market accounts, and all highly liquid investments with a remaining maturity of three months or less at the date of purchase. Restricted cash represents collateral provided for letters of credit issued as security deposits in connection with the Company's leases of its corporate facilities.

The following table reconciles cash, cash equivalents, and restricted cash reported within the Company's condensed consolidated balance sheets to the total of the amounts shown in the condensed consolidated statements of cash flows (in thousands):

	September 30, 2024	September 30, 2023
Cash and cash equivalents	$ 230,203	$ 169,049
Restricted cash	6,549	8,680
Total cash, cash equivalents, and restricted cash	$ 236,752	$ 177,729

3. Property and equipment, net

Property and equipment consist of the following (in thousands):

	September 30, 2024	December 31, 2023
Leasehold improvements	$ 100,921	$ 100,186
Lab equipment	69,109	61,674
Furniture and fixtures	4,836	4,836
Computer equipment	3,170	3,163
Construction in process	2,130	5,283
Total property and equipment	180,166	175,142
Less accumulated depreciation	(66,664)	(50,182)
Property and equipment, net	$ 113,502	$ 124,960

The following table summarizes depreciation expense incurred (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Depreciation expense	$ 5,475	$ 5,187	$ 16,482	$ 14,650

4. Fair value of financial instruments

The Company's financial instruments that are measured at fair value on a recurring basis consist of cash equivalents, marketable securities, corporate equity securities of Verve Therapeutics, Inc., or Verve, and Prime Medicine, Inc., or Prime, contingent consideration liabilities related to the Agreement and Plan of Merger, dated February 23, 2021, between Guide Therapeutics, Inc., or Guide, and the Company, or the Guide Merger Agreement, success payment derivative liabilities pursuant to the license agreement, or the Harvard License Agreement, between President and Fellows of Harvard University, or Harvard, and the Company, the license agreement, or the Broad License Agreement, between The Broad Institute, Inc., or Broad Institute, and the Company, and settlement payment derivative liabilities associated with a settlement agreement, between the Company and a research institution.

The following tables set forth the fair value of the Company's financial assets and liabilities by level within the fair value hierarchy at September 30, 2024 (in thousands):

	Carrying amount	Fair value	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market funds	$ 178,597	$ 178,597	$ 178,597	$ —	$ —
Commercial paper	51,443	51,443	—	51,443	—
Marketable securities:					
Commercial paper	217,714	217,714	—	217,714	—
Corporate notes	115,568	115,568	—	115,568	—
U.S. Treasury securities	227,457	227,457	—	227,457	—
U.S. Government securities	125,943	125,943	—	125,943	—
Corporate equity securities	8,872	8,872	8,872	—	—
Total assets	$ 925,594	$ 925,594	$ 187,469	$ 738,125	$ —
Liabilities					
Success payment liability – Harvard	$ 4,000	$ 4,000	$ —	$ —	$ 4,000
Success payment liability – Broad Institute	4,400	4,400	—	—	4,400
Derivative settlement liability	5,276	5,276	—	—	5,276
Contingent consideration liability – Technology	484	484	—	—	484
Contingent consideration liability – Product	620	620	—	—	620
Total liabilities	$ 14,780	$ 14,780	$ —	$ —	$ 14,780

The following tables set forth the fair value of the Company's financial assets and liabilities by level within the fair value hierarchy at December 31, 2023 (in thousands):

	Carrying amount	Fair value	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market funds	$ 435,689	435,689	$ 435,689	$ —	$ —
Marketable securities:					
Commercial paper	285,289	285,289	—	285,289	—
Corporate notes	23,525	23,525	—	23,525	—
U.S. Treasury securities	152,147	152,147	—	152,147	—
U.S. Government securities	271,145	271,145	—	271,145	—
Corporate equity securities	21,875	21,875	21,875	—	—
Total assets	$ 1,189,670	$ 1,189,670	$ 457,564	$ 732,106	$ —
Liabilities					
Success payment liability – Harvard	$ 5,200	$ 5,200	$ —	$ —	$ 5,200
Success payment liability – Broad Institute	5,600	5,600	—	—	5,600
Contingent consideration liability – Technology	1,371	1,371	—	—	1,371
Contingent consideration liability – Product	1,352	1,352	—	—	1,352
Total liabilities	$ 13,523	$ 13,523	$ —	$ —	$ 13,523

Cash equivalents – Money market funds included within cash equivalents are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets. Commercial paper and corporate notes are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies.

Marketable securities – Marketable securities, excluding corporate equity securities (held in Verve and Prime), are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined using models or other valuation methodologies.

The Company holds an investment in Verve consisting of shares of Verve's common stock. As of September 30, 2024, the Company owned 546,970 shares of Verve's common stock valued at $2.7 million, which is included in marketable securities in the condensed consolidated balance sheet.

The Company also holds an investment in Prime consisting of 1,608,337 shares of Prime's common stock. As of September 30, 2024, the Company's investment in Prime's common stock was valued at $6.2 million, which is included in marketable securities in the condensed consolidated balance sheet.

Pursuant to ASC 825, *Financial instruments*, the Company records changes in the fair value of its investments in equity securities to other income (expense), in the Company's condensed consolidated statements of operations.

The following table summarizes other income (expense) recorded due to changes in the fair value of corporate equity securities held (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Other income (expense)	$ (2,064)	$ (11,221)	$ (13,003)	$ (17,870)

Success payment liabilities – As discussed further in Note 7, *License agreements*, the Company is required to make payments to Harvard and Broad Institute based upon the achievement of specified multiples of the market value of the Company's common stock, at specified valuation dates. The Company's liability for the share-based success payments under the Harvard License Agreement and the Broad License Agreement is carried at fair value. To determine the estimated fair value of the success payment liability, the Company uses a Monte Carlo simulation methodology, which models the future movement of stock prices based on several key variables.

The following variables were incorporated in the calculation of the estimated fair value of the Harvard and Broad Institute success payment liabilities:

	Harvard		Broad Institute	
	September 30, 2024	December 31, 2023	September 30, 2024	December 31, 2023
Fair value of common stock (per share)	$ 24.50	$ 27.22	$ 24.50	$ 27.22
Expected volatility	79%	80%	80%	79%
Expected term (years)	0.04-4.74	0.06-5.49	0.04-5.61	0.06-6.36

The computation of expected volatility was estimated using available information about the historical volatility of stocks of similar publicly traded companies in addition to the Company's own data for a period matching the expected term assumption. In addition, the Company incorporated the estimated number, timing, and probability of valuation measurement dates in the calculation of the success payment liability.

The following table reconciles the change in the fair value of success payment liabilities based on Level 3 inputs (in thousands):

	Nine Months Ended September 30, 2024		
	Harvard	Broad Institute	Total
Balance at December 31, 2023	$ 5,200	$ 5,600	$ 10,800
Change in fair value	(1,200)	(1,200)	(2,400)
Balance at September 30, 2024	$ 4,000	$ 4,400	$ 8,400

Derivative settlement liability – On July 19, 2024, the Company entered into a settlement agreement with a research institution pursuant to which, in exchange for a release of claims in its favor, the Company agreed, among other things, to pay the research institution an upfront payment of $15.0 million and to make additional payments contingent upon the development and commercialization of BEAM-102 and BEAM-302. These contingent payments consist of certain development, regulatory, and sales-based milestone payments, as well as 1% royalty through 2038. Any amounts due must be settled in cash. The maximum amount of development and regulatory milestone payments under the settlement agreement is $15.0 million, and the maximum amount of sales milestone payments is $35 million, per program. The Company paid the $15.0 million upfront payment during the three months ended September 30, 2024. There was no material charge related to this settlement in the three or nine months ended September 30, 2024 as the settlement value was substantially accrued in prior periods.

The contingent settlement payments are accounted for as a derivative under Accounting Standards Codification 815, *Derivatives and Hedging,* as the potential payments meet the definition of a derivative and are not subject to any scope exceptions. The derivative liability is recorded at fair value on the Company's balance sheet with changes in value recognized in interest and other income (expense) in the consolidated statement of operations and other comprehensive loss. To determine the estimated fair value of the liability, the Company applied a probability-based model, which utilized inputs based on the potential achievement and related timing of certain development, regulatory and sales-based milestones that were unobservable in the market. This derivative liability is classified within Level 3 of the fair value hierarchy above.

The following assumptions were incorporated in the calculation of the fair value of the derivative liability:

	Milestones
	September 30, 2024
Discount rate	10.00%
Probability of achievement of settlement payments	3%-44%
Projected Year of achievement of settlement payments	2027-2038

The following table reconciles the change in fair value of the derivative liability based on level 3 inputs (in thousands):

	Nine Months Ended September 30, 2024
	Total
Balance at December 31, 2023	$ —
Initial recognition of derivative liability	5,276
Balance at September 30, 2024	$ 5,276

Contingent consideration liabilities – Under the Guide Merger Agreement, Guide's former stockholders and optionholders are eligible to receive up to an additional $100.0 million in technology milestone payments and $220.0 million in product milestone payments, payable in the Company's common stock valued using the volume-weighted average price of the Company's stock over the ten-day trading period ending two trading days prior to the date on which the applicable milestone is achieved. As these milestones are payable with a variable number of shares of the Company's common stock, the milestone payments result in liability classification under ASC 480, *Distinguishing Liabilities from Equity*. These contingent consideration liabilities are carried at fair value which was estimated by applying a probability-based model, which utilized inputs based on timing of achievement that were unobservable in the market. These contingent consideration liabilities are classified within Level 3 of the fair value hierarchy.

The following variables were incorporated in the calculation of the estimated fair value of the contingent consideration liabilities:

	Technology Milestones		Product Milestones	
	September 30, 2024	December 31, 2023	September 30, 2024	December 31, 2023
Discount Rate	10.00%	10.00%	10.00%	10.00%
Probability of Achievement	2%	2-5%	1-2%	1-2%
Projected Year of Achievement	2026	2025	2028-2034	2025-2031

The following table reconciles the change in fair value of the contingent consideration liabilities based on level 3 inputs (in thousands):

	Nine Months Ended September 30, 2024		
	Technology Milestones	Product Milestones	Total
Balance at December 31, 2023	$ 1,371	$ 1,352	$ 2,723
Change in fair value	(887)	(732)	(1,619)
Balance at September 30, 2024	$ 484	$ 620	$ 1,104

5. Marketable securities

The following table summarizes the Company's marketable securities held at September 30, 2024 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial paper	$ 217,213	$ 501	$ —	$ 217,714
Corporate notes	115,320	259	(11)	115,568
U.S. Treasury securities	226,850	607	—	227,457
U.S. Government securities	125,540	405	(2)	125,943
Corporate equity securities	8,872	—	—	8,872
Total	$ 693,795	$ 1,772	$ (13)	$ 695,554

The following table summarizes the Company's marketable securities held at December 31, 2023 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Commercial paper	$ 285,054	$ 250	$ (15)	$ 285,289
Corporate notes	23,462	63	—	23,525
U.S. Treasury securities	151,805	436	(94)	152,147
U.S. Government securities	271,181	328	(364)	271,145
Corporate equity securities	21,875	—	—	21,875
Total	$ 753,377	$ 1,077	$ (473)	$ 753,981

The amortized cost of marketable securities is adjusted for amortization of premiums and accretion of discounts to maturity. At September 30, 2024, the balance in accumulated other comprehensive (loss) income was related to marketable securities. There were no realized gains or losses recognized on the sale or maturity of marketable securities for the nine months ended September 30, 2024 and 2023 and, as a result, the Company did not reclassify any amounts out of accumulated other comprehensive (loss) income for the same periods.

The Company holds debt securities of companies with high credit quality and has determined that there was no material change in the credit risk of any of its debt securities.

6. Accrued expenses and other current liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

	September 30, 2024	December 31, 2023
Accrued contingent obligation, refer to Note 7	20,652	43,280
Employee compensation and related benefits	13,712	21,774
Research costs	8,206	9,804
Professional fees	3,551	3,468
Process development and manufacturing costs	3,073	4,697
Other	2,575	28,641
Total	$ 51,769	$ 111,664

7. License agreements

The Company has various license agreements related to technology used in its research and development activities. The license agreements may include up-front payments, option fees, ongoing maintenance fees, sublicense fees, royalty-based payments, milestone payments, success-based payments, and other payments. Option fees, when applicable, are recognized when exercised, maintenance fees, sublicense fees, and other payments are recorded as incurred based on the estimated amounts due or that will ultimately be paid. Contingent payments that are not required to be accounted for as a derivative are recognized as incurred. As the success-based payments due under the Company's license arrangements are derivatives, the change in the fair value of the success-based payments are recognized in a separate line item in the statement of operations and comprehensive loss, as discussed further below.

