UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2021

OR

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

For the transition period from _____ to _____

Commission File Number: 001-39615

CODIAK BIOSCIENCES, INC.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**47-4926530**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
35 CambridgePark Drive, Suite 500 Cambridge, MA	**02140**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (617) 949-4100

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	CDAK	Nasdaq Global Market

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

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

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

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

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

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

As of May 3, 2021, the registrant had 22,043,883 shares of common stock, $0.0001 par value per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- the success, cost and timing of our product development activities, preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs;
- the design and conduct of our clinical trials of exoSTING and exoIL-12 and planned clinical trial of exoASO-STAT6;
- our ability to successfully advance any our engEx product candidates into and through clinical trials, or obtain marketing approval;
- the potential and capabilities of our engEx Platform, engEx product candidates and engEx discovery programs;
- the potential and capability of our engEx Platform to generate additional engEx product candidates;
- our ability to successfully manufacture, or procure from third parties sufficient supply of, our product candidates for preclinical studies, clinical trials or commercial use, if approved;
- our ability to establish, operate and maintain our in-house Phase 1/2 clinical manufacturing facility;
- our ability to utilize our engEx Platform to engineer exosomes to carry various biologically active drug molecules, target specific cell types or cellular pathways or enhance the value of existing drug modalities;
- the potential indications that we may be able to target with engineered exosomes generated from our engEx Platform;
- the size, composition and growth potential of the patient populations and markets we intend to target with our engEx product candidates and our ability to develop and commercialize engEx product candidates to address those patient populations and markets;
- the ability and willingness of our current and future collaborators to continue research and development activities relating to our engEx exosomes;
- our ability to maintain regulatory approval, if obtained, of any of our current or future engEx product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate;
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates;
- our ability to license intellectual property relating to our product candidates and to comply with our existing license and collaboration agreements;
- our ability to commercialize our products, if approved, in light of the intellectual property rights of others;
- developments relating to the use of exosomes to develop therapeutics;
- the success of competing therapies that are or become available;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates;
- the commercialization of our product candidates, if approved;
- our plans to research, develop and commercialize our engEx product candidates and enhance the capabilities of our engEx Platform;
- our ability to attract collaborators with development, regulatory and commercialization expertise;

- future agreements with third parties in connection with the commercialization of our product candidates and any other approved product;
- the rate and degree of market acceptance of our product candidates;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our ability to attract and retain key scientific or management personnel;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the impact of laws and regulations; and
- the direct or indirect impact of the COVID-19 pandemic on our business, operations, development timelines and the markets and communities in which we and our partners, collaborators, vendors and customers operate.

In some cases, you can identify forward-looking statements by terminology such as “may,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue” or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed above under “Summary of the Material Risks Associated with Our Business” and under the section titled “Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this Quarterly Report on Form 10-Q and the documents that we reference in this Quarterly Report on Form 10-Q and have filed with the Securities and Exchange Commission as exhibits hereto completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this Quarterly Report on Form 10-Q represent our views as of the date of this Quarterly Report on Form 10-Q. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

This Quarterly Report on Form 10-Q also contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. While we are not aware of any misstatements regarding any third-party information presented in this Quarterly Report on Form 10-Q, their estimates, in particular as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors, including those discussed under the section titled “Risk Factors” and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2020, or the Annual Report, and this Quarterly Report on Form 10-Q.

NOTE REGARDING COMPANY REFERENCES

Unless the context otherwise requires, the terms “Codiak,” “the Company,” “we,” “us,” and “our” in this Form 10-Q refer to Codiak BioSciences, Inc. and its consolidated subsidiaries.

Item 1. Financial Statements

CODIAK BIOSCIENCES, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited, in thousands, except share and per share data)

	MARCH 31, 2021	DECEMBER 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 130,272	$ 88,915
Prepaid expenses and other current assets	4,405	4,843
Total current assets	134,677	93,758
Property and equipment, net	30,885	31,410
Restricted cash, net of current portion	4,170	4,170
Operating right-of-use assets	21,767	22,003
Total assets	$ 191,499	$ 151,341
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,162	$ 2,018
Accrued expenses	6,805	8,870
Deferred revenue	4,345	5,281
Operating lease liabilities	2,230	1,482
Total current liabilities	15,542	17,651
Long-term liabilities:		
Deferred revenue, net of current portion	46,008	57,416
Note payable, net of discount	25,095	24,960
Operating lease liabilities, net of current portion	35,931	36,540
Other long-term liabilities	207	207
Total liabilities	122,783	136,774
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Common stock, $0.0001 par value; 150,000,000 shares authorized as of March 31, 2021 and December 31, 2020; 21,996,886 and 18,787,579 shares issued and outstanding as of March 31, 2021 and December 31, 2020, respectively	2	2
Additional paid-in capital	367,112	302,655
Accumulated deficit	(298,398)	(288,090)
Total stockholders' equity	68,716	14,567
Total liabilities and stockholders' equity	$ 191,499	$ 151,341

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

CODIAK BIOSCIENCES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Unaudited, in thousands, except share and per share data)

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Revenue:		
Collaboration revenue	$ 13,191	$ 134
Total revenue	13,191	134
Operating expenses:		
Research and development	16,550	18,391
General and administrative	6,588	4,233
Total operating expenses	23,138	22,624
Loss from operations	(9,947)	(22,490)
Other income (expense):		
Interest expense	(698)	(295)
Interest income	5	223
Other income	332	60
Total other expense, net	(361)	(12)
Net loss	$ (10,308)	$ (22,502)
Cumulative dividends on redeemable convertible preferred stock	—	(3,419)
Net loss attributable to common stockholders	$ (10,308)	$ (25,921)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.51)	$ (8.64)
Weighted average common shares outstanding, basic and diluted	20,333,398	3,001,660
Comprehensive loss:		
Net loss	$ (10,308)	$ (22,502)
Other comprehensive loss:		
Unrealized loss on investments, net of tax of $0	—	(41)
Total other comprehensive loss	—	(41)
Comprehensive loss	$ (10,308)	$ (22,543)

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

CODIAK BIOSCIENCES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

FOR THE THREE MONTHS ENDED MARCH 31, 2021 AND 2020

(Unaudited, in thousands, except share data)

	SERIES A REDEEMABLE CONVERTIBLE PREFERRED STOCK		SERIES B REDEEMABLE CONVERTIBLE PREFERRED STOCK		SERIES C REDEEMABLE CONVERTIBLE PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN	ACCUM-ULATED OTHER COMPRE-HENSIVE (LOSS)	ACCUM-ULATED	TOTAL STOCK-HOLDERS EQUITY
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	CAPITAL	INCOME	DEFICIT	(DEFICIT)
Balance at December 31, 2020	—	$ —	—	$ —	—	$ —	18,787,579	$ 2	$ 302,655	$ —	$ (288,090)	$ 14,567
Exercise of options to purchase common stock	—	—	—	—	—	—	46,807	—	316	—	—	316
Stock-based compensation	—	—	—	—	—	—	—	—	2,273	—	—	2,273
Issuance of common stock upon public offering, net of issuance costs of $560	—	—	—	—	—	—	3,162,500	—	61,868	—	—	61,868
Net loss	—	—	—	—	—	—	—	—	—	—	(10,308)	(10,308)
Balance at March 31, 2021	—	$ —	—	$ —	—	$ —	21,996,886	$ 2	$ 367,112	$ —	$ (298,398)	$ 68,716
Balance at December 31, 2019	33,200,000	$ 44,169	20,520,828	$ 81,108	20,204,079	$ 89,507	2,997,040	$ —	$ 2	$ 43	$ (192,878)	$ (192,833)
Issuance of Series B redeemable convertible preferred stock in conjunction with sponsored research agreement	—	—	62,500	—	—	—	—	—	—	—	—	—
Exercise of options to purchase common stock	—	—	—	—	—	—	5,340	—	18	—	—	18
Accretion of preferred stock to redemption value	—	662	—	1,184	—	1,526	—	—	(1,768)	—	(1,604)	(3,372)
Stock-based compensation	—	—	—	—	—	—	—	—	1,750	—	—	1,750
Unrealized loss on investments	—	—	—	—	—	—	—	—	—	(41)	—	(41)
Net loss	—	—	—	—	—	—	—	—	—	—	(22,502)	(22,502)
Balance at March 31, 2020	33,200,000	$ 44,831	20,583,328	$ 82,292	20,204,079	$ 91,033	3,002,380	$ —	$ 2	$ 2	$ (216,984)	$ (216,980)

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

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CODIAK BIOSCIENCES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	THREE MONTHS ENDED MARCH 31,	
	2021	**2020**
Cash flows from operating activities:		
Net loss	$ (10,308)	$ (22,502)
Adjustments to reconcile net loss to net cash from operating activities:		
Stock-based compensation expense	2,273	1,750
Non-cash interest expense	135	67
Depreciation and amortization expense	1,386	1,028
Accretion of investments	—	(40)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	273	3,154
Operating right-of-use assets	236	502
Accounts payable	270	(920)
Accrued expenses	(1,696)	(4,315)
Deferred revenue	(12,345)	(134)
Operating lease liabilities	139	2,421
Net cash used in operating activities	(19,637)	(18,989)
Cash flows from investing activities:		
Purchases of property and equipment	(1,526)	(14,065)
Maturities of investments	—	70,562
Net cash (used in) provided by investing activities	(1,526)	56,497
Cash flows from financing activities:		
Proceeds from exercise of common stock options	316	18
Proceeds from public offering of common stock, net of issuance costs	62,204	—
Net cash provided by financing activities	62,520	18
Net Increase in cash, cash equivalents and restricted cash	41,357	37,526
Cash, cash equivalents and restricted cash, beginning of period	93,085	14,852
Cash, cash equivalents and restricted cash, end of period	$ 134,442	$ 52,378
Supplemental disclosures:		
Cash paid for interest	$ 563	$ 228
Non-cash investing and financing activities:		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 457	$ 3,136
Deferred offering costs included in accrued expenses	$ 336	$ —
Accretion of redeemable convertible preferred stock to redemption value	$ —	$ 3,372
Operating right-of-use assets obtained in exchange for operating lease liabilities	$ —	$ 23,186

	AS OF MARCH 31,	
Reconciliation to amounts within the condensed consolidated balance sheets	**2021**	**2020**
Cash and cash equivalents	$ 130,272	$ 47,842
Restricted cash	$ —	$ 366
Restricted cash, net of current portion	$ 4,170	$ 4,170
Cash, cash equivalents and restricted cash at end of period	$ 134,442	$ 52,378

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

1. Nature of the Business

Codiak BioSciences, Inc. (collectively, with its consolidated subsidiaries, any of Codiak, we, us, or the Company) was incorporated in Delaware on June 12, 2015 and is headquartered in Cambridge, Massachusetts. Codiak is a clinical-stage biopharmaceutical company focused on pioneering the development of exosome-based therapeutics, a new class of medicines with the potential to transform the treatment of a wide spectrum of diseases with high unmet medical need. Exosomes have evolved as intercellular transfer mechanisms for complex, biologically active macromolecules and have emerged in recent years as a compelling potential drug delivery vehicle. By leveraging Codiak's deep understanding of exosome biology, the Company has developed its engineering and manufacturing platform (the engEx Platform), to expand upon the innate properties of exosomes to design, engineer and manufacture novel exosome therapeutics. Codiak has utilized its engEx Platform to generate a deep pipeline of engineered exosomes (engEx exosomes) aimed at treating a broad range of diseases, including oncology, neuro-oncology, neurology, neuromuscular disease and infectious disease. In September 2020, Codiak initiated clinical trials for its two lead product candidates, exoSTING and exoIL-12, which are being developed to address solid tumors. Codiak has multiple preclinical and discovery programs that it is advancing either independently or through its strategic collaborations with Jazz Pharmaceuticals Ireland Limited (Jazz) and Sarepta Therapeutics, Inc. (Sarepta).