The value attributable to sublicenses and the related sublicense fees due under the Company's license agreements may require estimates and other judgments related to contractual requirements, which creates uncertainty over the ultimate amount that would be paid under these arrangements. Contractual amounts due are accrued and if a contingency exists related to the interpretation of the amounts due under the license agreement, the Company recognizes a liability for the amount that is probable and estimable. When no amount within the range of potential payments is a better estimate than any other amount, however, the minimum amount in the range is accrued. If some amount within a range of loss appears to be a better estimate than any other amount within the range, that amount is accrued. The Company's accrued liabilities for license fees includes estimates, including approximately $20.7 million of contingent obligations that are expected to be due associated with payments received under the Lilly Agreement. As of September 30, 2024, management believes that it is remote that an adjustment to its estimated accrual would result in a material charge in excess of the amount accrued. The ultimate amount paid may differ materially from the estimated amounts.

Harvard license agreement

Under the Harvard License Agreement, Harvard is entitled to receive success payments, in cash or shares of Company stock, determined based upon the achievement of specified multiples of the initial weighted average value of the Company's Series A Preferred at specified valuation dates. The success payments range from $5.0 million to a maximum of $105.0 million and have valuation multiples that range from 5 times to 40 times the initial weighted average value of the Series A Preferred. Subsequent to the Company's February 2020 IPO, the amount of success payments is based on the market value of the Company's common stock.

The Company is required to make success payments to Harvard during a period of time, or the Harvard Success Payment Period, which has been determined to be the later of (1) the ninth anniversary of the Harvard License Agreement or (2) the earlier of (a) the twelfth anniversary of the Harvard License Agreement and (b) the third anniversary of the first date on which a licensed product receives regulatory approval in the United States. During the Harvard Success Payment Period, the Company will perform a calculation of any amounts owed to Harvard on each rolling 90-day period, commencing one year after the Company's IPO.

In May 2021, the first success payment measurement occurred and amounts due to Harvard were calculated to be $15.0 million. The Company elected to make the payment in shares of the Company's common stock and issued 174,825 shares of the Company's common stock to settle this liability on June 10, 2021. The Company may owe Harvard success payments of up to an additional $90.0 million. As of September 30, 2024, no success payments were due to Harvard.

The following table summarizes the Company's success payment liability for Harvard (in thousands):

	September 30, 2024	December 31, 2023
Harvard success payment liability	$ 4,000	$ 5,200

The following table summarizes the expense (income) resulting from the change in the fair value of the success payment liability for Harvard (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Change in fair value of Harvard success payment liability	$ 100	$ (2,400)	$ (1,200)	$ (4,700)

Broad license agreement

Under the Broad License Agreement, Broad Institute is entitled to receive success payments, in cash or shares of Company common stock, determined based upon the achievement of specified multiples of the initial weighted average value of the Series A Preferred at specified valuation dates. The success payments range from $5.0 million to a maximum of $105.0 million and have valuation multiples that range from 5 times to 40 times the initial weighted average value of the Series A Preferred. Subsequent to the February 2020 IPO, the amount of success payments is based on the market value of the Company's common stock.

The Company is required to make success payments to Broad Institute during a period of time, or the Broad Success Payment Period, which has been determined to be the earliest of (1) the twelfth anniversary of the Broad License Agreement or (2) the third anniversary of the first date on which a licensed product receives regulatory approval in the United States. During the Broad Success Payment Period, the Company will perform a calculation of any amounts owed to Broad Institute on each rolling 90-day period, commencing one year after the Company's IPO.

In May 2021, the first success payment measurement occurred and amounts due to Broad Institute were calculated to be $15.0 million. The Company elected to make the payment in shares of the Company's common stock and issued 174,825 shares of the Company's common stock to settle this liability on June 10, 2021. The Company may owe Broad Institute success payments of up to an additional $90.0 million. As of September 30, 2024, no success payments were due to Broad Institute.

The following table summarizes the Company's success payment liability for Broad Institute (in thousands):

	September 30, 2024	December 31, 2023
Broad Institute success payment liability	$ 4,400	$ 5,600

The following table summarizes the expense (income) resulting from the change in the fair value of the success payment liability for Broad Institute (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Change in fair value of Broad Institute success payment liability	$ 100	$ (2,300)	$ (1,200)	$ (4,700)

Editas license agreement

In May 2018, the Company entered into a license agreement, or the Editas License Agreement, with Editas Medicine, Inc., or Editas. Pursuant to the Editas License Agreement, Editas granted to the Company licenses and options to acquire licenses to certain intellectual property rights owned or controlled by Editas, for specified uses.

The annual maintenance fees under the Editas License Agreement are recorded as research and development expense. Annual patent costs are expensed as incurred. In addition, the Company is required to make certain development, regulatory and commercial milestone payments to Editas upon the achievement of specified milestones.

8. Collaboration and license agreements

Eli Lilly and Company

In October 2023, the Company entered into a Transfer and Delegation Agreement, or the Lilly Agreement, with Eli Lilly and Company, or Lilly, pursuant to which Lilly acquired certain assets and other rights under the Company's amended collaboration and license agreement with Verve, or the Verve Agreement, including the Company's opt-in rights to co-develop and co-commercialize Verve's base editing programs for cardiovascular disease (see discussion below related to the Verve Agreement). The Company granted Lilly an exclusive sublicense to the Verve technology originally licensed to the Company under the Verve Agreement. Lilly also acquired from the Company the right to receive any future milestone or royalty payments payable by Verve under the Verve Agreement and the rights and obligations to designate representatives and participate on the joint steering committee with Verve. The Company received a $200.0 million nonrefundable upfront payment and is eligible to receive up to $350.0 million in potential future development-stage payments upon the completion of certain clinical, regulatory and alliance events. If Lilly does not opt-in to co-develop and co-commercialize a licensed product, Lilly is obligated to pay the Company a percentage of any royalties received from Verve for sales of such product, subject to certain caps on a licensed product-by-licensed product basis.

For a period of six years from the effective date of the Lilly Agreement, Lilly has the right to request the Company to perform any critical research and development services, if Lilly reasonably determines that the Company is uniquely able to provide such services and other conditions are met, including that no other third parties can provide such services. The parties will negotiate an agreement governing the Company's performance of such activity, if any, and the Company will be compensated for any services at approximately cost plus a margin. The Company has not been requested to perform any services and believes it is remote that the Company would be requested to provide any services.

In connection with the Lilly Agreement, the Company and Lilly entered into a Stock Purchase Agreement providing for the sale and issuance of 2,004,811 shares of the Company's common stock to Lilly for an aggregate purchase price of $50.0 million.

The Company received the consideration under the Stock Purchase Agreement of $50.0 million in October 2023 and the upfront payment of $200.0 million in November 2023.

The Lilly Agreement and Stock Purchase Agreement were negotiated at the same time as a package and have been accounted for as one combined contract. The Company accounts for the component of the arrangement to transfer common stock to Lilly under ASC 505, *Equity*, or ASC 505, and the revenue component under ASC 606, *Revenue from Contracts with Customers*, or ASC 606, as it includes a customer-vendor relationship as defined under ASC 606 and meets the criteria to be considered a contract. The Company first applied the guidance in ASC 505 to measure the fair value of the common stock issued and allocated the remaining consideration to the ASC 606 component of the arrangement.

The overall ASC 606 transaction price as of the inception of the contract was determined to be $216.4 million, which is comprised of the upfront payment of $200.0 million and the residual value of the proceeds received in excess of the fair value of the common stock sold to Lilly of $16.4 million. The fair value of the common stock issued to Lilly was $33.6 million, as determined by management with the assistance of a third-party valuation specialist. There is no variable consideration included in the transaction price at inception. The Company will re-evaluate the transaction price at each reporting period.

The Company concluded that the collaboration rights and licenses to intellectual property have the same pattern and timing of transfer and are transferred as of the effective date of the Lilly Agreement. Lilly's right to request research and development services represents an optional purchase in the agreement that does not constitute a material right. All other items promised to Lilly are immaterial in the context of the agreement.

The Company recognized revenue for the performance obligation at a point-in-time in October 2023 as all requirements related to the performance obligation have been completed. Any consideration received related to Lilly's optional purchase of the Company's research and development services will be accounted for as a separate contract if and when the option is exercised in accordance with ASC 606. During the year ended December 31, 2023, the Company recognized the full $216.4 million of revenue related to the Lilly Agreement. As of September 30, 2024, there was no deferred revenue related to the Lilly Agreement and there has been no revenue recognized subsequent to the up-front payment.

Orbital

In September 2022, the Company entered into a License and Research Collaboration Agreement, or the Orbital Agreement, with Orbital Therapeutics, Inc., or Orbital. Under the terms of the Orbital Agreement, the Company will collaborate with Orbital to advance nonviral delivery and ribonucleic acid, or RNA, technology by providing Orbital with certain proprietary materials, a non-exclusive research license to certain RNA technology and nonviral delivery technology controlled by the Company, and by performing research and development support services as outlined in a research plan. The Company also granted Orbital an exploitation license to certain RNA technology and nonviral delivery technology controlled by the Company. The exploitation license is exclusive in the fields of vaccines and certain protein therapeutics and nonexclusive in all other fields other than gene editing and conditioning. The collaboration is managed on an overall basis by a Joint Steering Committee, or JSC, comprised of an equal number of representatives from the Company and Orbital.

In exchange for the licenses and services provided by the Company under the Orbital Agreement, the Company received a non-exclusive research license to certain RNA technology and nonviral delivery technology controlled by Orbital, and research and development support services as outlined in a research plan. Orbital also granted the Company an exploitation license to certain RNA technology and nonviral delivery technology controlled by Orbital. The exploitation license is exclusive in the fields of gene editing and conditioning and nonexclusive in all other fields other than vaccines and certain protein therapeutics. The Company also received 75 million shares of Orbital's common stock at closing. The Company accounts for its investment in Orbital under the equity method of accounting.

The research plan has a term of three years and can be extended for unspecified periods upon mutual agreement between the Company and Orbital. The exploitation licenses are exclusive for an initial research term of three years, which may be extended for up to two successive one-year periods by mutual agreement between the Company and Orbital. Either party may terminate the licenses granted to it under the Orbital Agreement for convenience on a product-by-product basis at any time by providing 90 days' prior written notice.

The Company accounts for the Orbital Agreement under ASC 606, as it includes a customer-vendor relationship as defined under ASC 606 and meets the criteria to be considered a contract.

The overall transaction price as of the inception of the contract was determined to be $25.5 million, which represents the fair value of the Company's equity interest in Orbital's common stock at inception. There is no variable consideration included in the transaction price at inception.

The Company concluded that the research and exploitation licenses are not distinct from the other promises in the Orbital Agreement, and as such the Company has determined that the licenses combined with the research and development services, know-how transfers, committee participation and materials transfer represent a combined performance obligation. The Company recognizes revenue associated with the Orbital performance obligation over time as it is satisfied during the term of the Orbital Agreement, which is three years. During each of the three and nine months ended September 30, 2024 and 2023, the Company recognized $2.1 and $6.4 million of revenue, respectively, related to the Orbital agreement. As of September 30, 2024, there was $8.5 million of current deferred revenue related to the Orbital Agreement.

Pfizer

In December 2021, the Company entered into a research collaboration agreement, or the Pfizer Agreement, with Pfizer Inc., or Pfizer, focused on the use of certain of the Company's base editing technology to develop *in vivo* therapies for rare genetic diseases of the liver, muscle, and central nervous system. Under the terms of the Pfizer Agreement, the Company will conduct all research activities through development candidate selection for three base editing programs that target specific genes corresponding to specific diseases that are the subject of such programs. Pfizer will have exclusive rights to license each of the three programs at no additional cost, each an Opt-In Right, and will assume responsibility for subsequent development and commercialization. At the end of the Phase 1/2 clinical trials, the Company may elect to enter into a global co-development and co-commercialization agreement with Pfizer with respect to one program licensed under the collaboration for an option exercise fee equal to a percentage of the applicable development costs incurred by Pfizer, or the Participation Election. In the event the Company elects to exercise its Participation Election, upon the payment of its option exercise fee, Pfizer and the Company would share net profits as well as development and commercialization costs in a 65%/35% (Pfizer/Company) split for such program. The research collaboration is managed on an overall basis by a Joint Research Committee, or JRC, formed by an equal number of representatives from the Company and Pfizer.

At the inception of the Pfizer Agreement, the Company was entitled to receive a nonrefundable upfront payment of $300.0 million in consideration for the rights granted to Pfizer under the collaboration. Should Pfizer exercise its Opt-In Right for any of the three programs, the Company would be eligible to receive development, regulatory, and commercial milestones of up to $350.0 million per program, for potential total consideration of up to $1.35 billion, plus royalty payments on global net sales for each licensed program, if any. If Pfizer does not exercise its Opt-In Right for a program, the Company's rights in such program revert to the Company and the Company will be required to pay Pfizer earn-out payments equal to a low single digit percentage of net sales earned on such program for a ten-year period, if any.