Since its inception, the Company has devoted substantially all of its resources to its research and development efforts, including activities to develop its engEx Platform, advance engEx product candidates into clinical trials, perform preclinical research to identify potential engEx product candidates, to perform process development to refine Codiak's exosome engineering and manufacturing processes, and to provide general and administrative support for these operations.

The Company has primarily funded its operations with proceeds from the sales of common stock, redeemable convertible preferred stock, collaborative and research arrangements with Jazz and Sarepta and its Loan and Security agreement with Hercules Capital, Inc. (Hercules). As of March 31, 2021, the Company has raised an aggregate of $168.2 million through the issuance of its redeemable convertible preferred stock and convertible debt, net of issuance costs, $24.6 million from its term loan facility with Hercules, net of issuance costs, and received $66.0 million in payments from its collaborations with Jazz and Sarepta. On October 16, 2020, the Company completed its initial public offering (IPO), pursuant to which it issued and sold 5,500,000 shares of its common stock at a public offering price of $15.00 per share, resulting in net proceeds of $74.4 million, after deducting underwriting discounts and commissions and other offering expenses. In addition, on February 17, 2021, the Company completed a follow-on public offering, pursuant to which it issued and sold 3,162,500 shares of its common stock (inclusive of the exercise of the underwriter's option to purchase 412,500 additional shares of common stock) at a public offering price of $21.00 per share, resulting in aggregate net proceeds of $61.9 million, after deducting underwriting discounts and commissions and other offering expenses.

The Company has incurred significant operating losses and negative cash flows from operations since inception. The Company expects to continue to incur significant expenses and operating losses for the foreseeable future. In addition, the Company anticipates that its expenses will increase significantly in connection with ongoing activities to support its engEx Platform development, drug discovery and preclinical and clinical development, in addition to creating a portfolio of intellectual property and providing administrative support.

The Company does not expect to generate significant revenue from sales of its engEx product candidates unless and until clinical development has been successfully completed and regulatory approval is obtained. If the Company obtains regulatory approval for any of its investigational products, it expects to incur significant commercialization expenses.

As a result, the Company will need substantial additional funding to support its continued operations and growth strategy. Until such a time as the Company can generate significant revenue from product sales, if ever, the Company expects to finance its operations through the sale of equity, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. The Company may be unable to raise additional funds or enter into such other agreements on favorable terms, or at all. If the Company fails to raise capital or enter into such agreements as, and when, needed, the Company may have to significantly delay, scale back or discontinue the development and commercialization of one or more of its product candidates or delay its pursuit of potential in-licenses or acquisitions.

As of March 31, 2021, the Company had cash and cash equivalents of $130.3 million. Management believes that its cash and cash equivalent resources at March 31, 2021, will be sufficient to allow the Company to fund its current operating plan through at least the next twelve months from the issuance of these financial statements.

The Company is subject to those risks associated with any biopharmaceutical company that has substantial expenditures for research and development. There can be no assurance that the Company's research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees and consultants. If the Company fails to become profitable or is unable to sustain profitability on a continuing basis, then it may be unable to continue its operations at planned levels and be forced to reduce its operations.

2. Summary of Basis of Presentation and Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated financial statements that accompany these notes have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) and applicable rules and regulations of the Securities and Exchange Commission (SEC) for interim financial reporting, consistent in all material respects with those applied in our Annual Report on Form 10-K for the year ended December 31, 2020 (2020 Annual Report). Any reference in these notes to applicable guidance is meant to refer to the authoritative accounting principles generally accepted in the United States as found in the Accounting Standard Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB). Certain reclassifications were made to the 2020 financial statements to conform to the current period's presentation. The reclassifications did not result in any changes to net loss or net stockholders' deficit in either period presented. This report should be read in conjunction with the consolidated financial statements in our 2020 Annual Report.

The consolidated financial statements include the Company and its 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 in the financial statements and accompanying notes. Actual results could materially differ from those estimates. Management considers many factors in selecting appropriate financial accounting policies and controls, and in developing the estimates and assumptions that are used in the preparation of these financial statements. Management must apply significant judgment in this process. In addition, other factors may affect estimates, including: expected business and operational changes, sensitivity and volatility associated with the assumptions used in developing estimates, and whether historical trends are expected to be representative of future trends. The estimation process often may yield a range of potentially reasonable estimates of the ultimate future outcomes and management must select an amount that falls within that range of reasonable estimates. Significant estimates relied upon in preparing the consolidated financial statements include, among others: estimates related to revenue recognition, the valuation of common stock and stock-based compensation awards, leases, accrued expenses and income taxes.

Significant Accounting Policies

The significant accounting policies used in preparation of these condensed consolidated financial statements for the three months ended March 31, 2021 are consistent with those described in our 2020 Annual Report.

Recent accounting pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In December 2019, the FASB issued ASU No. 2019-12 *Income Taxes (Topic 740)-Simplifying the Accounting for Income Taxes* (ASU 2019-12), as part of its initiative to reduce complexity in the accounting standards. The amendments in ASU 2019-12, eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. ASU 2019-12, also clarifies and simplifies other aspects of the accounting for income taxes. ASU 2019-12, is effective for the Company on January 1, 2022, with early adoption permitted. The Company is currently evaluating the potential impact that this standard may have on its financial position and results of operations.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326)* (ASU 2016-13). The new standard adjusts the accounting for assets held at amortized cost basis, including marketable securities accounted for as available-for-sale. The standard eliminates the probable initial recognition threshold and requires an entity to reflect its current estimate of all expected credit losses. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial assets to present the net amount expected to be collected. ASU 2016-13 is effective for the Company on January 1, 2023, with early adoption permitted. The Company is currently evaluating the potential impact that this standard may have on its financial position and results of operations.

3. Fair Value Measurements

The following tables present information about the Company's assets measured at fair value on a recurring basis, and indicate the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	MARCH 31, 2021				
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3	NOT SUBJECT TO LEVELING(1)
Assets:					
Cash equivalents:					
Money market funds	$ 26,501	$ —	$ —	$ —	$ 26,501
	$ 26,501	$ —	$ —	$ —	$ 26,501

	DECEMBER 31, 2020				
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3	NOT SUBJECT TO LEVELING(1)
Assets:					
Cash equivalents:					
Money market funds	$ 81,601	$ —	$ —	$ —	$ 81,601
	$ 81,601	$ —	$ —	$ —	$ 81,601

(1) Certain cash equivalents that are valued using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.

As of March 31, 2021 and December 31, 2020, the Company's cash equivalents consisted of money market funds invested in US Treasury securities with original maturities of less than 90 days from the date of purchase.

During the three months ended March 31, 2021 and 2020, there were no transfers between Level 1, Level 2 and Level 3.

The fair value of the Company's debt is classified as Level 2 for the periods presented and approximates its carrying value due to the variable interest rate.

4. Investments

All of the Company's investments matured during the year ended December 31, 2020. The Company did not hold any investments as of March 31, 2021.

Investments with original maturities of less than 90 days are included in cash and cash equivalents on the condensed consolidated balance sheets. Investments with maturities of less than 12 months would be considered current and those investments with maturities greater than 12 months would be considered non-current.

The Company did not recognize any realized gains or losses in the three months ended March 31, 2021. The Company recognized less than $0.1 million of realized losses in the three months ended March 31, 2020.

5. Property and Equipment, net

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

	MARCH 31, 2021	DECEMBER 31, 2020
Leasehold improvements	$ 23,961	$ 23,949
Laboratory equipment	15,812	14,837
Furniture and fixtures	1,288	1,288
Computer equipment and software	159	159
Construction-in-process	1,541	1,667
	$ 42,761	$ 41,900
Less: Accumulated depreciation and amortization	(11,876)	(10,490)
Property and equipment, net	$ 30,885	$ 31,410

Depreciation and amortization expense for the three months ended March 31, 2021 and 2020 was $1.4 million and $1.0, respectively.

6. Accrued Expenses

Accrued expenses consists of the following (in thousands):

	MARCH 31, 2021	DECEMBER 31, 2020
Accrued employee compensation	$ 3,422	$ 5,040
Accrued external research and development costs	1,351	1,475
Accrued professional services and consulting	1,156	902
Accrued facilities costs	296	846
Other expenditures	580	607
	$ 6,805	$ 8,870

7. Leases

We have entered into various long-term non-cancelable lease arrangements for our facilities, expiring at various times through 2029. Certain arrangements have free rent periods or escalating rent payment provisions; costs under such arrangements are recognized on a straight-line basis over the life of the leases. We have two locations in Massachusetts, our office and laboratory, located in Cambridge and manufacturing space, located in Lexington.

Operating Leases

500 Technology Square

The Company leased building space at 500 Technology Square in Cambridge, Massachusetts. Under the terms of the lease, the Company leased approximately 19,823 square feet for $1.5 million per year in base rent, which was subject to a 2.5% annual rent increase plus certain operating expenses and taxes. The Company accounted for this lease as an operating lease. The lease commenced on December 28, 2016 and originally expired on December 31, 2021. On August 26, 2019, the Company signed a lease termination to accelerate the expiration date of the lease to February 28, 2020.

4 Hartwell Place

On March 5, 2019, the Company entered into a lease for manufacturing space at 4 Hartwell Place in Lexington, Massachusetts. Under the terms of the lease, the Company leases approximately 18,707 square feet for $0.9 million per year in base rent, which is subject to a 3.0% annual rent increase during the initial lease term, plus certain operating expenses and taxes. The lease term commenced in July 2019 and will end in December 2029. The Company has the option to extend the lease twice, each for a 5-year period, on the same terms and conditions as the current lease, subject to a change in base rent based on market rates. The Company has fully occupied the space as of December 31, 2020. Upon execution of the lease agreement, the Company provided a security deposit of $0.4 million which is held in the form of a letter of credit and was classified as non-current restricted cash on the condensed consolidated balance sheets as of March 31, 2021 and December 31, 2020. The lease provides the Company with a tenant improvement allowance of up to $1.3 million, which is being amortized as a reduction to rent expense over the remaining lease term. As of March 31, 2021, the Company had received all $1.3 million of the tenant improvement allowance. Costs incurred related to the allowance are capitalized as leasehold improvements.

35 CambridgePark Drive

On March 22, 2019, the Company entered into a lease for office and laboratory space at 35 CambridgePark Drive in Cambridge, Massachusetts. Under the terms of the lease, the Company leases approximately 68,258 square feet for $4.9 million per year in base rent, which is subject to a 3.0% annual rent increase during the initial lease term, plus certain operating expenses and taxes. The lease term commenced upon execution of the lease on March 26, 2019 and is expected to end in November 2029. The Company has the option to extend the lease for a 10-year period on the same terms and conditions as the current lease, subject to a change in base rent based on market rates. The Company occupied the space in February 2020 as its new corporate headquarters. Upon execution of the lease agreement, the Company provided a security deposit of $3.7 million which is held in the form of a letter of credit and was classified as non-current restricted cash on the condensed consolidated balance sheets as of March 31, 2021 and December 31, 2020. The lease provides the Company with a tenant improvement allowance of $12.3 million, subject to reduction for a 2% construction oversight fee due to the landlord, which is being amortized as a reduction to rent expense over the remaining lease term. As of December 31, 2020, the Company had received all $12.3 million of the tenant improvement allowance. Costs incurred related to the allowance are capitalized as leasehold improvements.

Sublease

On April 27, 2020, the Company entered into a sublease for 23,280 square feet of its leased space at 35 CambridgePark Drive. Under the terms of the sublease, the sublessee is to pay the Company approximately $1.3 million per year, which is subject to a 3.0% annual rent increase, plus certain operating expenses. The Company remains jointly and severally liable under the head lease and accounts for the sublease as an operating lease. The lease term commenced on May 18, 2020 and is expected to end in May 2022. The sublessee has the option to extend the sublease for a one-year period on the same terms and conditions as the current sublease, subject to a change in base rent based on the greater of (i) an increase of 3% of the annual rent owed by the sublessee in year two, and (ii) market rent for the subleased premises. Upon execution of the sublease agreement, the sublessee provided the Company a security deposit of $0.3 million which is held in the form of a letter of credit. During the three months ended March 31, 2021, the Company recognized sublease income of $0.4 million, which was presented in other income on the condensed consolidated statements of operations and comprehensive loss. There was no sublease income recognized during the three months ended March 31, 2020.

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

	THREE MONTHS ENDED MARCH 31, 2021	THREE MONTHS ENDED MARCH 31, 2020
Operating lease costs	$ 1,209	$ 1,212
Short-term lease costs	6	3
Variable lease costs	669	616
Sublease income	(357)	—
	$ 1,527	$ 1,831

Variable lease costs were primarily related to operating expenses, taxes and utilities associated with the operating leases, which were assessed based on the Company's proportionate share of such costs for the leased premises.

Additional lease information is summarized in the following table (in thousands, except lease term and discount rate):

	THREE MONTHS ENDED MARCH 31, 2021	THREE MONTHS ENDED MARCH 31, 2020
Cash paid for amounts included in the measurement of operating lease liabilities	$ 1,483	$ 1,698
Weighted-average remaining lease term - operating leases (years)	8.7	9.7
Weighted-average discount rate - operating leases	10%	10%

Undiscounted cash flows used in calculating the Company's operating lease liabilities and amounts to be received under the sublease at 35 CambridgePark Drive as of March 31, 2021 are as follows (in thousands):

Fiscal Year	OPERATING LEASE PAYMENTS	SUBLEASE RECEIPTS	NET OPERATING LEASE PAYMENTS
2021 (remainder of the year)	4,463	961	3,502
2022	6,123	483	5,640
2023	6,307	—	6,307
2024	6,496	—	6,496
2025	34,978	—	34,978
Total undiscounted cash flows	$ 58,367	$ 1,444	$ 56,923
Less: Amounts representing interest	(20,206)		
Present value of lease liabilities	$ 38,161		

8. Commitments and contingencies

Purchase commitments

Under the Company's Sponsored Research Agreement with the University of Texas MD Anderson Cancer Center (MDACC), as amended (the MDACC Research Agreement), the Company was obligated to pay fixed quarterly cash payments to MDACC over the term of the agreement. The Company was also obligated to make additional quarterly payments pursuant to the MDACC Research Agreement, payable in the form of a fixed number of the Company's Series B redeemable convertible preferred stock throughout the remainder of the agreement. Pursuant to the Third Amendment to the MDACC Research Agreement, the termination date was modified to be effective December 31, 2019. The Company made the final $1.2 million cash payment and issued the remaining shares of Series B redeemable convertible preferred stock to MDACC in January 2020. There are no further payments or share issuances owed to MDACC pursuant to the MDACC Research Agreement.

In November 2015, the Company entered into a Patent and Technology License Agreement with MDACC, as amended in April 2018 (the MDACC License Agreement). Under the terms of this agreement the Company is obligated to pay milestone payments upon the achievement of development and regulatory milestones and payments upon the execution of sublicenses for qualifying products, in addition to potential royalty payments on commercial products.

Additionally, the Company has a license agreement with Kayla Therapeutics S.A.S. (Kayla) under which the Company is obligated to make milestone payments upon the achievement of clinical and regulatory milestones and payments upon the execution of sublicenses, in addition to potential royalty payments on commercial products. The first milestone was achieved upon the first dosing of exoSTING to the first subject in the Company's Phase 1/2 clinical trial in September 2020. Upon achievement of the milestone, the Company was obligated to make a nonrefundable payment of $15.0 million in cash and issue 177,318 shares of common stock to Kayla. The common stock was issued as of the date of dosing, and the cash payment of $15.0 million was paid during 2020. The expense related to the milestone payment to Kayla was recorded as research and development expense in the year ended December 31, 2020 because the associated asset was in development at the time the contingency that triggered the milestone was resolved.

Purchase orders

The Company has agreements with third parties for various services, including services related to clinical and preclinical operations and support, for which the Company is not contractually able to terminate for convenience to avoid future obligations to the vendors. Certain agreements provide for termination rights subject to termination fees or wind down costs. Under such agreements, the Company is contractually obligated to make certain payments to vendors, primarily to reimburse them for their unrecoverable outlays incurred prior to cancelation. The actual amounts the Company could pay in the future to the vendors under such agreements may differ from the purchase order amounts due to cancellation provisions.

Indemnification agreements

The Company enters into standard indemnification agreements and/or indemnification sections in other agreements in the ordinary course of business. Pursuant to the agreements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally the Company's business partners. The term of these indemnification agreements is generally perpetual any time after execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification agreements. The Company does not believe that the outcome of any existing claims under indemnification arrangements will have a material effect on its financial position, results of operations or cash flows, and it had not accrued any liabilities related to such obligations in its condensed consolidated balance sheets as of March 31, 2021 or December 31, 2020.

Legal proceedings

The Company is not currently party to any material legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of FASB ASC Topic 450, *Contingencies*. The Company expenses costs related to its legal proceedings as incurred.

9. Indebtedness

On September 30, 2019 (the Closing Date), the Company entered into a Loan and Security Agreement (the Loan Agreement) with Hercules pursuant to which a term loan in an aggregate principal amount of up to $75.0 million (the Term Loan Facility) is available to the Company in four tranches, subject to certain terms and conditions. $10.0 million of the first tranche was advanced to the Company on the Closing Date and an additional $15.0 million under the first tranche was drawn down on July 24, 2020. Upon satisfaction of certain liquidity and clinical milestones, the second tranche was available under the Term Loan Facility, which allowed the Company to borrow an additional amount up to $10.0 million through March 31, 2021. As of March 31, 2021 the Company did not elect to borrow against the second $10.0 million tranche. Upon satisfaction of certain additional clinical milestones, the third tranche is available under the Term Loan Facility, which allows the Company to borrow an additional amount up to $10.0 million through June 30, 2021. The fourth tranche, which allows the Company to borrow an additional amount up to $30.0 million, will be available upon Hercules' approval on or prior to December 15, 2021.

Advances under the Term Loan Facility bear interest at a rate equal to the greater of (i) 9.00% plus the Prime Rate (as reported in The Wall Street Journal) less 5.25%, and (ii) 9.00%. The Company makes interest only payments through April 1, 2022. The interest only period may be extended to November 1, 2022 upon satisfaction of certain milestones. Following the interest only period, the Company will repay the principal balance and interest on the advances in equal monthly installments through October 1, 2024.

The Company may prepay advances under the Loan Agreement, in whole or in part, at any time subject to a prepayment charge (Prepayment Premium) equal to: (i) 2.0% of amounts so prepaid, if such prepayment occurs during the first year following the Closing Date; (ii) 1.5% of the amount so prepaid, if such prepayment occurs during the second year following the Closing Date, or (iii) 1.0% of the amount so prepaid, if such prepayment occurs after the second year following the Closing Date.

Upon prepayment or repayment of all or any of the term loans under the Term Loan Facility, the Company will pay (in addition to any Prepayment Premium) an end of term charge of 5.5% of the aggregate funded amount under the Term Loan Facility. With respect to the first tranche, an end of term charge of $1.4 million will be payable upon any prepayment or repayment. To the extent that the Company is provided additional advances under the Term Loan Facility, the 5.5% end of term charge will be applied to any such additional amounts.