During the collaboration term, Pfizer has a one-time option to substitute a disease that is the subject of a specific program with one pre-defined substitute disease. The collaboration has an initial term of four years and may be extended for an additional year on a program-by-program basis. Pfizer may terminate the Pfizer Agreement for convenience on any or all of the programs by providing 90 days' prior written notice.

The Company accounts for the Pfizer Agreement under ASC 606, as it includes a customer-vendor relationship as defined under ASC 606 and meets the criteria to be considered a contract.

The overall transaction price as of the inception of the contract was determined to be $300.0 million, which is comprised entirely of the nonrefundable upfront payment. There is no variable consideration included in the transaction price at inception as the future milestone payments are fully constrained and the Company is not required to estimate variable consideration for the royalty payments at contract inception. The Company re-evaluates the transaction price in each reporting period.

The Company has concluded that the licenses to its base editing technology, including the exclusive development and commercialization rights, are not capable of being distinct from the other performance obligations, and as such the Company has determined that the licenses combined with the other research and development services represent performance obligations and no up-front revenue was recognized for the licenses.

The selling price of each performance obligation was determined based on the Company's estimated standalone selling price, or the ESSP. The Company developed the ESSP for all of the performance obligations included in the Pfizer Agreement by determining the total estimated costs to fulfill each performance obligation identified 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 allocated the stand-alone selling price to the performance obligations based on the relative standalone selling price method.

The Company recognizes revenue for each performance obligation as it is satisfied during the term of the agreement using an input method. The Company allocated the transaction price of $300.0 million to each of the three performance obligations, which includes each of the three base editing programs combined with the research and development services, licenses, and exclusive development and commercialization rights. Revenue is recognized using an input method based on the actual costs incurred as a percentage of total estimated costs towards satisfying the performance obligation as this method provides the most faithful depiction of the entity's performance in transferring control of the goods and services promised to Pfizer and represents the Company's best estimate of the period of the obligation. During the three and nine months ended September 30, 2024, the Company recognized $2.7 million and $8.4 million of revenue related to the Pfizer Agreement, respectively. The Company recognized $10.0 million and $36.4 million of revenue related to the Pfizer Agreement during the three and nine months ended September 30, 2023, respectively. As of September 30, 2024, there was $66.9 million and $42.2 million of current and long-term deferred revenue, respectively, related to the Pfizer Agreement.

Apellis Pharmaceuticals

In June 2021, the Company entered into a research collaboration agreement, or the Apellis Agreement, with Apellis Pharmaceuticals, Inc., or Apellis, focused on the use of certain of the Company's base editing technology to discover new treatments for complement system-driven diseases. Under the terms of the Apellis Agreement, the Company will conduct preclinical research on six base editing programs that target specific genes within the complement system in various organs, including the eye, liver, and brain. Apellis has an exclusive option to license any or all of the six programs, or in each case, an Opt-In Right, and will assume responsibility for subsequent development. The Company may elect to enter into a 50-50 U.S. co-development and co-commercialization agreement with Apellis with respect to one program instead of a license. The collaboration is managed on an overall basis by an alliance steering committee formed by an equal number of representatives from the Company and Apellis.

As part of the collaboration, the Company received a total of $75.0 million in upfront and near-term milestones from Apellis, which was comprised of $50.0 million received upon signing and an additional $25.0 million payment on June 30, 2022, the one-year anniversary of the effective date of the Apellis Agreement, or the First Anniversary Payment. Following any exercise of an Opt-In Right for any of the six programs, the Company will be eligible to receive development, regulatory, and sales milestones from Apellis, as well as royalty payments on sales. The collaboration has an initial term of five years and may be extended up to two years on a per year and program-by-program basis. During the collaboration term, Apellis may, subject to certain limitations, substitute a specific complement gene and/or organ for any of the initial base editing programs. Apellis may terminate the Apellis Agreement for convenience on any or all of the programs by providing prior written notice.

The Company accounts for the Apellis Agreement under ASC 606 as it includes a customer-vendor relationship as defined under ASC 606 and meets the criteria to be considered a contract.

The overall transaction price as of the inception of the contract was determined to be $75.0 million, which is composed of the upfront payment of $50.0 million and the First Anniversary Payment of $25.0 million. The Company re-evaluates the transaction price in each reporting period.

The Company concluded that each of the six base editing programs combined with the research and development service, licenses, substitution rights and governance participation were material promises that were both capable of being distinct and were distinct within the context of the Apellis Agreement and represented separate performance obligations. The Company further concluded that the Opt-In Rights and option to extend the collaboration term did not grant Apellis a material right. The Company determined that the term of the contract is five years, as this is the period during which both parties have enforceable rights.

The selling price of each performance obligation was determined based on the Company's ESSP. The Company developed the ESSP for all of the performance obligations included in the Apellis Agreement by determining the total estimated costs to fulfill each performance obligation identified 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 allocated the stand-alone selling price to the performance obligations based on the relative standalone selling price method.

The Company recognizes revenue for each performance obligation as it is satisfied over the five-year term using an input method. The Company allocated the transaction price of $75.0 million to each of the six performance obligations, which includes each of the six base editing programs combined with the research and development service, licenses, substitution rights and governance participation, and is being recognized using an input method based on the actual costs incurred as a percentage of total estimated costs towards satisfying the performance obligation as this method provides the most faithful depiction of the entity's performance in transferring control of the goods and services promised to Apellis and represents the Company's best estimate of the period of the obligation. For the three and nine months ended September 30, 2024, the Company recognized $8.5 million and $16.7 million of revenue related to the Apellis Agreement, respectively. For the three and nine months ended September 30, 2023, the Company recognized $5.0 million and $17.3 million of revenue related to the Apellis Agreement, respectively. As of September 30, 2024, there was $13.9 million and $15.6 million of current and long-term deferred revenue, respectively, related to the Apellis Agreement.

Verve

In April 2019, the Company entered into the Verve Agreement to investigate gene editing strategies to modify genes associated with an increased risk of coronary diseases and in July 2022, the Company and Verve amended the Verve Agreement. Under the terms of the Verve Agreement, as amended, the Company granted Verve an exclusive license to certain base editor technology and improvements and Verve granted the Company a non-exclusive license under certain know-how and patents controlled by Verve, an interest in joint collaboration technology and a non-exclusive license under certain delivery technology. The Company retained the option, after the dosing of the final patient in a Phase 1 clinical trial of a licensed product, to participate in future development and commercialization, and share 35% of worldwide profits and losses, for any licensed product directed against one of the Verve program targets, and share 50% of U.S. profits and losses for any licensed product directed against the other two targets.

In October 2023, the Company entered into the Lilly Agreement, pursuant to which Lilly acquired certain assets and other rights under the Verve Agreement, including the Company's opt-in rights to co-develop and co-commercialize Verve's base editing programs for cardiovascular disease, which consist of programs targeting PCSK9, ANGPTL3 and an undisclosed liver-mediated, cardiovascular target. In addition, Lilly acquired the right to receive any future milestone or royalty payments payable to the Company under the Verve Agreement.

During the year ended December 31, 2023, the Company recognized all remaining license revenue related to the Verve Agreement and has no related deferred revenue as of September 30, 2024.

9. Common stock

In April 2021, the Company entered into the Sales Agreement with Jefferies, pursuant to which the Company was entitled to offer and sell, from time to time at prevailing market prices, shares of the Company's common stock having aggregate gross proceeds of up to $300.0 million. The Company agreed to pay Jefferies a commission of up to 3.0% of the aggregate gross sale proceeds of any shares sold by Jefferies under the Sales Agreement. Between April 2021 and July 2021, the Company sold 2,908,009 shares of its common stock under the Sales Agreement at an average price of $103.16 per share for aggregate gross proceeds of $300.0 million, before deducting commissions and offering expenses payable by the Company.

In July 2021 and May 2023, the Company and Jefferies entered into amendments to the Sales Agreement to provide for increases in the aggregate offering amount under the Sales Agreement, such that as of May 10, 2023, the Company may offer and sell shares of common stock having an aggregate offering price of up to an additional $800.0 million. As of September 30, 2024, the Company has sold 10,860,992 additional shares of its common stock under the amended Sales Agreement at an average price of $51.93 per share for aggregate gross proceeds of $564.0 million, before deducting commissions and offering expenses payable by the Company.

10. Stock option and grant plan

2019 equity incentive plan

As of September 30, 2024, the Company had 14,850,473 shares reserved including 1,592,485 shares available for future issuance, pursuant to the Beam Therapeutics Inc. 2019 Equity Incentive Plan.

Stock-based compensation expense recorded as research and development and general and administrative expenses in the condensed consolidated statements of operations and other comprehensive loss is as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Research and development	$ 18,371	$ 15,230	$ 54,819	$ 44,973
General and administrative	11,188	10,605	35,625	31,057
Total stock-based compensation expense	$ 29,559	$ 25,835	$ 90,444	$ 76,030

Stock options

The following table provides a summary of stock option activity under the Company's equity award plans:

	Number of options	Weighted average exercise price
Outstanding at December 31, 2023	8,276,033	$ 42.59
Granted	2,436,259	24.74
Exercised	(215,842)	9.99
Forfeited	(451,828)	47.76
Outstanding at September 30, 2024	10,044,622	38.73
Exercisable as of September 30, 2024	6,139,139	$ 39.59

The weighted-average grant date fair value per share of stock options granted in the nine months ended September 30, 2024 was $17.05. As of September 30, 2024, there was $97.6 million of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted-average remaining vesting period of approximately 2.5 years.

Restricted stock

The Company issues shares of restricted common stock, including both restricted stock units and restricted stock awards. Restricted common stock issued generally vests over a period of two to four years.

The following table summarizes the Company's restricted stock activity:

	Shares	Weighted-average grant date fair value
Unvested as of December 31, 2023	2,927,152	$ 40.89
Issued	1,132,288	31.61
Vested	(575,358)	53.27
Forfeited	(270,716)	38.74
Unvested as of September 30, 2024	3,213,366	$ 35.59

At September 30, 2024, there was approximately $81.5 million of unrecognized stock-based compensation expense related to restricted stock that is expected to vest. These costs are expected to be recognized over a weighted-average remaining vesting period of approximately 2.1 years.

2019 employee stock purchase plan

The Company issued 135,187 and 130,403 shares under the Beam Therapeutics Inc. 2019 Employee Stock Purchase Plan, or ESPP, during the nine months ended September 30, 2024 and 2023, respectively. As of September 30, 2024, the Company had 2,928,706 shares available for issuance under the ESPP.

Stock-based compensation recognized under the ESPP for the three and nine months ended September 30, 2024 was $0.3 million and $1.0 million, respectively. The Company recognized stock-based compensation under the ESPP of $0.3 million and $1.1 million for the three and nine months ended September 30, 2023, respectively.

11. Net loss per share

For periods in which the Company reports a net loss, potentially dilutive securities have been excluded from the computation of diluted net loss per share as their effects would be anti-dilutive. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at period end, from the computation of diluted net loss per share because including them would have had an anti-dilutive effect:

	As of September 30,	
	2024	2023
Unvested restricted stock	3,213,366	2,177,818
Outstanding options to purchase common stock	10,044,622	8,727,251
Total	13,257,988	10,905,069

The following table summarizes the computation of basic and diluted net loss per share of the Company (in thousands, except share and per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Numerator:				
Net loss	$ (96,668)	$ (96,088)	$ (286,388)	$ (275,324)
Denominator:				
Weighted average common shares outstanding, basic and diluted	82,410,095	79,024,647	82,141,383	75,902,612
Net loss per common share, basic and diluted	$ (1.17)	$ (1.22)	$ (3.49)	$ (3.63)

12. Income taxes

Through September 30, 2024, the Company recorded a full valuation allowance on federal and state deferred tax assets since there is insufficient evidence that the deferred tax assets are more likely than not realizable. The Company recorded a current tax provision of less than $0.1 million in the nine months ended September 30, 2024 and did not record any tax provision or benefit during the nine months ended September 30, 2023.

13. Related party transactions

Orbital

The Company has significant influence over, but does not control, Orbital through its noncontrolling representation on Orbital's board of directors and the Company's equity interest in Orbital. The Company and Orbital are also parties to a collaboration and license agreement and have multiple common board members.

Founders

The Company made payments of $0.3 million and $0.4 million to its founding shareholders for scientific consulting and other expenses during the nine months ended September 30, 2024 and 2023, respectively.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and the related notes to those statements included elsewhere in this Quarterly Report on Form 10-Q. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve important risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed in "Risk Factors" in Part II, Item 1A. and elsewhere in this Quarterly Report on Form 10-Q, and in the "Risk Factors Summary" and Part I "Item 1A. Risk Factors" section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, or the 2023 Form 10-K. Some of the numbers included herein have been rounded for the convenience of presentation.

Overview

We are a biotechnology company committed to establishing the leading, fully integrated platform for precision genetic medicines. Our vision is to provide life-long cures to patients suffering from serious diseases. To achieve this vision, we have assembled a platform that includes a suite of gene editing and delivery technologies as well as internal manufacturing capabilities.

Our suite of gene editing technologies is anchored by our proprietary base editing technology, which potentially enables a differentiated class of precision genetic medicines that target a single base in the genome without making a double-stranded break in the DNA. This approach uses a chemical reaction designed to create precise, predictable and efficient genetic outcomes at the targeted sequence. Our proprietary base editors have two principal components: (i) a clustered regularly interspaced short palindromic repeats, or CRISPR, protein, bound to a guide RNA, that leverages the established DNA-targeting ability of CRISPR, but is modified to not cause a double-stranded break, and (ii) a base editing enzyme, such as a deaminase, which carries out the desired chemical modification of the target DNA base. We believe this design contributes to a more precise and efficient edit compared to traditional gene editing methods, with the potential to dramatically increase the impact of gene editing. We are also pursuing a suite of both delivery modalities, including both *ex vivo* and *in vivo* approaches, depending on tissue type. The elegance of the base editing approach, combined with a tissue specific delivery modality, provides the basis for a targeted, efficient, precise, and highly versatile gene editing system that is designed to be capable of gene correction, gene silencing or gene activation, gene modification, and/or multiplex editing of several genes simultaneously.

Our goal is to advance a broad, diversified portfolio of base editing programs against distinct, genetically validated editing targets, as well as an innovative, platform business model that will expand the reach of our programs to more patients. Overall, we are seeking to build the leading integrated platform for precision genetic medicine, which may have broad therapeutic applicability and the potential to transform the field of precision genetic medicines.

Hematology

We are advancing hematology base editing programs in which hematopoietic stem cells, or HSCs, are collected from a patient, edited using electroporation, and then infused back into the patient following a myeloablative conditioning regimen, such as treatment with busulfan, the standard of care in HSC transplantation, or HSCT, today. Once reinfused, the HSCs begin repopulating a portion of the bone marrow in a process known as engraftment. The engrafted, edited HSCs give rise to progenitor cell types with the corrected gene sequences. We are deploying this *ex vivo* approach in our BEAM-101 and ESCAPE base editing programs.

We are pursuing a long-term, staged development strategy for our base editing approach to treat hematological diseases that consists of advancing our lead *ex vivo* program, BEAM-101, in Wave 1, improving patient conditioning regimens in Wave 2, and enabling *in vivo* base editing with delivery directly into HSCs of patients via lipid nanoparticles, or LNPs, in Wave 3. We believe this suite of technologies – base editing, improved conditioning and *in vivo* delivery for editing HSCs – can maximize the potential applicability of our sickle cell disease programs to patients as well as create a platform for the treatment of many other severe genetic blood disorders.

Wave 1: Ex Vivo Base Editing via Autologous Transplant with BEAM-101

We are using base editing to pursue the development of BEAM-101 for the treatment of sickle cell disease. BEAM-101 is a patient-specific, autologous HSC investigational therapy designed to offer a potentially best-in-class profile, incorporating base edits that are intended to mimic single nucleotide polymorphisms seen in individuals with hereditary persistence of fetal hemoglobin, or HbF. BEAM-101 aims to alleviate the effects of sickle cell disease by increasing HbF, which is expected to increase functional hemoglobin production and, in the case of sickle cell disease, inhibit hemoglobin S, or HbS, polymerization.

We are conducting a Phase 1/2 clinical trial designed to assess the safety and efficacy of BEAM-101 for the treatment of sickle cell disease, which we refer to as our BEACON trial. The BEACON trial initially includes up to 45 patients ages 18 to 35 with severe sickle cell disease who have received prior treatment with at least one disease-modifying agent with inadequate response or intolerance. Following mobilization, conditioning and treatment with BEAM-101, patients are assessed for safety and tolerability, with safety endpoints including neutrophil and platelet engraftment. Patients are also assessed for efficacy, with efficacy endpoints including the change from baseline in severe vaso-occlusive events, transfusion requirements, HbF levels, and quality of life assessments. Thirty-five patients have cleared screening and enrolled in the BEACON trial. Of these patients, eight have been dosed with BEAM-101, with the other enrolled patients in pre-transplant stages, including cell collection and drug product manufacturing.

On November 5, 2024, we announced the publication of an abstract for an upcoming oral presentation at the American Society of Hematology Annual Meeting and Exposition taking place December 7-10, 2024 in San Diego, CA, or ASH. The abstract contained initial, preliminary data as of July 2, 2024 from the BEACON trial, including adverse event, or AE, data from six patients, as well as engraftment and efficacy data from four patients with at least one month of follow-up post-dosing. The abstract data included the following:

- The initial safety profile of BEAM-101 was consistent with busulfan conditioning and autologous HSCT.
- There were no ≥Grade 3 AEs or serious AEs determined to be related to treatment with BEAM-101.
- One patient died four months after BEAM-101 infusion due to respiratory failure that was determined by the investigator to be likely related to busulfan conditioning and deemed unrelated to BEAM-101.
- Patients achieved neutrophil and platelet engraftment at a median of 17 (15–19) and 20 (11–34) days, respectively.
- All four patients with at least one month of follow-up experienced rapid and robust HbF induction by month one (>60%) and corresponding HbS reduction (≤36%) in non-transfused blood, which was sustained over time.
- No vaso-occlusive crises (VOCs) were reported by investigators post-treatment.

We expect to present additional data on a total of seven patients from the BEACON trial at ASH.

Wave 2: Non-genotoxic Conditioning

In parallel with Wave 1 development, we also aim to improve the transplant conditioning regimen for patients undergoing HSCT, thereby reducing toxicity challenges associated with HSCT. Conditioning is a critical component necessary to prepare a patient's body to receive the *ex vivo* edited cells that must engraft in the patient's bone marrow in order to be effective. However, today's conditioning regimens rely on nonspecific chemotherapy or radiation, which are associated with significant toxicities. As a potential alternative to genotoxic conditioning regimens in HSCT, we are advancing our ESCAPE program. ESCAPE aims to avoid toxicity challenges associated with currently available conditioning regimens for patients with sickle cell disease and beta-thalassemia ahead of autologous HSCT, by combining antibody-based conditioning with multiplex gene edited HSCs. ESCAPE may also have applications in other diseases of the blood and immune system where HSCT could deliver potential benefits but has been limited by toxicities associated with current standard of care conditioning regimens.

We have nominated a development candidate for our ESCAPE technology comprised of two investigational drug products: BEAM-103, an anti-CD117 monoclonal antibody, and BEAM-104, a cell therapy that includes the same therapeutic edit as BEAM-101 (editing the HBG1/2 genes to elevate fetal hemoglobin), plus an additional edit to CD117 designed to block binding of BEAM-103, allowing the edited cells to evade suppression by the antibody. We intend to advance BEAM-103 and BEAM-104 for development in sickle cell disease and beta-thalassemia, potentially building on the same regulatory, manufacturing, clinical and commercial foundations being established with BEAM-101. We anticipate initiating Phase 1-enabling preclinical studies for ESCAPE by the end of 2024.

On November 5, 2024, we announced the publication of an abstract for an upcoming oral presentation at ASH containing data from a preclinical study of our ESCAPE approach in non-human primates, or NHPs. Initial data from two NHPs undergoing autologous HSCT after conditioning with a CD117 antibody showed robust long-term engraftment and high levels of HbF expression for *ex vivo* edited CD34 cells, establishing preclinical proof of principle for the ESCAPE approach. We expect to provide additional data from the study at ASH.

Wave 3: In Vivo Base Editing via HSC-targeted LNPs

We are also exploring the potential for *in vivo* base editing programs for sickle cell disease, in which base editors would be delivered to the patient through an infusion of LNPs targeted to HSCs, eliminating the need for transplantation altogether. This approach could provide a more accessible option for patients, particularly in regions where *ex vivo* treatment is challenging. In preclinical studies, we achieved *in vivo* validation of our most potent HSC-directed LNP, demonstrating:

- durable, dose-dependent mRNA transfection in HSCs, resulting in fluorescent reporter expression in more than 40% of cells, maintained out to 16 weeks post-delivery;
- efficient transfection of human CD34+ cells in vitro; and
- efficient transfection of nearly 20% of CD34+ HSCs in humanized mice and non-human primates at a dose of 1.0 mg/kg.

Genetic Diseases

BEAM-302: In Vivo LNP liver-targeting for AATD

BEAM-302 is a liver-targeting LNP formulation of base editing reagents designed to offer a one-time treatment to correct the E342K point mutation (PiZZ genotype) predominantly responsible for the severe form of alpha-1 antitrypsin deficiency, or AATD. AATD is an inherited genetic disorder that can cause early onset emphysema and liver disease. The most severe form of AATD arises when a patient has a point mutation in both copies of the SERPINA1 gene at amino acid 342 position (E342K, also known as the PiZ mutation or the “Z” allele). This point mutation causes Alpha-1 antitrypsin, or AAT, to misfold, accumulating inside liver cells rather than being secreted, resulting in very low levels (10%-15%) of circulating AAT. In addition to resulting in lower levels, the PiZ AAT protein variant is also less enzymatically effective compared to wildtype AAT protein. As a consequence, the lung is left unprotected from neutrophil elastase, resulting in progressive, destructive changes in the lung, such as emphysema, which can result in the need for lung transplants. The mutant AAT protein also accumulates in the liver, causing liver inflammation and cirrhosis, which can ultimately cause liver failure or cancer requiring patients to undergo a liver transplant. It is estimated that approximately 100,000 individuals in the United States have two copies of the Z allele. There are currently no curative treatments for patients with AATD.

We are conducting a Phase 1/2 open label, dose escalation study of BEAM-302 at trial sites located in the United Kingdom. The trial will evaluate the safety, pharmacodynamics, pharmacokinetics and efficacy of BEAM-302 initially in patients with AATD-associated lung disease. The study design includes a dose exploration portion followed by a dose expansion portion to identify the optimal dose to take forward in a pivotal study. We have completed dosing of the first cohort of patients in the dose exploration portion of the trial. We continue to progress enrollment and global site activation and expect to report initial clinical data from multiple cohorts in the trial in 2025.

BEAM-301: In Vivo LNP liver-targeting for GSD1a

BEAM-301 is a liver-targeting LNP formulation of base editing reagents designed to correct the R83C mutation, the most prevalent disease-causing mutation for, and the mutation which results in the most severe form of, glycogen storage disease 1a, or GSD1a. GSD1a is an autosomal recessive disorder caused by mutations in the G6PC gene that disrupts a key enzyme, G6Pase, critical for maintaining glucose homeostasis. Inhibition of G6Pase activity results in low fasting blood glucose levels that can result in seizures and be fatal. Patients with this mutation typically require ongoing corn starch administration, without which they may enter into hypoglycemic shock within one to three hours.

Our approach to treating patients with GSD1a is to apply base editing via LNP delivery to repair the two most prevalent mutations that cause the disease, R83C and Q347X. It is estimated that these two point mutations account for 300 and 500 patients, respectively, in the United States.

In October 2023, we presented new preclinical data demonstrating the ability of BEAM-301 to directly correct the R83C mutation. These data showed that a single dose of BEAM-301 restored clinically meaningful endpoints in *in vivo* rodent disease models out to at least one year. In July 2024, we received clearance from the U.S. Food and Drug Administration, or the FDA, for our IND for BEAM-301. We are continuing site activation activities for a Phase 1/2 clinical trial for BEAM-301 in patients with GSD1a with patient dosing expected to commence in early 2025.

Immunology/Oncology

BEAM-201: Universal CD7-targeting CAR-T cells

BEAM-201 is a development candidate comprised of T cells derived from healthy donors that are simultaneously edited at TRAC, CD7, CD52 and PDCD1 and then transduced with a lentivirus encoding for an anti-CD7 chimeric antigen receptor, or CAR, that is designed to create allogeneic CD7 targeting CAR-T cells, resistant to both fratricide and immunosuppression. We have dosed multiple patients in a first-in-human Phase 1/2 clinical trial designed to evaluate the safety and efficacy of BEAM-201 in patients with relapsed/refractory T-cell acute lymphoblastic leukemia/T-cell lymphoblastic lymphoma. Key safety endpoints for the trial include

treatment-emergent and treatment-related adverse events, and key efficacy endpoints include proportion of patients with complete or partial responses, proportion eligible for HSC transplant and proportion achieving minimal residual disease negative status.

On November 5, 2024, we announced the publication of an abstract for an upcoming poster presentation at ASH containing initial, preliminary data from three patients in the BEAM-201 clinical trial. The data showed a safety profile consistent with underlying disease, lymphodepletion and AEs associated with CAR-T therapy. A complete response (CRi/CR) was demonstrated in two of three patients at CAR-T cell doses greater than 200 million. Both patients achieving a CRi/CR were deemed suitable for stem cell transplant following therapy. We expect to present additional data from the BEAM-201 clinical trial at ASH.