The Term Loan Facility is secured by a lien on substantially all of the Company's assets, other than the Company's intellectual property. The Company has agreed to not pledge or grant a security interest on the Company's intellectual property to any third party. The Term Loan Facility also contains customary covenants and representations, including a liquidity covenant, whereby the Company is obligated to maintain, in an account covered by Hercules' account control agreement, an amount equal to the lesser of: (i) 110% of the amount of the Company's obligations under the Term Loan Facility or (ii) the Company's then existing cash and cash equivalents; financial reporting covenant and limitations on dividends, indebtedness, collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, deposit accounts, and subsidiaries.

Upon issuance, the initial advance under the first tranche was recorded as a liability with an initial carrying value of $9.5 million, net of debt issuance costs. The July 24, 2020 advance under the first tranche was recorded as a liability with an initial carrying value of $15.0 million. The initial carrying value of all outstanding advances will be accreted to the repayment amount, which includes the outstanding principal plus the end of term charge, through interest expense using the effective interest rate method over the term of the loan. As of March 31, 2021 and December 31, 2020, the carrying value of the term loan was $25.1 million and $25.0 million, respectively, which is classified as a long-term liability on the Company's condensed consolidated balance sheets as of each respective period. The fair value of debt is classified as Level 2 for the periods presented and approximates its carrying value.

The events of default under the Loan Agreement include, without limitation, and subject to customary grace periods, the following: (i) any failure by the Company to make any payments of principal or interest under the Loan Agreement, (ii) any breach or default in the performance of any covenant under the Loan Agreement, (iii) the occurrence of a material adverse effect, (iv) any making of false or misleading representations or warranties in any material respect, (v) the Company's insolvency or bankruptcy, (vi) certain attachments or judgments on the assets of the Company or (vii) the occurrence of any material default under certain agreements or obligations of the Company's involving indebtedness. If an event of default occurs, Hercules is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

The future principal payments under the Loan Agreement are as follows as of March 31, 2021 (in thousands):

Fiscal Year	PRINCIPAL
2021	—
2022	6,106
2023	9,888
2024	9,006
	$ 25,000

During the three months ended March 31, 2021 and 2020, the Company recognized $0.7 million and $0.3 million of interest expense related to the Loan Agreement, respectively. Such amounts were reflected as interest expense on the condensed consolidated statements of operations and comprehensive loss.

10. Stock-based compensation

Stock plans

As of March 31, 2021, the Company has granted service-based awards, which vest over a defined period of service, and performance-based and market-based awards, which vest upon the achievement of defined conditions. Service-based awards generally vest over a four-year period, with the first 25% vesting following twelve months of continued employment or service, and the remainder vesting in twelve quarterly installments over the following three years.

2020 Stock Option and Incentive Plan

The 2020 Stock Option and Incentive Plan (the 2020 Plan), was adopted by the Company's board of directors in October 2020, approved by the Company's stockholders in October 2020 and became effective as of October 12, 2020. The 2020 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock units, and other stock-based awards. The number of shares of the Company's common stock initially reserved for issuance under the 2020 Plan was 1,043,402 shares. The number of shares reserved shall be annually increased on the first day of each calendar year beginning on January 1, 2021 and ending on and including January 1, 2030, equal to the lesser of 5% of the number of shares of common stock outstanding on the final day of the immediately preceding calendar year or such lesser number of shares determined by the compensation committee. As of January 1, 2021, 938,384 additional shares of common stock were reserved for issuance under the 2020 Plan.

The shares of the Company's common stock subject to outstanding awards under the 2015 Plan that expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right will be added back to the shares of common stock available for issuance under the 2020 Plan. As of March 31, 2021, there were 1,575,840 shares available for future issuance under the 2020 Plan.

The Company's stock options expire after approximately ten years from the date of grant. As of March 31, 2021, the Company does not hold any treasury shares. Upon stock option exercise, the Company issues new shares and delivers them to the participant.

2020 Employee stock purchase plan

The Company's 2020 Employee Stock Purchase Plan, (the ESPP) was adopted by our board of directors in October 2020, approved by the Company's stockholders in October 2020 and became effective October 12, 2020. The ESPP initially provides participating employees with the opportunity to purchase up to an aggregate of 208,680 shares of the Company's common stock. The number of shares of common stock reserved for issuance under the ESPP will automatically increase on each January 1st, beginning on January 1, 2021 and ending on January 1, 2030, by the lesser of (i) 834,720 shares of common stock, (ii) 0.5% of the outstanding shares of common stock on the immediately preceding December 31st or (iii) such lesser number of shares as determined by the administrator of the ESPP. There was no increase in the number of common stock reserved for issuance under the ESPP as of March 31, 2021.

Stock Options

The following table summarizes the Company's option activity during the three months ended March 31, 2021:

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE PER SHARE	WEIGHTED AVERAGE REMAINING CONTRACTUAL TERM (In years)	AGGREGATE INTRINSIC VALUE (1) (In thousands)
Outstanding as of December 31, 2020	4,543,318	$ 8.52	7.22	$ 108,048
Granted	813,000	26.84		
Exercised	(46,807)	6.76		
Forfeited/Cancelled	(161,565)	13.76		
Outstanding as of March 31, 2021	5,147,946	11.26	6.99	29,108
Exercisable as of March 31, 2021	2,707,703	6.87	5.46	22,236
Vested and expected to vest as of March 31, 2021	5,147,946	11.26	6.99	29,108

(1) Aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair value of common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock as of March 31, 2021 and December 31, 2020.

The weighted average grant date fair value per share of options granted during the three months ended March 31, 2021 and 2020 was $16.85 per share and $6.33 per share, respectively.

The aggregate intrinsic value of stock options exercised during the three months ended March 31, 2021 and 2020 was $1.0 million and less than $0.1 million, respectively.

Stock Option Valuation

Service-based awards

The key assumptions used in the Black-Scholes option pricing model on the date of grant for options with service-based vesting conditions were as follows, presented on a weighted average basis:

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Risk-free interest rate	0.65%	1.63%
Expected term (in years)	6.25	6.25
Expected volatility	70.25%	66.90%
Expected dividend yield	0.00%	0.00%
Fair value per share of common stock	$ 16.85	$ 6.33

Performance-based awards

The Company did not grant any performance-based awards during the three months ended March 31, 2021 and 2020.

Stock-based Compensation Expense

The following table presents the components and classification of stock-based compensation expense (in thousands):

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Research and development	$ 1,058	$ 1,033
General and administrative	1,215	717
	$ 2,273	$ 1,750
Employee	$ 2,239	$ 1,551
Non-employee	34	199
	$ 2,273	$ 1,750

The Company recognized less than $0.1 million during the three months ended March 31, 2021 related to performance-based awards that vested upon achievement of their underlying performance condition. The Company did not recognize expense related to performance-based awards during the three months ended March 31, 2020 because the associated performance conditions were not deemed probable of achievement.

As of March 31, 2021, the total unrecognized compensation expense related to the Company's option awards was $24.6 million, which the Company expects to recognize over a weighted-average period of approximately 3.14 years.

11. Collaboration agreements

The following table summarizes our total consolidated net revenue from our strategic collaborators for the periods presented (in thousands):

	THREE MONTHS ENDED MARCH 31,	
Collaboration Revenue by Strategic Collaborator:	2021	2020
Jazz	$ 11,618	$ 134
Sarepta	1,573	—
Total collaboration revenue	$ 13,191	$ 134

The following tables present changes in the Company's contract assets and liabilities for the three months ended March 31, 2021 (in thousands):

	THREE MONTHS ENDED MARCH 31, 2021			
	BALANCE BEGINNING OF PERIOD	ADDITIONS	DEDUCTIONS	BALANCE END OF PERIOD
Contract assets:				
Account receivable (1)	$ —	$ 847	$ —	$ 847
Contract liabilities:				
Deferred revenue	$ 62,697	$ —	$ (12,344)	$ 50,353

(1) Included in prepaid expenses and other current assets as shown within the condensed consolidated balance sheets.

During the three months ended March 31, 2021 and 2020, the Company recognized the following revenue (in thousands):

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Revenue recognized in the period from:		
Amounts included in deferred revenue at the beginning of the period	$ 12,344	$ 134

Jazz collaboration and license agreement

Agreement summary

On January 2, 2019, the Company entered into a Collaboration and License Agreement (the Jazz Collaboration Agreement) with Jazz focused on the research, development and commercialization of exosome therapeutics to treat cancer. The Company granted Jazz an exclusive, worldwide, sublicensable, royalty-bearing license to develop, manufacture and commercialize therapeutic candidates directed at up to five oncogene targets (each, a Development and Commercialization License) to be developed using the Company's engEx Platform for exosome therapeutics. The targets, one of which is NRAS, have been validated in hematological malignancies and solid tumors but generally have been undruggable with current modalities. On December 23, 2020, the Company and Jazz entered into an amendment to the Jazz Collaboration Agreement (the First Amendment). The First Amendment extended the time available for Jazz to exercise an option to July 2, 2021 with respect to either the inclusion of an additional target or initiation of an additional program. The First Amendment did not modify any of the other provisions of the Jazz Collaboration Agreement and did not result in any change in transaction price.

Four of the targets were identified at the inception of the collaboration (the Initial Collaboration Targets) and Jazz has the option to select a fifth target in accordance with the terms of the Jazz Collaboration Agreement (an Additional Target). Jazz will also have the option to nominate an additional target (a Replacement Target) if two of the Initial Collaboration Targets fail prior to acceptance of an Investigational New Drug application (IND). As set forth in the Jazz Collaboration Agreement, early development will also include different engineered exosomes directed to the same target (each, a Backup Candidate).

Under the terms of the Jazz Collaboration Agreement, the Company is responsible for the initial development of therapeutic candidates directed at all five targets as well as the costs associated with such development activities. In April 2021, the Company and Jazz mutually agreed to discontinue their work on exoASO™-STAT3 (STAT3), one of the five oncogene targets subject to the Jazz Collaboration Agreement. In addition, the Company is responsible for development costs up to and including IND acceptance, and certain development costs of the Phase 1, Phase 1/2 and Phase 2 clinical trials for each of the first two therapeutic candidates to commence clinical trials.