Manufacturing

Due to the critical importance of high-quality manufacturing and control of production timing and know-how, we have established a 100,000 square foot manufacturing facility in Research Triangle Park, North Carolina intended to support a broad range of clinical programs. The facility, which initiated current Good Manufacturing Practice, or cGMP operations in late 2023, is designed to support manufacturing for our *ex vivo* cell therapy programs in hematology and *in vivo* non-viral delivery programs for liver and liver-mediated diseases, with the capability to scale-up to support potential commercial supply. For our initial clinical trials, we expect to rely primarily on our internal manufacturing capabilities, along with CMOs with relevant manufacturing experience in genetic medicines. We believe this investment will maximize the value of our portfolio and capabilities, the probability of technical success of our programs, and the speed at which we can provide potentially life-long cures to patients.

Collaborations

We believe our collection of base editing, gene editing and delivery technologies has significant potential across a broad array of genetic diseases. To fully realize this potential, we have established and plan to continue to seek out innovative collaborations, licenses, and strategic alliances with pioneering companies and with leading academic and research institutions. Additionally, we have and intend to continue to pursue relationships that potentially allow us to accelerate our preclinical research and development efforts. We believe these relationships will allow us to aggressively pursue our vision of maximizing the potential of base editing to provide life-long cures for patients suffering from serious diseases.

Pfizer

In December 2021, we entered into a four-year research collaboration agreement with Pfizer Inc., or Pfizer, focused on *in vivo* base editing programs for three targets for rare genetic diseases of the liver, muscle and central nervous system. Under the terms of the agreement, we will conduct all research activities through development candidate selection for three pre-specified, undisclosed targets, which are not included in our existing programs. Pfizer may opt in to exclusive, worldwide licenses to each development candidate, after which it will be responsible for all development activities, as well as potential regulatory approvals and commercialization, for each such development candidate. We have a right to opt in, at the end of Phase 1/2 clinical trials, upon the payment of an option exercise fee, to a global co-development and co-commercialization agreement with respect to one program licensed under the collaboration pursuant to which we and Pfizer would share net profits as well as development and commercialization costs in a 35%/65% ratio (Beam/Pfizer).

Apellis Pharmaceuticals

In June 2021, we entered into a research collaboration agreement, or the Apellis Agreement, with Apellis Pharmaceuticals, Inc., or Apellis, focused on the use of our base editing technology to discover new treatments for complement system-driven diseases. Under the terms of the Apellis Agreement, we will conduct preclinical research on six base editing programs that target specific genes within the complement system in various organs, including the eye, liver, and brain. Apellis has an exclusive option to license any or all of the six programs and will assume responsibility for subsequent development. We may elect to enter into a 50-50 U.S. co-development and co-commercialization agreement with Apellis with respect to one program licensed under the collaboration.

Verve Therapeutics and Eli Lilly and Company

In April 2019, we entered into a collaboration and license agreement, or the Verve Agreement, with Verve Therapeutics, Inc., or Verve, a company focused on gene editing for cardiovascular disease treatments, and in July 2022, we and Verve amended the Verve Agreement. Under the terms of the Verve Agreement, as amended, we granted Verve exclusive worldwide licenses under certain of our editing technologies for human therapeutic applications against a total of three liver-mediated, cardiovascular disease targets, including use of our base editing technology for each of these targets and use of certain of our gene editing technology for two of such targets. In exchange, we received shares of Verve common stock. In October 2023, we entered into a transfer and delegation agreement, or the Lilly Agreement, with Eli Lilly and Company, or Lilly, pursuant to which Lilly acquired certain assets and other rights under the Verve Agreement, including our opt-in rights to co-develop and co-commercialize each of Verve's base editing programs for cardiovascular disease, which consist of programs targeting PCSK9, ANGPTL3 and an undisclosed liver-mediated, cardiovascular target. In addition, Lilly acquired the right to receive any future milestone or royalty payments payable to us under the Verve Agreement. Under the terms of the Lilly Agreement, we received a $200.0 million payment and are eligible to receive up to $350.0 million in potential future development-stage payments upon the completion of certain clinical, regulatory and alliance events.

In October 2023, we also entered into a Stock Purchase Agreement, or the Purchase Agreement, with Lilly providing for the sale and issuance of 2,004,811 shares, of our common stock to Lilly at a price of $24.94 per share, which was equal to a 15% premium to the volume-weighted average share price of our common stock over the 30 trading days prior to the date of the Purchase Agreement, for an aggregate purchase price of approximately $50 million. The Purchase Agreement contains customary representations, warranties and covenants of each party.

Sana Biotechnology

In October 2021, we entered into an option and license agreement, or the Sana Agreement, with Sana Biotechnology, Inc., or Sana, pursuant to which we granted Sana non-exclusive research and development and commercial rights to our CRISPR Cas12b technology to perform nuclease editing for certain *ex vivo* engineered cell therapy programs. Under the terms of the Sana Agreement, licensed products include certain specified allogeneic T cell and stem cell-derived products directed at specified genetic targets, with certain limited rights for Sana to add and substitute such products and targets. The Sana Agreement excludes the grant of any Beam-controlled rights to perform base editing. In January 2023, Sana announced that the FDA cleared its IND application to initiate a first-in-human study of SC291, its CD19-targeted allogeneic CAR-T cell therapy, in patients with various B-cell malignancies. In November 2023, Sana announced that the FDA cleared its IND application to initiate a first-in-human trial of SC291, in patients with various B-cell mediated autoimmune diseases. In January 2024, Sana announced that the FDA cleared its IND application to initiate a first-in-human trial of SC262, its CD22-directed allogeneic CAR-T cell therapy, in patients with relapsed or refractory B-cell malignancies. In connection with each of the foregoing events, Sana made immaterial milestone payments to us under the Sana Agreement.

Orbital Therapeutics

In September 2022, we entered into a license and research collaboration agreement, or the Orbital Agreement, with Orbital, pursuant to which each of us granted the other licenses to certain technology controlled during the three years after entry into the Orbital Agreement that are necessary or reasonably useful for the non-viral delivery or the design or manufacture of RNA for the prevention, treatment or diagnosis of human disease. Our license to Orbital is for all fields other than our exclusive field and also excludes the targets and substantially all of the indications that are the subject of our existing programs. Our exclusive field consists of all products and biologics that function in the process of gene editing or conditioning for use in cell transplantation, or that act in combination with any such products or biologics. Orbital's license to us is for all fields other than Orbital's exclusive field. Orbital's exclusive field consists of products and biologics that function as vaccines and also of therapeutic proteins, other than therapeutic proteins (i) that use gene editing, (ii) for use in conditioning, (iii) for use in regenerative medicine, (iv) for use as a CAR immune therapy, including CAR-T, CAR-NK and CAR-macrophage compositions, (v) for use as a T-cell receptor therapy or (vi) that modulate certain immune responses. The licenses are exclusive in each party's exclusive field for three years and non-exclusive in those fields thereafter. We and Orbital agreed that for a period of three years after entry into the Orbital Agreement, subject to limited exceptions, we would not research, develop and commercialize, or grant licenses to research, develop and commercialize, products or biologics within the other party's exclusive field.

Critical accounting policies and significant judgments and estimates

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

Our critical accounting policies are those policies which require the most significant judgments and estimates in the preparation of our condensed consolidated financial statements. We have determined that our most critical accounting policies are those relating to stock-based compensation, variable interest entities, fair value measurements, and leases. There have been no significant changes to our existing critical accounting policies and significant judgments and estimates discussed in the 2023 Form 10-K.

Financial operations overview

General

We were founded in January 2017 and began operations in July 2017. Since our inception, we have devoted substantially all of our resources to building our base editing platform and advancing development of our portfolio of programs, establishing and protecting our intellectual property, conducting research and development activities, organizing and staffing our company, conducting clinical trials, maintaining and expanding internal manufacturing capabilities, business planning, raising capital and providing general and administrative support for these operations. To date, we have financed our operations primarily through the sales of our redeemable

convertible preferred stock, proceeds from offerings of our common stock and payments received under collaboration and license agreements.

We are an early-stage company, and the majority of our programs are at a preclinical or clinical stage of development. To date, we have not generated any revenue from product sales and do not expect to generate revenue from the sale of products for the foreseeable future. Our revenue to date has been primarily derived from license and collaboration agreements with partners. Since inception we have incurred significant operating losses. Our net losses for the nine months ended September 30, 2024 and 2023 were $286.4 million and $275.3 million, respectively. As of September 30, 2024, we had an accumulated deficit of $1.5 billion. We expect to continue to incur significant expenses and increasing operating losses in connection with ongoing development activities related to our internal programs and collaborations as we continue our preclinical and clinical development of product candidates; advance additional product candidates toward clinical development; operate our cGMP facility in North Carolina; further develop our base editing platform; continue to make investments in delivery technology for our base editors; conduct research activities as we seek to discover and develop additional product candidates; maintain, expand, enforce, defend and protect our intellectual property portfolio; and continue to hire research and development, clinical, technical operations and commercial personnel. In addition, we expect to continue to incur the costs associated with operating as a public company.

As a result of these anticipated expenditures, we will need to raise additional capital to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances, and licensing arrangements. We may be unable to raise additional funds or enter into such other agreements when needed on favorable terms or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We can give no assurance that we will be able to secure such additional sources of capital to support our operations, or, if such capital is available to us, that such additional capital will be sufficient to meet our needs for the short or long term.

Revenue Recognition

In April 2019, we entered into a collaboration and license agreement, or the Verve Agreement, with Verve Therapeutics, Inc., or Verve, a company focused on gene editing for cardiovascular disease treatments. In June 2021, we entered into a research collaboration agreement, or the Apellis Agreement, with Apellis Pharmaceuticals, Inc., or Apellis, focused on the use of our base editing technology to discover new treatments for complement system-driven diseases. In October 2021, we entered into an option and license agreement, or the Sana Agreement, with Sana Biotechnology, Inc., or Sana, pursuant to which we granted Sana non-exclusive research and development and commercial rights to our CRISPR Cas12b technology to perform nuclease editing for certain *ex vivo* engineered cell therapy programs. In December 2021, we entered into a four-year research collaboration agreement, or the Pfizer Agreement, with Pfizer Inc., or Pfizer, focused on *in vivo* base editing programs for three targets for rare genetic diseases of the liver, muscle and central nervous system. In September 2022, we entered into a License and Research Collaboration Agreement, or the Orbital Agreement, with Orbital Therapeutics, Inc., or Orbital, a newly formed entity focused on advancing non-viral delivery and RNA technologies. In October 2023, we entered into a Transfer and Delegation Agreement, or the Lilly Agreement, with Eli Lilly and Company, or Lilly, pursuant to which Lilly acquired certain assets and other rights under the Verve Agreement, including our opt-in rights to co-develop and co-commercialize Verve's base editing programs for cardiovascular disease.

We have not generated any revenue to date from product sales and do not expect to do so in the near future. During the nine months ended September 30, 2024 and 2023, we recognized $33.5 million and $61.5 million of license and collaboration revenue, respectively.

Research and development expenses

Research and development expenses consist of costs incurred in performing research and development activities, which include:

- expenses incurred in connection with our clinical trials, including contract research organization costs and costs related to study preparation;
- the cost of manufacturing materials for use in our preclinical studies, IND-enabling studies and clinical trials;
- expenses incurred in connection with investments in delivery technology for our base editors;
- expenses incurred in connection with the discovery and preclinical development of our research programs, including under agreements with third parties, such as consultants, contractors and contract research organizations;
- personnel-related expenses, including salaries, bonuses, benefits and stock-based compensation for employees engaged in research and development functions;
- the cost to obtain licenses to intellectual property, such as those with Harvard University, or Harvard, The Broad Institute, Inc., or Broad Institute, Editas Medicine, Inc., or Editas, and Bio Palette Co., Ltd., or Bio Palette, and related future payments should certain success, development and regulatory milestones be achieved;

- expenses incurred in connection with the building of our base editing platform;
- expenses incurred in connection with regulatory filings;
- laboratory supplies and research materials; and
- facilities, depreciation and other expenses which include direct and allocated expenses.

Our external research and development expenses support our various preclinical and clinical programs. Our internal research and development expenses consist of employee-related expenses, facility-related expenses, and other indirect research and development expenses incurred in support of overall research and development. We expense research and development costs as incurred. Advance payments that we make for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the benefits are consumed.

In the early phases of development, our research and development costs are often devoted to product platform and proof-of-concept preclinical studies that are not necessarily allocable to a specific target.

We expect that our research and development expenses will increase substantially as we advance our programs through their planned preclinical and clinical development.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, intellectual property, business development and administrative functions. General and administrative expenses also include legal fees relating to intellectual property and corporate matters, professional fees for accounting, auditing, tax and consulting services, insurance costs, travel, and direct and allocated facility related expenses and other operating costs.