Following the conclusion of the applicable clinical trials for the first two candidates, and for the remaining three candidates, Jazz will be responsible for the further development and associated costs of the therapeutic candidates, including all Phase 3 and any Phase 4 clinical trials, potential regulatory submissions and commercialization for each product at its sole cost and expense. The Company has the option to participate in co-commercialization and cost/profit-sharing in the US and Canada on up to two products, subject to a one-time veto right by Jazz (which exercise of such veto may result in an additional $20.0 million milestone payment to the Company related to regulatory approval of the product). Should the Company choose to exercise this option, the Company and Jazz will equally split most of the remaining development costs and the net profits or losses in the US and Canada, while the Company would receive milestones and royalties for sales in other parts of the world. In the event that the Company does not exercise its option, the Company will receive milestones and royalties based upon sales worldwide.

As part of the Jazz Collaboration Agreement, Jazz has paid the Company an up-front payment of $56.0 million. The Company is eligible to receive up to $20.0 million in preclinical development milestone payments, the first of which is for $10.0 million and will be due from Jazz upon the second initiation of IND-enabling toxicology studies for a collaboration target. The Company is also eligible to receive milestone payments totaling up to $200.0 million per product based on IND acceptance, clinical and regulatory milestones, including approvals in the US, the EU and Japan, and sales milestones. In addition, the Company will receive tiered royalties on net sales of each approved product, with percentages ranging from mid-single digits in the lowest tier to high teens in the highest tier, excluding such net sales in the US and Canada if the Company has exercised its option to co-commercialize the related product. The milestone and royalty payments are each subject to reduction under certain specified conditions set forth in the Jazz Collaboration Agreement, provided, however, that in the case of a termination with respect to a licensed compound that is a Development Candidate (as defined below), Jazz will maintain its obligation to reimburse the Company for certain development costs.

Either party can terminate the agreement with respect to a region and a target upon the other party's material breach relating to such region and target, subject to specified notice and cure provisions. Jazz also has the right to terminate the agreement in its entirety or in part (with respect to a particular collaboration target, research program, licensed compound or product, region or, in some cases, country) for convenience at any time upon 180 days' written notice or for safety reasons immediately upon notice, provided, however, that in the case of a termination for convenience with respect to a licensed compound that is a Development Candidate, Jazz will maintain its obligation to reimburse the Company for certain development costs.

Absent early termination, the term of the Jazz Collaboration Agreement will continue on a country-by-country basis and licensed product-by-licensed product basis, until the expiration of the royalty payment obligations for the country and the licensed product (or, in the case of a shared territory for an optioned product, will continue for so long as such optioned product is being sold by Jazz or its affiliates or sublicensees in the shared territory). Any expiration or termination of the Jazz Collaboration Agreement does not affect the rights and obligations of the parties that accrued prior to the expiration or termination date. Upon termination of the Jazz Collaboration Agreement, all licenses granted by the Company to Jazz will immediately terminate.

Accounting analysis

The Company evaluated the Jazz Collaboration Agreement, as amended, in accordance with the provisions of ASC 606. The Company concluded that the contract counterparty is a customer in the arrangement. The Company accounted for the extension of the exercise period pursuant to the First Amendment as a modification. The Company did not account for the First Amendment as a separate contract because the amendment did not result in an increase to the scope of the arrangement nor was the pricing of the arrangement increased. Accordingly, the First Amendment was combined with the Jazz Collaboration Agreement. For the remaining promised goods and services that are distinct from the goods and services that were transferred on or before the date of the effectiveness of the First Amendment, the Company has accounted for the modification on a prospective basis as if it were a termination of the existing contract and the creation of a new contract. Conversely, the remaining promised goods and services that are not distinct from the goods and services that were transferred on or before the date of the effectiveness of the First Amendment were deemed to form part of a single performance obligation that is partially satisfied so they have been accounted for as part of the existing contract for which an adjustment has been recorded on a cumulative catch-up basis at the date of the modification.

The Company determined that the change to the arrangement that was enacted by the First Amendment did not impact the identification of the promises in the contract. The Company's obligations under the Jazz Collaboration Agreement, as amended, comprise the following substantive promises:

- Development and Commercialization Licenses for each of the Initial Collaboration Targets (each, a Development and Commercialization License Promise)
- Research services related to the conduct of the applicable work plan, which provides a framework for the applicable research activities, performed on a target-by-target basis, pursuant to a program aimed at identifying and evaluating exosome therapeutics directed to the individual targets (each such program for research activities, a Research Program) and sets forth the specific activities to be undertaken over the course of such Research Program, including the associated objectives and timelines therefor (each, a Work Plan) for each of the four Initial Collaboration Targets that are the subject of the collaboration (each, a Research Services Promise)

- Preclinical and clinical services related to the completion of the Early Development Plans (as defined below) for each of the four Initial Collaboration Targets that are the subject of the collaboration (each, a Development Services Promise)
- Material right associated with Jazz's ability to obtain either: (i) a Development and Commercialization License, research services pursuant to an associated Work Plan, and preclinical and clinical services pursuant to an associated plan that describes the preclinical studies, manufacturing process development, and clinical development to be performed with respect to an applicable product candidate that the parties determine is suitable for IND-enabling studies (each such product candidate, a Development Candidate) and the associated timelines, budget and resource allocation therefor (each, an Early Development Plan) for an Additional Target or (ii) research services pursuant to an associated Work Plan and preclinical and clinical services pursuant to an associated Early Development Plan for an additional Research Program for one of the Initial Collaboration Targets (an Additional Research Program, and such material right, the Additional Target or Program Material Right Promise)
- Material right associated with Jazz's ability to obtain a Development and Commercialization License, research services pursuant to an associated Work Plan and preclinical and clinical services pursuant to an associated Early Development Plan for a Replacement Target (the Replacement Target Material Right Promise)
- Material rights associated with Jazz's ability to obtain services with respect to non-GLP toxicology studies for two Backup Candidates (each, a Backup Candidate Material Right Promise)

For purposes of evaluating the Jazz Collaboration Agreement, as amended, in accordance with ASC 606, the Company has determined that the ability for Jazz to either nominate an Additional Target or request an Additional Research Program represents a material right because the pricing inherent in such option provides the customer with a discount that is incremental to the range of discounts that would otherwise be granted for the related goods and services to comparable customers. More specifically, the Development and Commercialization License and associated research services under the related Work Plan that would be provided pursuant to Jazz's option to include an Additional Target within the scope of the arrangement would be provided at no additional cost to Jazz. Similarly, the research services under a Work Plan that would be provided upon an exercise of Jazz's option to request an Additional Research Program would be provided at no additional cost to Jazz. The deadline for the exercise of this option was extended by a defined period of time under the First Amendment, but the option was otherwise unchanged. Additionally, the Company has determined that the ability for Jazz to elect a Replacement Target represents a material right because the pricing inherent in such option provides the customer with a discount that is incremental to the range of discounts that would otherwise be granted for the related goods and services to comparable customers. Consistent with an Additional Target, to the extent Jazz requests that a Replacement Target be included within the scope of the arrangement, the Development and Commercialization License and associated research services under the related Work Plan would be provided at no additional cost to Jazz. Lastly, the Company determined that the ability for Jazz to request the Company to render services with respect to non-GLP toxicology studies for certain Backup Candidates represents a material right because the pricing inherent in such option also provides the customer with a discount that is incremental to the range of discounts that would otherwise be granted for the related services to comparable customers. Along the same lines as the other material rights, upon Jazz's exercise, the Company would render services with respect to the conduct of non-GLP toxicology studies for one Backup Candidate for each of the first two Development Candidates at no cost to Jazz.

The Company determined that the extension of the exercise period pursuant to the First Amendment did not affect the composition of the performance obligations. For purposes of evaluating the Jazz Collaboration Agreement, as amended, in accordance with ASC 606, the Company determined that the Development and Commercialization License Promise for each of the Initial Collaboration Targets is neither capable of being distinct nor distinct within the context of the contract from the associated Research Services Promise and Development Services Promise. Due to the specialized nature of the services to be provided by the Company, specifically with respect to the Company's proprietary expertise related to exosome engineering and manufacturing, the customer cannot benefit from or utilize the license without the research and development services. Moreover, the Company concluded that the Development and Commercialization License Promise, Research Services Promise and Development Services Promise for each individual target are interrelated to and interdependent on each other. Due to the nature of the services and capabilities of the parties, the customer cannot derive its intended benefit from the license without the accompanying research and development services to be performed pursuant to the underlying Work Plans and Early Development Plans. The nature of the combined performance obligation is to provide certain research and development services for targets that are designated for inclusion in the arrangement in order to transfer a combined item to the customer in the form of a product candidate for which human proof of concept has been established. As such, the Company has treated the Development and Commercialization License Promise, Research Services Promise and Development Services Promise related to each target as a combined performance obligation (each, a License and Services Performance Obligation; collectively, the License and Services Performance Obligations). However, the Company has determined that the License and

Services Performance Obligation associated with each target is distinct from the License and Services Performance Obligation for the other targets because: (i) Jazz can benefit from the license and research and development services for a given target on their own since the results related thereto can be evaluated discretely and (ii) each bundle for an individual target is separately identifiable since it does not affect either the Company's ability to perform or Jazz's ability to assess the program for any other target. Thus, the License and Services Performance Obligation for each target is a separate performance obligation. Each of the material right promises has been deemed a distinct performance obligation due to their nature as specified in ASC 606. Therefore, the Company has identified the following eight performance obligations in connection with its obligations under the Jazz Collaboration Agreement, as amended:

- Combined performance obligation comprising the Development and Commercialization License Promise, Research Services Promise and Development Services Promise for each of the four Initial Collaboration Targets (the License and Services Performance Obligation: Initial Collaboration Target #1, License and Services Performance Obligation: Initial Collaboration Target #2, License and Services Performance Obligation: Initial Collaboration Target #3 and License and Services Performance Obligation: Initial Collaboration Target #4, respectively)
- Material right associated with Jazz's option to request either: (i) an Additional Target or (ii) an Additional Research Program (the Additional Target or Program Material Right Performance Obligation)
- Material right associated with Jazz's option to request a Replacement Target (the Replacement Target Material Right Performance Obligation)
- Material right associated with Jazz's option to request certain Backup Candidates (the Backup Candidate Material Right Performance Obligation: Backup Candidate #1 and Backup Candidate Material Right Performance Obligation: Backup Candidate #2, respectively)

Accordingly, in accounting for the modification resulting from the First Amendment, the License and Services Performance Obligations were treated as part of the existing contract, whereas the material right performance obligations were treated as a termination of the existing contract and the creation of a new contract.