We anticipate that our general and administrative expenses will increase in the future to support our increased research and development activities. We also expect to continue to incur costs associated with being a public company and maintaining controls over financial reporting, including costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with Nasdaq and SEC requirements, director and officer insurance costs, and investor and public relations costs.

Other income and expenses

Other income and expenses consist of the following items:

- *Change in fair value of derivative liabilities* consists primarily of remeasurement gains or losses associated with changes in success payment liabilities associated with our license agreement with Harvard, dated as of June 27, 2017, as amended, or the Harvard License Agreement, and the license agreement with The Broad Institute, as amended, dated as of May 9, 2018, or the Broad License Agreement.
- *Change in fair value of non-controlling equity investments* consists of mark-to-market adjustments related to our investments in corporate equity securities.
- *Change in fair value of contingent consideration liabilities* consists of remeasurement of the fair value of the technology and product contingent consideration liabilities related to the acquisition of Guide Therapeutics, Inc., or Guide.
- *Interest and other income (expense)*, consists primarily of interest income from our investments in fixed income securities as well as interest expense related to our equipment financings.

Results of operations

Comparison of the three months ended September 30, 2024 and 2023

The following table summarizes our results of operations (in thousands):

	Three Months Ended September 30,		
	2024	2023	Change
License and collaboration revenue	$ 14,269	$ 17,193	$ (2,924)
Operating expenses:			
Research and development	94,258	100,050	(5,792)
General and administrative	26,515	25,410	1,105
Total operating expenses	120,773	125,460	(4,687)
Loss from operations	(106,504)	(108,267)	1,763
Other income (expense):			
Change in fair value of derivative liabilities	(200)	4,700	(4,900)
Change in fair value of non-controlling equity investments	(2,064)	(11,221)	9,157
Change in fair value of contingent consideration liabilities	(27)	6,002	(6,029)
Interest and other income (expense), net	12,127	12,698	(571)
Total other income (expense)	9,836	12,179	(2,343)
Net loss before income taxes	$ (96,668)	$ (96,088)	$ (580)
Provision for income taxes	—	—	—
Net loss	$ (96,668)	$ (96,088)	$ (580)

License and collaboration revenue

License and collaboration revenue was $14.3 million and $17.2 million for the three months ended September 30, 2024 and 2023, respectively. The decrease in revenue of $2.9 million is due to the lower level of research activities on our license and collaboration programs. License and collaboration revenue represents revenue recorded under each of the Pfizer, Apellis, Verve, and Orbital Agreements.

Research and development expenses

Research and development expenses were $94.3 million and $100.1 million for the three months ended September 30, 2024 and 2023, respectively. The following table summarizes our research and development expenses for the three months ended September 30, 2024 and 2023 (in thousands):

	Three Months Ended September 30,		
	2024	2023	Change
External research and development expenses	$ 33,377	$ 40,329	$ (6,952)
Employee related expenses	23,899	26,219	(2,320)
Facility and IT related expenses	18,981	17,366	1,615
Stock-based compensation expense	18,362	15,230	3,132
Other expense (income)	(361)	906	(1,267)
Total research and development expenses	$ 94,258	$ 100,050	$ (5,792)

The decrease of $5.8 million was primarily due to the following:

- A decrease of $7.0 million in external research and development expenses driven by a $6.2 million decrease in outsourced services, primarily due to the strategic reprioritization of pipeline programs, timing of manufacturing spend and fewer IND-enabling activities, partially offset by increased clinical activities for BEAM-101, BEAM-302 and BEAM-301. A decline in lab supply expenses of $0.8 million due to less research and development activities when compared to the prior year also contributed to the decline in external research and development expenses;
- A decrease of $2.3 million of employee related costs due to the decline in research and development employees from 439 as of September 30, 2023, to 374 as of September 30, 2024;
- An increase of $3.1 million in stock-based compensation from additional equity awards granted to existing employees;
- An increase of $1.6 million of facility and IT allocated costs, including depreciation, due to the expense allocated to research and development related to our leased facilities; and
- A decrease in other expenses of $1.3 million driven by lower sublicense expenses related to our collaborations during the three months ended September 30, 2024.

General and administrative expenses

General and administrative expenses were $26.5 million and $25.4 million for the three months ended September 30, 2024 and 2023, respectively. The increase of $1.1 million was primarily due to the following:

- An increase of $1.7 million in employee related costs due to the growth in general and administrative employees from 86 as of September 30, 2023 to 98 as of September 30, 2024;
- An increase of $0.6 million in stock-based compensation from additional equity awards granted to employees;
- A decrease of $0.9 million in facility and IT allocated costs, including depreciation, due to the expense allocated to general and administrative expenses related to our leased facilities; and
- A decrease of $0.3 million in other expenses.

Change in fair value of derivative liabilities

During the three months ended September 30, 2024 and 2023, we recorded $0.2 million of other expense and $4.7 million of other income, respectively, related to the change in fair value of success payment liabilities due to changes in the price of our common stock over the related periods. A portion of the success payment obligations were paid in June 2021; the remaining success payment obligations are still outstanding as of September 30, 2024 and will continue to be revalued at each reporting period.

Change in fair value of non-controlling equity investments

During the three months ended September 30, 2024 and 2023, we recorded $2.1 million and $11.2 million of other expense, respectively, as a result of changes in the fair value of our investment in Verve and Prime common stock.

Change in fair value of contingent consideration liabilities

During the three months ended September 30, 2024 and 2023, we recorded less than $0.1 million of other expense and $6.0 million of other income, respectively, related to the change in fair value of the Guide technology and product contingent consideration liabilities.

Interest and other income (expense), net

Interest and other income (expense), net was $12.1 million and $12.7 million of net income for the three months ended September 30, 2024 and 2023, respectively. The change was primarily due to increases in interest income driven by increased market rates.

Comparison of the nine months ended September 30, 2024 and 2023

The following table summarizes our results of operations (in thousands):

	Nine Months Ended September 30,		
	2024	2023	Change
License and collaboration revenue	$ 33,451	$ 61,517	$ (28,066)
Operating expenses:			
Research and development	266,117	297,304	(31,187)
General and administrative	82,865	73,556	9,309
Total operating expenses	348,982	370,860	(21,878)
Loss from operations	(315,531)	(309,343)	(6,188)
Other income (expense):		—	
Change in fair value of derivative liabilities	2,400	9,400	(7,000)
Change in fair value of non-controlling equity investments	(13,003)	(17,870)	4,867
Change in fair value of contingent consideration liabilities	1,619	7,877	(6,258)
Interest and other income (expense), net	38,166	34,612	3,554
Total other income (expense)	29,182	34,019	(4,837)
Net loss before income taxes	$ (286,349)	$ (275,324)	$ (11,025)
Provision for income taxes	(39)	—	(39)
Net loss	$ (286,388)	$ (275,324)	$ (11,064)

License and collaboration revenue

License and collaboration revenue was $33.5 million and $61.5 million for the nine months ended September 30, 2024 and 2023, respectively. License and collaboration revenue represents revenue recorded under each of the Pfizer, Apellis, Verve, and Orbital Agreements and the change reflects the lower level of research activities performed in the nine months ended September 30, 2024 as compared to September 30, 2023.

Research and development expenses

Research and development expenses were $266.1 million and $297.3 million for the nine months ended September 30, 2024 and 2023, respectively. The following table summarizes our research and development expenses for the nine months ended September 30, 2024 and 2023 (in thousands):

	Nine Months Ended September 30,		
	2024	2023	Change
External research and development expenses	$ 82,240	$ 118,048	$ (35,808)
Employee related expenses	71,494	81,144	(9,650)
Facility and IT related expenses	55,374	50,911	4,463
Stock-based compensation expense	54,811	44,973	9,838
Other expense (income)	2,198	2,228	(30)
Total research and development expenses	$ 266,117	$ 297,304	$ (31,187)

The decrease of $31.2 million was primarily due to the following:

- A decrease of $35.8 million in external research and development expenses driven by a $25.5 million decrease in outsourced services driven primarily by the strategic reprioritization of pipeline programs, timing of manufacturing spend and fewer IND-enabling activities, partially offset by increased clinical activities for BEAM-101, BEAM-302 and BEAM-301. Also contributing to the decrease in expenses is a decline of $10.3 million in lab supply expenses, primarily due to a decrease in research and development activities as well as a shift of programs from research into development;
- A decrease of $9.7 million of employee related expenses due to a reduction in the number of research and development employees from 439 as of September 30, 2023 to 374 as of September 30, 2024;
- An increase of $9.8 million in stock-based compensation from additional equity awards granted to employees; and
- An increase of $4.5 million of facility and IT allocated costs, including depreciation, due to the expense allocated to research and development related to our leased facilities.

General and administrative expenses

General and administrative expenses were $82.9 million and $73.6 million for the nine months ended September 30, 2024 and 2023, respectively. The increase of $9.3 million was primarily due to the following:

- An increase of $4.6 million in stock-based compensation from additional equity awards granted to employees;
- An increase of $3.5 million in personnel related expenses due to an increase in fees associated with outside consultants and an increase in the number of general and administrative employees from 86 as of September 30, 2023 to 98 as of September 30, 2024, and their related activities;
- An increase of $1.5 million in legal costs; and
- A decrease of $0.1 million in other expenses during the nine months ended September 30, 2024 compared to September 30, 2023.

Change in fair value of derivative liabilities

During the nine months ended September 30, 2024 and 2023, we recorded $2.4 million and $9.4 million of other income, respectively, related to the change in fair value of success payment liabilities due to a decrease in the price of our common stock over the related periods. A portion of the success payment obligations were paid in June 2021; the remaining success payment obligations are still outstanding as of September 30, 2024 and will continue to be revalued at each reporting period.

Change in fair value of non-controlling equity investments

During the nine months ended September 30, 2024 and 2023, we recorded $13.0 million and $17.9 million of other expense, respectively, as a result of changes in the fair value of our investment in Verve and Prime common stock.

Change in fair value of contingent consideration liabilities

During the nine months ended September 30, 2024 and 2023, we recorded $1.6 million and $7.9 million of other income, respectively, related to the change in fair value of the Guide technology and product contingent consideration liabilities.

Interest and other income (expense), net

Interest and other income (expense), net was $38.2 million and $34.6 million of net income for the nine months ended September 30, 2024 and 2023, respectively. The change was primarily due to increases in interest income driven by increased market rates.

Liquidity and capital resources

Since our inception in January 2017, we have not generated any revenue from product sales, have generated only limited revenue from our license and collaboration agreements, and have incurred significant operating losses and negative cash flows from our operations. We expect to incur significant expenses and operating losses for the foreseeable future as we advance the preclinical and clinical development of our product candidates.

In February 2024, we filed a universal automatic shelf registration statement on Form S-3 with the SEC, to register for sale an indeterminate amount of our common stock, preferred stock, debt securities, warrants and/or units in one or more offerings, which became effective upon filing with the SEC (File No. 333-277427).

In April 2021, we entered into an at the market, or ATM, sales agreement, or the Sales Agreement, with Jefferies LLC, or Jefferies, pursuant to which we were entitled to offer and sell, from time to time at prevailing market prices, shares of our common stock having aggregate gross proceeds of up to $300.0 million. We agreed to pay Jefferies a commission of up to 3.0% of the aggregate gross sale proceeds of any shares sold by Jefferies under the Sales Agreement. Between April 2021 and July 2021, we sold 2,908,009 shares of our common stock under the Sales Agreement at an average price of $103.16 per share for aggregate gross proceeds of $300.0 million, before deducting commissions and offering expenses payable by us.

In July 2021 and May 2023, we and Jefferies entered into amendments to the Sales Agreement to provide for increases in the aggregate offering amount under the Sales Agreement, such that as of May 10, 2023, we may offer and sell shares of common stock having an aggregate offering price of up to an additional $800.0 million. As of September 30, 2024, we have sold 10,860,992 additional shares of our common stock under the amended Sales Agreement at an average price of $51.93 per share for aggregate gross proceeds of $564.0 million, before deducting commissions and offering expenses payable by us.

In October 2023, we entered into the Lilly Agreement, pursuant to which Lilly acquired certain assets and other rights under the Verve Agreement, including our opt-in rights to co-develop and co-commercialize Verve's base editing programs for cardiovascular disease. We received a $200.0 million upfront payment and are eligible to receive up to $350.0 million in potential future development-stage payments upon the completion of certain clinical, regulatory and alliance events. In connection with the Lilly Agreement, we and Lilly entered into a Stock Purchase Agreement providing for the sale and issuance of 2,004,811 shares of our common stock to Lilly for an aggregate purchase price of $50.0 million. We received the consideration under the Stock Purchase Agreement in October 2023 and the upfront payment in November 2023. We have accrued approximately $20.7 million of contingent obligations that may be due associated with payments received under the Lilly Agreement for which discussions are continuing related to the potential applicability to such payments of the terms of license agreements.

As of September 30, 2024, we had $925.8 million in cash, cash equivalents, and marketable securities.

We are required to make success payments to Harvard and Broad Institute based on increases in the per share fair market value of our common stock. The amounts due may be settled in cash or shares of our common stock, at our discretion. We may owe Harvard and Broad Institute future success payments of up to $90.0 million each.

We have not yet commercialized any of our product candidates, and we do not expect to generate revenue from the sale of our product candidates for the foreseeable future. We anticipate that we may need to raise additional capital in order to continue to fund our research and development, including our planned preclinical studies and clinical trials, maintaining and operating our commercial-scale cGMP manufacturing facility, and new product development, as well as to fund our general operations. As necessary, we will seek to raise additional capital through various potential sources, such as equity and debt financings or through corporate collaboration and license agreements. We can give no assurances that we will be able to secure such additional sources of capital to support our operations, or, if such funds are available to us, that such additional financing will be sufficient to meet our needs.

Cash flows

The following table summarizes our sources and uses of cash (in thousands):

	Nine Months Ended September 30,	
	2024	2023
Net cash provided by (used in) operating activities	$ (270,881)	$ (284,268)
Net cash provided by (used in) investing activities	58,727	(26,259)
Net cash provided by (used in) financing activities	4,292	242,735
Net change in cash, cash equivalents and restricted cash	$ (207,862)	$ (67,792)

Operating activities

Net cash used in operating activities for the nine months ended September 30, 2024 was $270.9 million, including our net loss of $286.4 million, decreases in accrued expenses and other liabilities of $53.6 million, deferred revenue of $31.5 million, and operating lease liabilities totaling $9.7 million and an increase of prepaid expenses and other current assets of $2.5 million. In addition, noncash items, including the amortization of investment premiums of $18.1 million, a decrease in the fair value of derivative liabilities of $2.4 million and a decrease of $1.6 million in the fair value of our contingent consideration liabilities also contributed to net cash used in operating activities.

These uses of cash were partially offset by an increase in accounts payable of $2.4 million and other long-term liabilities of $0.5 million, respectively. In addition, we recorded noncash items consisting of stock-based compensation expense of $90.4 million, depreciation and amortization expense of $16.5 million, a decrease in the fair value of non-controlling equity investments of $13.0 million and a decrease in operating lease right-of-use, or ROU, assets of $7.2 million.

Net cash used in operating activities for the nine months ended September 30, 2023 was $284.3 million, consisting of our net loss of $275.3 million, a decrease in deferred revenue of $60.0 million, decreases in accounts payable of $5.8 million, accrued expenses and other liabilities of $2.7 million, increases in prepaid expenses and other current assets of $10.0 million, and a decrease in operating lease liabilities totaling $7.2 million. In addition, we recorded noncash items consisting of amortization of investment premiums of $22.4 million, and decreases in the fair value of derivative liabilities of $9.4 million and the fair value of contingent consideration liabilities of $7.9 million, respectively.

These uses of cash were partially offset by noncash items consisting of stock-based compensation expense of $76.0 million, decreases in the fair value of non-controlling equity investments of $17.9 million, depreciation and amortization expense of $14.7 million and changes in operating lease right-of-use (ROU) assets of $7.1 million.

Investing activities

For the nine months ended September 30, 2024, cash provided by investing activities consisted of net maturities of marketable securities of $64.7 million, partially offset by purchases of property and equipment of $6.0 million.

For the nine months ended September 30, 2023, cash used in investing activities consisted of purchases of property and equipment of $30.1 million, partially offset by the net maturities of marketable securities of $3.9 million.

Financing activities

Net cash provided by financing activities for the nine months ended September 30, 2024 consisted of $2.6 million of proceeds from the issuance of common stock under our Employee Stock Purchase Plan, or ESPP, and $2.2 million of proceeds from the exercise of stock options, offset in part by repayments of equipment financing liabilities of $0.5 million.

Net cash provided by financing activities for the nine months ended September 30, 2023 consisted of net proceeds from equity offerings of $236.6 million, $5.4 million of proceeds from the exercise of stock options, and $3.0 million of proceeds from the issuance of common stock under our ESPP, offset in part by repayments of equipment financing liabilities of $1.6 million and payment of equity offering costs of $0.6 million.

Funding requirements

We expect our operating expenses to increase over the next twelve months, as we expect increases in costs related to continued and expected clinical-stage development of our lead product candidates and increases in biologics license application readiness activities related to the potential commercial launch of clinical products, if approved.

Our future operating expenses depend on a number of factors, including the extent to which we undertake the following activities:

- advance clinical trials of our product candidates;
- continue our research programs and our preclinical development of product candidates from our research programs;
- seek to identify additional research programs and additional product candidates;
- initiate preclinical studies and clinical trials for additional product candidates we identify and develop;
- maintain, expand, enforce, defend, 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;
- establish a sales, marketing, and distribution infrastructure to commercialize any medicines for which we may obtain marketing approval;
- further develop our base editing platform;

- •continue to hire additional personnel including research and development, clinical and commercial personnel;
- •add operational, financial, and management information systems and personnel, including personnel to support our product development;
- •acquire or in-license products, intellectual property, medicines and technologies; and
- •maintain and operate a commercial-scale cGMP manufacturing facility.

We expect that our cash, cash equivalents and marketable securities at September 30, 2024 will enable us to fund our current and planned operating expenses and capital expenditures for at least the next 12 months from the date of issuance of our accompanying condensed consolidated financial statements. We have based these estimates on assumptions that may prove to be imprecise, and we may exhaust our available capital resources sooner that we currently expect. Because of the numerous risks and uncertainties associated with the development our programs, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates.

Our future funding requirements will depend on many factors including:

- •the cost of continuing to build our base editing platform;
- •the costs of acquiring licenses for the delivery modalities that will be used with our product candidates;
- •the scope, progress, results, and costs of discovery, preclinical development, laboratory testing, manufacturing 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 develop;
- •the costs of future activities, including product sales, medical affairs, marketing, manufacturing, distribution, coverage and reimbursement for any product candidates for which we receive regulatory approval;
- •the success of our license agreements and our collaborations;
- •our ability to establish and maintain additional collaborations on favorable terms, if at all;
- •the achievement of milestones or occurrence of other developments that trigger payments under any collaboration agreements we are a party to or may become a party to;
- •the payment of success liabilities to Harvard and Broad Institute pursuant to the respective terms of the Harvard License Agreement and the Broad Institute License Agreement, should we choose to pay in cash;
- •the extent to which we acquire or in-license products, intellectual property, and technologies;
- •the costs of operating and expanding our manufacturing capacity; and
- •the impact on our business of macro-economic conditions, as well as the prevailing level of macro-economic, business, and operational uncertainty, including as a result of geopolitical events or other global or regional events.

A change in the outcome of any of these or other variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate. Further, our operating plans may change in the future, and we may need additional funds to meet operational needs and capital requirements associated with such operating plans.

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. We do not have any committed external source of capital. We have historically relied on equity issuances to fund our capital needs and will likely rely on equity issuances in the future. 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 capital 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 capital through equity or debt financings when needed, we may be required to delay, limit, reduce, or terminate our product development or, if approved, future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. We can give no assurance that we will be able to secure such additional sources of funds to support our operations, or, if such funds are available to us, that such additional funding will be sufficient to meet our needs.

Contractual obligations

We enter into contracts in the normal course of business with contract research organizations and other vendors to assist in the performance of our research and development activities and other services and products for operating purposes. These contracts generally provide for termination on notice, and therefore are cancelable contracts and not included in our calculations of contractual obligations and commitments.

We lease certain assets under noncancelable operating and finance leases. The leases relate primarily to office space and laboratory space. As of September 30, 2024, aggregate future minimum commitments under these office and laboratory leases are $231.5 million, of which $6.0 million will be payable in 2024. These minimum lease payments exclude our share of the facility operating expenses, real-estate taxes and other costs that are reimbursable to the landlord under the leases.

During the nine months ended September 30, 2024, 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 the 2023 Form 10-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risk related to changes in interest rates. As of September 30, 2024, we had cash, cash equivalents, and marketable securities of $925.8 million, which consisted of cash, money market funds, commercial paper and corporate and government securities. Our cash and cash equivalents are primarily maintained in accounts with multiple financial institutions in the United States. At times, we may maintain cash and cash equivalent balances in excess of Federal Deposit Insurance Corporation limits. We do not believe that we are subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in short-term marketable securities. Due to the short-term duration of our investment portfolio and the low risk profile of our investments, we believe an immediate 10% change in interest rates would not have a material effect on the fair market value of our investment portfolio. We have the ability to hold our investments until maturity, and therefore, we would not expect our operating results or cash flows to be affected to any significant degree by the effect of a change in market interest rates on our investment portfolio.

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we do contract with vendors that are located outside of the United States and may be subject to fluctuations in foreign currency rates. We may enter into additional contracts with vendors located outside of the United States in the future, which may increase our foreign currency exchange risk.

Inflation generally affects us by increasing our cost of labor and research, manufacturing and development costs. We believe that inflation has not had a material effect on our financial statements included elsewhere in this Quarterly Report on Form 10-Q. However, our operations may be adversely affected by inflation in the future.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC'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 a company's management, including its principal executive and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of September 30, 2024, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures as of such date are effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

We continuously seek to improve the efficiency and effectiveness of our internal controls. This results in refinements to processes throughout our company. There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended September 30, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

We are not currently subject to any material legal proceedings.

Item 1A. Risk Factors.

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in the sections titled sections titled "Risk Factors Summary" and "Item 1A. Risk Factors" in the 2023 Form 10-K, which could materially affect our business, financial condition or future results. The risk factors disclosure in the 2023 Form 10-K is qualified by the information in this Quarterly Report on Form 10-Q. The risks described in the 2023 Form 10–K are not our only risks. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

The risk factors set forth below represent new risk factors or those containing changes to the similarly titled risk factor included in "Item 1.A Risk Factors" of the 2023 Form 10-K.

Our owned patents and patent applications and in-licensed patents and patent applications and other intellectual property may be subject to priority disputes or to inventorship disputes and similar proceedings. 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.

Although we have an option to exclusively license certain patents and patent applications directed to Cas9 and Cas12a from Editas, who in turn has licensed such patents from various academic institutions including Broad Institute, we do not currently have a license to such patents and patent applications. Certain of the U.S. patents and one U.S. patent application to which we hold an option are co-owned by Broad Institute and MIT, and in some cases co-owned by Broad Institute, MIT, and Harvard, which we refer to together as the Boston Licensing Parties, and were involved in U.S. interference No. 106,048 with one U.S. patent application co-owned by the University of California, the University of Vienna, and Emmanuelle Charpentier, which we refer to together as the University of California. On September 10, 2018, the Court of Appeals for the Federal Circuit, or the CAFC, affirmed the Patent Trial and Appeal Board of the USPTO's, or PTAB's, holding that there was no interference-in-fact. An interference is a proceeding within the USPTO to determine priority of invention of the subject matter of patent claims filed by different parties.

On June 24, 2019, the PTAB declared an interference (U.S. Interference No. 106,115) between ten U.S. patent applications ((U.S. Serial Nos. 15/947,680; 15/947,700; 15/947,718; 15/981,807; 15/981,808; 15/981,809; 16/136,159; 16/136,165; 16/136,168; and 16/136,175) that are co-owned by the University of California, and 13 U.S. patents and one U.S. patent application (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; 8,999,641; and 9,840,713, and U.S. Serial No. 14/704,551)) that are co-owned by the Boston Licensing Parties, which we have an option to under the Editas License Agreement. In the declared interference, the University of California has been designated as the junior party and the Boston Licensing Parties have been designated as the senior party.

As a result of the declaration of interference, an adversarial proceeding in the USPTO before the PTAB has been initiated, which is declared to ultimately determine priority, specifically and which party was first to invent the claimed subject matter. An interference is typically divided into two phases. The first phase is 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. The ten University of California patent applications and the 13 U.S. patents and one U.S. patent application co-owned by the Boston Licensing Parties involved in U.S. Interference No. 106,115 generally relate to CRISPR/Cas9 systems or eukaryotic cells comprising CRISPR/Cas9 systems having fused or covalently linked RNA and the use thereof in eukaryotic cells. On February 28, 2022, the PTAB issued a decision that the Boston Licensing Parties have priority of invention over University of California with respect to a single RNA CRISPR-Cas9 system that functions in eukaryotic cells. This decision is being appealed. There can be no assurance that the U.S. interference will be resolved in favor of the Boston Licensing Parties on appeal. If the U.S. interference resolves in favor of University of California, or if the Boston Licensing Parties' patents and patent application are narrowed, invalidated, or held unenforceable, we may lose the ability to license the optioned patents and patent application and our ability to commercialize our product candidates may be adversely affected if we cannot obtain a license to relevant third party patents that cover our product candidates. 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 nonexclusive, 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. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our base editing platform technology or product candidates or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business.