At inception of the arrangement, the Company measured the transaction price solely in reference to the $56.0 million non-refundable and non-creditable up-front payment. None of the variable consideration payable under the arrangement was included in the transaction price at inception. The Company estimates the amount of variable consideration to which it expects to be entitled associated with cost reimbursements, in addition to preclinical development, IND acceptance, clinical and regulatory milestones, using the most likely amount method. The Company did not include any cost reimbursements in the transaction price at inception due to the uncertainty around the Company's receipt of such amounts as it is dependent upon viable product candidates progressing through development. All preclinical development, IND acceptance, clinical and regulatory milestone payments were excluded from the transaction price at inception due to the uncertainty of initiating the specified phase of preclinical development, achieving the associated development criteria or receiving approval or acknowledgement from the relevant regulatory authorities. Further, regulatory milestone payments will be excluded from the transaction price until the associated regulatory milestone is achieved. The sales milestone payments, royalties and profit share are subject to the royalty recognition constraint because the associated license is deemed to be the sole or predominant item to which the payments relate. As of December 23, 2020, the total remaining consideration was $55.0 million which solely comprises the transaction price on the original contract not yet recognized as revenue because the modification did not change the arrangement consideration. The Company updates its assessment of the estimated transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur. There have been no changes to the Company's estimate of variable consideration since inception of the arrangement through March 31, 2021. Through March 31, 2021, the Company has not achieved any preclinical development, IND acceptance, clinical, regulatory or sales milestones or earned any royalties or profit share under the Jazz Collaboration Agreement.

Upon modification, the Company allocated the transaction price associated with the remaining consideration to each of the identified performance obligations on a relative standalone selling price basis. Certain elements of variable consideration are attributable to specific performance obligations; however, no amounts of variable consideration have been included in the transaction price. The Company updated the standalone selling prices for each of the identified performance obligations to reflect assumptions and estimates in effect on the modification date. The Company determined the updated standalone selling prices for each of the performance obligations included in the Jazz Collaboration Agreement considering relevant market conditions, entity-specific factors and information about the customer, while maximizing the use of available observable inputs. As a result, the transaction price associated with the remaining consideration was reallocated to the identified performance obligations as follows (in thousands):

PERFORMANCE OBLIGATION	ALLOCATED TRANSACTION PRICE
License and Services Performance Obligation: Initial Collaboration Target #1	$ 12,717
License and Services Performance Obligation: Initial Collaboration Target #2	13,702
License and Services Performance Obligation: Initial Collaboration Target #3	10,866
License and Services Performance Obligation: Initial Collaboration Target #4	13,593
Additional Target or Program Material Right Performance Obligation	2,812
Replacement Target Material Right Performance Obligation	1,188
Backup Candidate Material Right Performance Obligation: Backup Candidate #1	47
Backup Candidate Material Right Performance Obligation: Backup Candidate #2	47
Transaction Price	$ 54,972

The standalone selling price for each of the License and Services Performance Obligations was estimated using a hybrid approach whereby the standalone selling price for each of the Development and Commercialization License Promises was estimated using an income approach, while the standalone selling price of the Research Services Promises and Development Services Promises for each of the plans associated with the individual targets were estimated using an expected cost-plus margin approach. The discounted cash flow analysis utilized in deriving the estimated standalone selling price for each of the Development and Commercialization License Promises included such key assumptions as: development timeline, revenue forecast, discount rate and probabilities of technical and regulatory success. The cost-plus margin approach utilized in deriving the estimated standalone selling price for the Research Services Promises and Development Services Promises for each target was based on the estimate of the overall effort to perform the underlying Work Plans and Early Development Plans and an estimated market rate for the associated services. The standalone selling prices for the Additional Target or Program Material Right Performance Obligation and Replacement Target Material Right Performance Obligation were estimated based on a similar hybrid approach as the License and Services Performance Obligations, but also contemplated the discount the customer could receive without exercising the corresponding option and the likelihood that the respective option will be exercised. The standalone selling price for the Additional Target or Program Material Right Performance Obligation also reflects the likelihood that each of the alternatives will be selected by Jazz. Lastly, the standalone selling prices for the Backup Candidate Material Right Performance Obligations was estimated using an expected cost-plus margin approach based on the estimate of the overall effort to perform the associated non-GLP toxicology studies.

Amounts allocated to each of the License and Services Performance Obligations is recognized as revenue over time commensurate with the term of the associated Research Program and development activities performed pursuant to a program focused on establishing human proof-of-concept for a given target using a proportional performance model which depicts the Company's performance in transferring control to the customer. The Company utilizes a cost-based input method to measure progress because such method best reflects the satisfaction of the performance obligation as the underlying services are provided. In applying the cost-based input method of revenue recognition, the Company uses actual costs incurred relative to the budgeted costs to complete each of the respective programs. These costs consist primarily of internal full-time equivalent effort and third-party costs. Allocated amounts are recognized as revenue based on actual costs incurred as a percentage of total budgeted costs. A cost-based input method of revenue recognition requires management to make estimates of costs to complete the Company's performance obligations. In making such estimates, significant judgment is required to evaluate assumptions related to cost estimates. The cumulative effect of revisions to estimated costs to complete the programs is recorded in the period in which changes are identified and amounts can be reasonably estimated. A significant change in these assumptions and estimates could have a material impact on the timing and amount of revenue recognized in future periods.

On April 2, 2021, the Company and Jazz mutually agreed to discontinue their work on STAT3, one of five oncogene targets subject to the Jazz Collaboration Agreement. The Company recognized the remaining $10.9 million in deferred revenue allocated to this target during the three months ended March 31, 2021 as the preclinical activities that informed this decision were completed prior to the end of the period. As of March 31, 2021, with the exception of STAT3, there were no significant changes in the Company's assumptions or estimates related to the costs to complete. Codiak and Jazz continue to jointly advance their research and development efforts on other exosome-based therapeutic programs to treat cancer pursuant to the Jazz Collaboration Agreement. Amounts allocated to each of the Additional Target or Program Material Right Performance Obligation, Replacement Target Material Right Performance Obligation and Backup Candidate Material Right Performance Obligations will be recognized as revenue upon the earlier of when: (i) the option is exercised wherein the future goods and/or services are transferred or (ii) the option expires. As of March

31, 2021, all of the material rights are outstanding as none of the material rights have either been exercised or have expired.

The aggregate amount of the transaction price allocated to the License and Services Performance Obligations that were unsatisfied, as of March 31, 2021 was $40.0 million, which is expected to be recognized over the respective term of the associated Research Program and development activities for each target, through approximately 2026. The aggregate amount of the transaction price allocated to all other performance obligations that were unsatisfied as of March 31, 2021 was $4.1 million, which is expected to be recognized upon the earlier of when the respective option is exercised or expires.

During the three months ended March 31, 2021, the Company recognized $11.6 million of revenue associated with the Jazz Collaboration Agreement. The Company's revenue of $0.1 million during the three months ended March 31, 2020 was generated solely from the Jazz Collaboration Agreement.

As of March 31, 2021 and December 31, 2020, the Company had $43.4 million and $55.0 million, respectively, of deferred revenue related to the Company's collaboration with Jazz which is classified as current or long-term in the accompanying condensed consolidated balance sheets based on the expected timing of satisfaction of the underlying goods and/or services. The Company incurred $0.7 million of costs associated with its obligations under the arrangement with Jazz during each of the three months ended March 2021 and 2020. The costs are classified within research and development expenses in the accompanying condensed consolidated statements of operations and comprehensive loss.

Sarepta license and option agreement

Agreement summary

On June 17, 2020, the Company entered into a two-year Research License and Option Agreement (the Sarepta Research Agreement) with Sarepta focused on the use of exosomes for non-viral delivery of AAV, gene-editing and RNA therapeutics to address five agreed targets associated with neuromuscular diseases. Pursuant to the Sarepta Research Agreement, the Company is receiving funding to conduct collaborative research and Sarepta has options to enter into exclusive, worldwide licenses for each of the agreed targets to develop, commercialize and manufacture therapeutic candidates developed using the Company's engEx Platform. For each target option exercised, the Company will be eligible to receive an option exercise fee, milestones and royalties. Each target is well-understood to be therapeutically relevant to its associated neuromuscular disease.

Under the terms of the Sarepta Research Agreement, the Company granted to Sarepta a non-exclusive, royalty-free, worldwide license, with a limited right to sublicense, to use certain intellectual property of the Company in the conduct of activities for which Sarepta is responsible under the Sarepta Research Agreement (the Research License). The Sarepta Research Agreement provides that the activities conducted by the parties will be performed in accordance with a research plan which sets forth the activities to be undertaken over the course of the Sarepta Research Agreement covering all targets included in the agreement (the Research Plan). The Company is responsible for the conduct of all activities to which it is assigned under the Research Plan. The Sarepta Research Agreement initially covers five agreed targets as selected by Sarepta at inception of the Sarepta Research Agreement (each, a Research Target). However, Sarepta has the right to replace up to two of the Research Targets with certain other agreed pre-named targets. To the extent a target is replaced, the original target is discontinued as a Research Target under the arrangement and the replacement target becomes a Research Target under the Sarepta Research Agreement.

Pursuant to the terms of the Sarepta Research Agreement, the Company granted to Sarepta an option to obtain an exclusive, worldwide, sublicensable license to use certain intellectual property of the Company for the development, manufacturing and commercialization of exosome therapeutic candidates directed to one or more of the Research Targets (each, a Sarepta Option). Each of the licenses that would be issued upon exercise of a Sarepta Option cover the use of the Company's intellectual property in the exploitation of therapeutics directed to a particular target (each, a Development and Commercialization License). Sarepta Options may be exercised on a Research Target-by-Research Target basis any time prior to completion of the research activities for the respective target, but not later than June 17, 2022, subject to extension to December 17, 2022 (the Option Term). Following option exercise, the parties will execute a definitive license agreement that outlines the terms and conditions of the collaboration arrangement that would govern the further development and commercialization of exosome therapeutics directed to the subject target (the Collaboration Agreement), contingent on remittance of the option exercise fee.

Under the terms of the Collaboration Agreement which would be entered into upon the exercise of a Sarepta Option, the Company would be responsible for the conduct of the associated preclinical development through the generation of a development candidate directed to the applicable target in accordance with a plan which sets forth the activities to be conducted with respect to each preclinical development program (each, a Preclinical Development Plan). Additionally, the Company is obligated to provide manufacturing and supply through the completion of Phase 2 clinical trials. The Company is entitled to receive reimbursement of costs incurred with respect to the activities performed in the execution of the Preclinical Development Plans and any manufacturing activities. Following the selection of a development candidate from a preclinical development program, Sarepta is responsible for any further development, regulatory matters and commercialization at its sole cost and expense.

Under the terms of the Sarepta Research Agreement, the Company received up-front and non-refundable cash payments totaling $10.0 million, consisting of a $7.0 million up-front payment and a $3.0 million up-front research services prepayment. In addition, the Company is eligible for the reimbursement of costs incurred in the execution of the Research Plan. To the extent Sarepta exercises its option and the parties enter into a Collaboration Agreement with respect to any target included in the arrangement, Sarepta would be obligated to remit an option exercise payment of $12.5 million to the Company per target, up to a total of $62.5 million if all options are exercised. Conditional on the exercise of a Sarepta Option and execution of a Collaboration Agreement, the Company may earn potential development and regulatory milestones and tiered royalties on net sales of licensed products. The Company is eligible to receive up to $192.5 million in development and regulatory milestones per target. One of the selected targets is eligible to generate additional milestone payments on the achievement of certain development and regulatory milestones. Also, to the extent any of the product candidates are commercialized, the Company would be entitled to receive tiered royalty payments ranging from the mid-single digits in the lowest tier to the low teens in the highest tier. Royalties are payable on a licensed product-by-licensed product and country-by-country basis from the first commercial sale until the later of (i) 10 years from first commercial sale, (ii) expiration of all valid claims of licensed patent rights and (iii) expiration of regulatory exclusivity. The royalty payments are subject to reduction under certain conditions to be specified in the Collaboration Agreement.

Either party can terminate the Sarepta Research Agreement upon the other party's material breach, subject to specified notice and cure provisions. Sarepta also has the right to terminate the Sarepta Research Agreement in its entirety or in part (with respect to a particular target) for convenience at any time upon specified written notice, subject to an obligation to pay the Company's related personnel costs for a specified period of time after the effective date of termination as well as to pay for any unavoidable costs as a result of the termination. Any expiration or termination of the Sarepta Research Agreement does not affect the rights and obligations of the parties that accrued prior to the expiration or termination date. Upon termination of the Sarepta Research Agreement, the license and options granted by the Company to Sarepta will immediately terminate.

Absent early termination, the term of the Sarepta Research Agreement will continue for two years plus additional specified time, if needed, for the execution of the Collaboration Agreement should Sarepta exercise its option.

Accounting analysis

The Company evaluated the Sarepta Research Agreement in accordance with the provisions of ASC 606. The Company concluded that the contract counterparty is a customer in the arrangement. The Company's obligations under the Sarepta Research Agreement comprise the following seven substantive promises:

- Research License covering all of the Research Targets that are the subject of the research alliance (the Research License Promise)
- Research services related to the conduct of the Research Plan covering all of the Research Targets that are the subject of the research alliance (the Research Services Promise)
- Material rights associated with Sarepta's ability to obtain a Development and Commercialization License and related preclinical development services and manufacturing for each of the five Research Targets that are the subject of the research alliance (each, a Material Right Promise)

For purposes of evaluating the Sarepta Research Agreement in accordance with ASC 606, the Company determined that the ability for Sarepta to acquire a Development and Commercialization License and the related preclinical development services and manufacturing for each of the Research Targets that are the subject of the arrangement represents a material right because the pricing inherent in such option provides the customer with a discount that is incremental to the range of discounts that would otherwise be granted for the related goods to comparable customers. More specifically, primarily as a function of the economics of the arrangement whereby the consideration to be received exceeds the value of the license and services to be provided, the pricing of the option was determined to contain an implicit discount.

For purposes of evaluating the Sarepta Research Agreement in accordance with ASC 606, the Company determined that the Research License Promise is neither capable of being distinct nor distinct within the context of the contract from the associated Research Services Promise. Due to the specialized nature of the services to be provided by the Company, specifically with respect to the Company's proprietary expertise related to exosome engineering and manufacturing, the customer cannot benefit from the license without the research services. Furthermore, Sarepta will be utilizing the license to perform additional discovery and research efforts as part of the overall work being conducted by the Company. As such, the license rights do not have utility outside of the context of the activities under the Research Plan. Moreover, the Company concluded that the Research License Promise and Research Services Promise are interrelated to and interdependent on each other. Due to the nature of the services and capabilities of the parties, the customer cannot derive its intended benefit from the license without the accompanying research services to be performed pursuant to the underlying Research Plan. The nature of the combined performance obligation is to provide certain research services for targets that are designated for inclusion in the arrangement in order to transfer a combined item to the customer in the form of certain exosome-based constructs from which product candidates can be derived. As such, the Company has treated the Research License Promise and Research Services Promise as a combined performance obligation. Each of the material right promises has been deemed a distinct performance obligation due to their nature as specified in ASC 606. Therefore, the Company has identified the following six performance obligations in connection with its obligations under the Sarepta Research Agreement:

- Combined performance obligation comprising the Research License Promise and Research Services Promise (the Research License and Services Performance Obligation)
- Material rights associated with Sarepta's option to obtain a Development and Commercialization License and related preclinical development services and manufacturing for each Research Target (the Material Right Performance Obligation: Research Target #1, Material Right Performance Obligation: Research Target #2, Material Right Performance Obligation: Research Target #3, Material Right Performance Obligation: Research Target #4 and Material Right Performance Obligation: Research Target #5, respectively)

At inception of the Sarepta Research Agreement, the Company determined that the aggregate transaction price totaled approximately $18.0 million which comprises: (i) $7.0 million up-front payment, (ii) $3.0 million up-front research services prepayment and (iii) $8.0 million related to the estimate of cost reimbursements to be received for activities performed under the Research Plan. The Company estimates the amount of variable consideration to which it expects to be entitled associated with cost reimbursements using the most likely amount method. The Company will update its assessment of the estimated transaction price, including a reevaluation of the constraint, at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur. Amounts that may become due under the Collaboration Agreement and the associated option exercise fee have been excluded from the measurement of the transaction price.

The Company allocated the transaction price to each of the identified performance obligations on a relative standalone selling price basis, or in the case of variable consideration, to one or more specific performance obligations. The Company determined the standalone selling prices for each of the performance obligations included in the Sarepta Research Agreement considering relevant market conditions, entity-specific factors and information about the customer, while maximizing the use of available observable inputs. As a result, the transaction price was allocated to the identified performance obligations as follows:

PERFORMANCE OBLIGATION	ALLOCATED TRANSACTION PRICE
Research License and Services Performance Obligation	$ 11,000
Material Right Performance Obligation: Research Target #1	1,400
Material Right Performance Obligation: Research Target #2	1,400
Material Right Performance Obligation: Research Target #3	1,400
Material Right Performance Obligation: Research Target #4	1,400
Material Right Performance Obligation: Research Target #5	1,400
Transaction Price	$ 18,000

The standalone selling price for the Research License and Services Performance Obligation was estimated primarily using an expected cost-plus margin approach. The cost-plus margin approach utilized in deriving the estimated standalone selling price was based on the estimate of the overall effort to perform the underlying Research Plan and an estimated market rate for the associated services. The Company determined that the standalone selling price for each of the Material Right Performance Obligations is the same across all targets. The Company considered factors such as the early stage of development, license rights and likelihood of exercise.

Amounts allocated to the Research License and Services Performance Obligation are recognized as revenue over time commensurate with the term of the Research Plan using a proportional performance model which depicts the Company's performance in transferring control to the customer. The Company has concluded that it will utilize a cost-based input method to measure progress because such method best reflects the satisfaction of the performance obligation as the underlying services are provided. In applying the cost-based input method of revenue recognition, the Company uses actual costs incurred relative to the budgeted costs to complete the research program. These costs consist primarily of internal full-time equivalent effort and third-party costs. Revenue is recognized based on actual costs incurred as a percentage of total budgeted costs. A cost-based input method of revenue recognition requires management to make estimates of costs to complete the Company's performance obligations. In making such estimates, significant judgement is required to evaluate assumptions related to cost estimates. The cumulative effect of revisions to estimated costs to complete the program will be recorded in the period in which changes are identified and amounts can be reasonably estimated. A significant change in these assumptions and estimates could have a material impact on the timing and amount of revenue recognized in future periods. As of March 31, 2021, there has been no significant change in the Company's assumptions or estimates related to the costs to complete. Amounts allocated to the Research License and Services Performance Obligation will be recognized over the term of the Research Plan which is expected to be through approximately mid-2022. Amounts allocated to each of the Material Right Performance Obligations will be recognized as revenue upon the earlier of when: (i) the option is exercised wherein the future goods and/or services are transferred or (ii) the option expires. As of March 31, 2021, all of the material rights are outstanding as none of the material rights have either been exercised or have expired.

The aggregate amount of the transaction price allocated to the Research License and Services Performance Obligation that was unsatisfied, as of March 31, 2021 was $7.2 million, which is expected to be recognized over the respective term of the associated Research Program and development activities for each target, through approximately mid-2022. The aggregate amount of the transaction price allocated to all other performance obligations that were unsatisfied as of March 31, 2021 was $7.0 million, which is expected to be recognized upon the earlier of when the respective option is exercised or expires.

During the three months ended March 31, 2021, the Company recognized $1.6 million of revenue associated with the Sarepta Research Agreement. There was no revenue recognized associated with the Sarepta deal as of March 31, 2020. As of March 31, 2021, there was $7.0 million of deferred revenue related to the Company's collaboration with Sarepta which is classified as long-term in the accompanying condensed consolidated balance sheet based on the expected timing of satisfaction of the underlying goods and/or services. During the three months ended March 31, 2021, the Company incurred $1.6 million of costs associated with its obligations under the Sarepta Research Agreement. Such costs were classified within research and development expenses for each respective period in the accompanying condensed consolidated statements of operations and comprehensive loss. There were no costs incurred associated with the Sarepta deal as of March 31, 2020.