We or our licensors may be subject to similar interferences in the future with the same risks as described above. For example, on December 14, 2020, the PTAB declared an interference (U.S. Interference No. 106,126) between 14 U.S. patents and two U.S. patent applications (U.S. Patent Nos. 8,697,359; 8,771,945; 8,795,965; 8,865,406; 8,871,445; 8,889,356; 8,889,418; 8,895,308; 8,906,616; 8,932,814; 8,945,839; 8,993,233; 8,999,641; and 9,840,713, and U.S. Serial Nos. 14/704,551 and 15/330,876) that are co-owned by the Boston Licensing Parties, which we have an option to under the Editas License Agreement, and one U.S. patent application (U.S. Serial Nos. 14/685,510) that is owned by Toolgen, Inc, or Toolgen. In the declared interference, the Boston Licensing Parties have been designated as the junior party and Toolgen has been designated as the senior party. On September 28, 2022, the PTAB issued an order suspending proceedings in the priority phase of the interference. We cannot predict with any certainty when a decision will be made. The 14 U.S. patents and two U.S. patent applications co-owned by the Boston Licensing Parties involved in U.S. Interference No. 106,126 generally relate to CRISPR/Cas9 systems or eukaryotic cells comprising CRISPR/Cas9 systems having fused or covalently linked RNA and the use thereof in eukaryotic cells.

On June 21, 2021, the PTAB declared an interference (U.S. Interference No. 106,133) between the same 14 U.S. patents and two U.S. patent applications (U.S. Patent Nos. 8,697,359; 8,771,945; 8,795,965; 8,865,406; 8,871,445; 8,889,356; 8,889,418; 8,895,308; 8,906,616; 8,932,814; 8,945,839; 8,993,233; 8,999,641; and 9,840,713, and U.S. Serial Nos. 14/704,551 and 15/330,876, co-owned by the Boston Licensing Parties) as named in the interference with Toolgen, and one U.S. patent application (U.S. Serial Nos. 15/456,204) that is owned by Sigma-Aldrich Co., LLC, or Sigma-Aldrich. In the declared interference, the Boston Licensing Parties have been designated as the junior party and Sigma-Aldrich has been designated as the senior party. On December 14, 2022, the PTAB issued an order suspending proceedings in the priority phase of the interference. We cannot predict with any certainty when a decision will be made.

We or our licensors may also be subject to claims that former employees, collaborators, or other third parties have an interest in our owned patents or patent applications 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 that issue from such patent applications against third parties, and such cooperation may not be provided to us.

If we or our licensors are unsuccessful in any interference proceedings or other priority, validity (including any patent oppositions), or inventorship disputes to which we or they are subject, we may lose valuable intellectual property rights through the loss of one or more of our owned, licensed, or optioned patents, or such patent claims may be narrowed, invalidated, or held unenforceable, or through loss of exclusive ownership of or the exclusive right to use our owned or in-licensed patents. In the event of loss of patent rights as a result of any of these disputes, 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 patent claims could limit our ability to stop others from using or commercializing similar or identical technology and product candidates. Even if we or our licensors are successful in an interference proceeding or other similar priority or inventorship disputes, it could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could result in a material adverse effect on our business, financial condition, results of operations, or prospects.

The intellectual property landscape around gene editing technology, including base editing and delivery technology, 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 may prevent, delay or otherwise interfere with our product discovery and development efforts.

The field of gene editing, especially in the area of base editing technology, is still in its infancy, and no base editing product candidates 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 and in the field of delivery technology, the intellectual property landscape is evolving and 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 and licensors 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 as well as administrative proceedings for challenging patents, including interference, derivation, inter partes review, post grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We may be 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 base editing platform technology, delivery platform 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. Numerous U.S. and foreign issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our product candidates and they may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit.

As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our base editing platform technology, delivery platform technology and product candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of therapies, products or their methods of use or manufacture. We are aware of certain third-party patents and patent applications that, if issued, may be construed to cover our base editing technology, delivery technology and product candidates. There may also be third-party patents of which we are currently unaware with claims to technologies, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents.

Numerous third-party U.S. and foreign issued patents and pending patent applications exist in the fields in which we are developing product candidates. Our product candidates make use of CRISPR-based technology, which is a field that is highly active for patent filings. The extensive patent filings related to CRISPR and Cas make it difficult for us to assess the full extent of relevant patents and pending applications that may cover our base editing platform technology and product candidates and their use or manufacture. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our base editing platform technology and product candidates. For example, we are aware of a patent portfolio that is co-owned by the University of California, University of Vienna and Emmanuelle Charpentier, or the University of California Portfolio, which contains multiple patents and pending applications directed to gene editing. The University of California portfolio includes, for example, U.S. Patent Nos. 10,266,850; 10,227,611; 10,000,772; 10,113,167; 10,301,651; 10,308,961; 10,337,029; 10,351,878; 10,407,697; 10,358,659; 10,358,658; 10,385,360; 10,400,253; 10,421,980; 10,415,061; 10,428,352; 10,443,076; 10,487,341; 10,513,712; 10,519,467; 10,526,619; 10,533,190; 10,550,407; 10,563,227; 10,570,419; 10,577,631; 10,597,680; 10,612,045; 10,626,419; 10,640,791; 10,669,560; 10,676,759; 10,752,920; 10,774,344; 10,793,878; 10,900,054; 10,982,230; 10,982,231; 10,988,780; 10,988,782; 11,001,863; 11,008,589; 11,008,590; 11,028,412; 11,186,849; 11,242,543; 11,274,318; 11,293,034; 11,332,761; 11,401,532; 11,473,108; 11,479,794; 11,549,127; 11,634,730; 11,674,159; 11,814,645; 11,970,711, which are expected to expire around March 2033, excluding any additional term for patent term adjustment, or PTA, or patent term extension, or PTE, and any disclaimed term for terminal disclaimers. The University of California portfolio also includes numerous additional pending patent applications. If these patent applications issue as patents, they are expected to expire around March 2033, excluding any PTA, PTE, and any disclaimed term for terminal disclaimers. As discussed above, certain applications in the University of California Portfolio are currently subject to U.S. Interference No. 106,115 with certain U.S. patents and one U.S. patent application that are co-owned by the Boston Licensing Parties to which we have an option under the Editas License Agreement. Although we have an option to exclusively license certain patents and patent applications directed to Cas9 and Cas12a from Editas, who in turn has licensed such patents from various academic institutions including Broad Institute, we do not currently have a license to such patents and patent applications. Certain members of the University of California Portfolio are being opposed in Europe by multiple parties. For example, European Patent Nos. EP2,800,811 B1, and EP3,241,902 B1, and EP3,401,400 B1 are being opposed, and notices of opposition have been filed by several third parties against European Patent No. EP3,597,749 B1, which patents are estimated to expire in March 2033 (excluding any patent term adjustments or extensions).

The opposition procedure before the EPO allows one or more third parties to challenge the validity of a granted European patent within nine months after grant date of the European patent. Opposition proceedings may involve issues including, but not limited to, priority, patentability of the claims involved, and procedural formalities related to the filing of the patent application. As a result of the opposition proceedings, the Opposition Division can revoke a patent, maintain the patent as granted, or maintain the patent in an amended form. Most of the claims of European patent EP2,800,811 B1 were maintained without amendment by the Opposition Division, but this decision is being appealed. In April 2021, the claims of European patent EP3,241,902 B1 were revoked in their

entirety, and that decision is not appealed. In February 2022, the claims of European patent EP3,401,400 B1 were maintained in amended form by the Opposition Division, and this decision is being appealed. It is uncertain how oppositions filed against EP3,597,749 B1 will be resolved. If these patents are maintained by the Opposition Division with claims similar to those that are currently opposed, our ability to commercialize our product candidates may be adversely affected if we do not obtain a license to these patents. 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 nonexclusive, 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. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our base editing platform technology or product candidates or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business.

Numerous other patents and patent applications have been filed by other third parties directed to gene editing, guide nucleic acids, PAM sequence variants, split inteins, Cas12b or gene editing in the context of immune therapy or chimeric antigen receptors.

Because of the large number of patents issued and patent applications filed in our field, third parties may allege they have patent rights encompassing our product candidates, technologies or methods. Third parties may assert that we are employing their proprietary technology without authorization and may file patent infringement claims or lawsuit against us, and if we are found to infringe such third-party patents, we may be required to pay damages, cease commercialization of the infringing technology, or obtain a license from such third parties, which may not be available on commercially reasonable terms or at all.

Our ability to commercialize our product candidates in the United States and abroad may be adversely affected if we cannot obtain a license on commercially reasonable terms to relevant third-party patents that cover our product candidates, delivery platform technology or base editing platform technology. 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. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, we may be unable to commercialize our base editing platform technology, delivery platform technology or product candidates or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business. 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.

Defense of third-party claims of infringement of misappropriation, or violation of intellectual property rights involves substantial litigation expense and would be a substantial diversion of management and employee time and resources from our business. Some third parties may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. There could also 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. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

Item 5. Other Information.

(c)

Director and Officer Trading Arrangements

The following table describes for the quarterly period covered by this report each trading arrangement for the sale or purchase of Company securities adopted or terminated by our directors and officers that is either (1) a contract, instruction or written plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c), or a "Rule 10b5-1 trading arrangement," or (2) a "non-Rule 10b5-1 trading arrangement" (as defined in Item 408(c) of Regulation S-K):

Name*(Title)*	**Action Taken *(Date of Action)***	**Type of Trading Arrangement**	**Nature of Trading Arrangement**	**Duration of Trading Arrangement**	**Aggregate Number of Securities**
Giuseppe Ciaramella *(President)*	Adoption *(September 26, 2024)*	Rule 10b5-1 trading arrangement	Sale	Until September 26, 2025, or such earlier date upon which all transactions are completed or expire without execution.	Up to 35,000 shares[(1)]
Christine Bellon *(Chief Legal Officer)*	Adoption (*September 20, 2024*)	Rule 10b5-1 trading arrangement		Until September 20, 2025, or such earlier date upon which all transactions are completed or expire without execution.	Up to 20,000 shares[(2)]
Bethany Cavanagh (*Senior Vice President, Finance*)	Adoption (*September 18, 2024*)	Rule 10b5-1 trading arrangement		Until September 18, 2025, or such earlier date upon which all transactions are completed or expire without execution.	Up to 14,595 shares
Bethany Cavanagh (*Senior Vice President, Finance*)	Adoption (*August 9, 2024*)	Durable Rule 10b5-1 trading arrangement for sell-to-cover transactions relating to all RSU equity awards that have been or may be granted	Sale	Until final settlement of any covered RSU	Indeterminable[(3)]

(1) Consists of 35,000 shares issuable upon exercise of options to purchase the Company's common stock pursuant to the Rule 10b-5-1 trading arrangement

(2) Includes up to 10,000 shares issuable upon exercise of options to purchase the Company's common stock pursuant to the Rule 10b5-1 trading arrangement.

(3) The number of shares subject to covered restricted stock units ("RSUs") that will be sold to satisfy applicable tax withholding obligations upon vesting is unknown as the number will vary based on the extent to which vesting conditions are satisfied, the market price of the Company's common stock at the time of settlement and the potential future grant of additional RSUs subject to this arrangement. This trading arrangement, which applies to RSUs whether vesting is based on the passage of time and/or the achievement of performance goals, provides for the automatic sale of shares that would otherwise be issuable on each settlement date of a covered RSU in an amount sufficient to satisfy the applicable withholding obligation, with the proceeds of the sale delivered to the Company in satisfaction of the applicable withholding obligation.

Item 6. Exhibits.

Exhibit Number	Description of Exhibit	Incorporated by Reference				Filed Herewith
		Form	File Number	Date of Filing	Exhibit Number	
3.1	Fourth Amended Certificate of Incorporation of Beam Therapeutics Inc.	8-K	001-39208	02/11/2020	3.1	
3.2	Second Amended and Restated Bylaws of Beam Therapeutics Inc.	10-K	001-39208	02/28/2023	3.2	
31.1	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Presentation Linkbase Document					X
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)					X

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.

BEAM THERAPEUTICS INC.

Date: November 5, 2024

By: /s/ John Evans

John Evans
Chief Executive Officer
(Principal executive officer and principal financial officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Evans, certify that:

1.I have reviewed this Quarterly Report on Form 10-Q of Beam Therapeutics Inc.;

2.Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3.Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4.The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a)Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b)Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c)Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d)Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5.The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a)All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b)Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2024

By: /s/ John Evans
John Evans
Chief Executive Officer
(Principal executive officer and principal financial officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Quarterly Report of Beam Therapeutics Inc. (the "Company") on Form 10-Q for the period ending September 30, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(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: November 5, 2024

By: /s/ John Evans
John Evans
Chief Executive Officer
(Principal executive officer and principal financial officer)