12. Other significant agreements

MDACC sponsored research agreement

In November 2015, the Company entered into the MDACC Research Agreement with MDACC. Under the MDACC Research Agreement, the Company engaged MDACC to perform research and development services relating to its technology on patients suffering with cancer (the Research Program). MDACC was obligated to use reasonable efforts to conduct the Research Program and furnish the facilities necessary to carry out the program. The Research Program allowed for amendments from time to time during the term, by agreement of the parties, to modify the current Research Program or to add additional research projects for inclusion as part of the Research Program. The MDACC Research Agreement provided the Company with an option to negotiate a license to certain other technology derived from the program in the field of exosome technology. The term of the MDACC Research Agreement was originally scheduled to expire in November 2018. The MDACC Research Agreement was subsequently amended in February 2017 and in April 2018 to extend the term of the MDACC Research Agreement to February 2021 and to modify the payment terms of the MDACC Research Agreement. The MDACC Research Agreement was further amended in September 2019 to terminate the agreement, effective as of December 31, 2019.

Under the terms of the MDACC Research Agreement, the Company was obligated to pay fixed tiered quarterly cash payments (the Quarterly Payments) and to issue a fixed number of shares of its Series A Preferred Stock or Series B Preferred Stock to MDACC in consideration for the research services. The Quarterly Payments consisted of the following: (i) direct expenses comprising $1.0 million payable to MDACC in the first year and $1.25 million payable in years two through five, and (ii) overhead charges of 25% of the direct expenses. In addition to the Quarterly Payments, the Company was also obligated to issue an aggregate of 200,000 shares of Series A Preferred Stock in the first year of

the arrangement and 20,833 shares of Series B Preferred Stock, quarterly, in years two through five of the MDACC Research Agreement. The Company recognized the payments made to MDACC as research and development expense as incurred. The shares to be issued were expensed on the date the associated Quarterly Payment was due based on the estimated fair value of the underlying series of redeemable convertible preferred stock on such date. Subsequent to issuance, the Series A Preferred Stock and Series B Preferred Stock issued to MDACC was accounted for consistent with all other outstanding shares of the respective series of redeemable convertible preferred stock. As noted above, the agreement was terminated as of December 31, 2019. The Company made the final cash payment of $1.2 million and issued the remaining shares of Series B Preferred Stock to MDACC in January 2020. There was no related expense recognized during the year ended December 31, 2020. There are no further payments or share issuances owed to MDACC pursuant to the MDACC Research Agreement. All shares of Series A Preferred Stock and Series B Preferred converted into common stock in connection with the IPO.

MDACC in-license agreement

In November 2015, the Company entered into a Patent and Technology License Agreement with MDACC, as amended in April 2018 (the MDACC License Agreement). Pursuant to the MDACC License Agreement, the Company holds exclusive worldwide license rights to certain intellectual property relating to the use of exosomes for diagnostic and therapeutic applications and a non-exclusive worldwide license under certain related technologies, with the right to grant sublicenses. The Company also obtained the exclusive right of first negotiation, for a specified time period, for a license to certain of MDACC's rights in future exosome technology.

Under the terms of the MDACC License Agreement, the Company is responsible for all patent costs incurred by MDACC for the underlying licensed technology in excess of $1.5 million from the effective date of the agreement through February 1, 2021, and for all patent costs incurred or invoiced after this date. As of March 31, 2021, there was no remaining funding provided by MDACC for patent-related costs under the MDACC License Agreement.

Pursuant to the MDACC License Agreement, the Company is also required to make future payments to MDACC upon the occurrence of events related to the development of products and upon the achievement of certain development and regulatory approval milestones up to an aggregate of $11.9 million, comprising up to $2.4 million for diagnostic products and up to $9.5 million for therapeutic products. The Company may at its discretion pay up to $4.4 million in such contingent payments in cash or through the issuance of equity in the form of redeemable convertible preferred stock or common stock, as applicable. Such payments will be expensed or capitalized based on the nature of the associated asset at the date the related contingency is resolved. In addition, the Company is obligated to pay certain payments upon the execution of sublicenses for qualifying products, as well as single digit percentage royalty payments on net sales from a licensed product.

The MDACC License Agreement will continue until the last to occur of: (i) the expiration of all patents issued underlying the licenses conveyed, (ii) the cancellation, withdrawal or express abandonment of all patent rights underlying the licenses conveyed or (iii) the fifteenth anniversary of the effective date of the agreement. Upon expiration of the MDACC License Agreement, the licenses granted will automatically convert to a fully-paid irrevocable and perpetual license. The Company may terminate the license for convenience upon 180 days prior written notice to MDACC. The license automatically terminates upon the Company's bankruptcy, if the Company challenges the validity or enforceability of any of the licensed patent rights, or if the Company fails to make a number of payments in a timely manner over a specified period of time. Additionally, MDACC may terminate the license for the Company's breach subject to certain specified cure periods.

As of March 31, 2021, no milestones had been achieved, nor had any royalties, sublicensing fees or other contingent payments been incurred under the MDACC License Agreement. The Company did not make any payments to MDACC for the three months ended March 31, 2021 or 2020 with respect to the MDACC License Agreement.

Kayla Therapeutics S.A.S license agreement

On November 6, 2018, the Company entered into a License Agreement with Kayla, pursuant to which it obtained a co-exclusive worldwide, sublicensable license under certain patent rights and to related know-how and methods to research, develop, manufacture and commercialize compounds and products covered by such patent rights in all diagnostic, prophylactic and therapeutic uses (the Kayla License Agreement). The foregoing license is co-exclusive with Kayla, but Kayla's retained rights are subject to certain restrictions.

During the first 6 years following the effective date of the Kayla License Agreement, Kayla and its affiliates may not research, develop, manufacture or commercialize anywhere in the world any product containing a small molecule STING agonist and an exosome. In addition, during the term of the Kayla License Agreement, Kayla and its affiliates may not grant a license to any third party under the licensed patent rights to, develop, manufacture or commercialize anywhere in the world a product containing certain STING compounds for therapeutic or veterinary purpose. The Kayla License Agreement also restricts the Company from developing any competing product containing a small molecule STING agonist and an exosome until the expiration of a non-compete period determined by the achievement of clinical milestones.

Pursuant to ASC 730, the Company determined that the assets acquired represent in-process research and development with no alternative future use. Therefore, the value of the consideration given for the licenses was expensed to acquired in-process research and development in the period in which it was incurred.

In consideration for entering into the Kayla License Agreement, the Company paid an up-front payment of $6.5 million in cash and issued 118,212 shares of common stock. The Company recorded an aggregate of $8.1 million to acquired in-process research and development expense during the year ended December 31, 2018 comprised of: (i) $6.5 million related to the cash payment and (ii) $1.6 million related to the issuance of its common stock based on the fair value of the Company's common stock at the effective date of the Kayla License Agreement.

The Company has certain diligence obligations under the Kayla License Agreement, which include using commercially reasonable efforts to develop, commercialize and market the products developed under the licensed patent rights, including using commercially reasonable efforts to initiate a cohort extension of a Phase 1/2 trial after obtaining IND approval. The Company is also obligated to pay up to $100.0 million in cash payments and up to $13.0 million payable in shares of the Company's common stock upon the achievement of specified clinical and regulatory milestones, including approvals in the US, the EU and Japan. Such payments will be expensed or capitalized based on the nature of the associated asset at the date the related contingency is resolved. Additionally, the Company is obligated to pay to Kayla a percentage of the payments that the Company receives from sublicensees of the rights licensed to it by Kayla, excluding any royalties. This percentage varies from single digits to low double digits. The first milestone was achieved upon the first dosing of exoSTING to the first subject in the Company's Phase 1/2 clinical trial in September 2020. Upon achievement of the milestone, the Company was obligated to make a nonrefundable payment of $15.0 million in cash and issue 177,318 shares of common stock to Kayla. The common stock was issued as of the date of dosing, and the cash payment of $15.0 million was paid as of December 31, 2020. As of March 31, 2021, no other milestones had been achieved.

The Company is obligated to pay to Kayla tiered royalties ranging from low single-digits to mid-single-digits based on annual net sales by the Company, its affiliates and its sublicensees of licensed products. The royalty term is determined on a product-by-product and country-by-country basis and continues until the later of (i) the expiration of the last valid claim of the licensed patent rights that covers such product in such country, (ii) the loss or expiration of any period of marketing exclusivity for such product in such country, or (iii) ten years after the first commercial sale of such product in such country; provided that if the royalty is payable when no valid claim covers a given product in a given country, the royalty rate for sales of such product in such country is decreased. The Company may terminate the Kayla License Agreement on a licensed compound-by-licensed compound basis and on a region-by region basis for any reason upon 30 days prior written notice to Kayla. The Company or Kayla may terminate the Kayla License Agreement for the other's material breach that remains uncured for 60 days after receiving notice thereof. As of March 31, 2021, no royalties, or other contingent payments had been incurred under the Kayla License Agreement.

13. Net loss per share

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

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Numerator:		
Net loss	$ (10,308)	$ (22,502)
Cumulative dividends on redeemable convertible preferred stock	—	(3,419)
Net loss attributable to common stockholders	$ (10,308)	$ (25,921)
Denominator:		
Weighted average common shares outstanding, basic and diluted	20,333,398	3,001,660
Net loss per share attributable to common stockholders, basic and diluted	$ (0.51)	$ (8.64)

The following common stock equivalents, presented based on amounts outstanding at each period end, were excluded from the calculation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have been anti-dilutive:

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Series A redeemable convertible preferred stock	—	4,247,153
Series B redeemable convertible preferred stock	—	2,633,138
Series C redeemable convertible preferred stock	—	2,584,633
Outstanding stock options	5,147,946	4,246,608
	5,147,946	13,711,532

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 financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q for the three months ended March 31, 2021, or the Quarterly Report, and our consolidated financial statements and related notes and other financial information in our Annual Report on Form 10-K for the year ended December 31, 2020. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report, such as statements regarding our plans, objectives, expectations, intentions, and projections, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report, our actual results could differ materially from the results described in, or implied by, these forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company focused on pioneering the development of exosome-based therapeutics, a new class of medicines with the potential to transform the treatment of a wide spectrum of diseases with high unmet medical need. Exosomes have evolved as intercellular transfer mechanisms for complex, biologically active macromolecules and have emerged in recent years as a compelling potential drug delivery vehicle. By leveraging our deep understanding of exosome biology, we have developed our engineering and manufacturing platform, or engEx Platform, to expand upon the innate properties of exosomes to design, engineer and manufacture novel exosome therapeutics. We have utilized our engEx Platform to generate a deep pipeline of engineered exosomes, or engEx exosomes, aimed at treating a broad range of diseases, including oncology, neuro-oncology, neurology, neuromuscular disease and infectious disease.

In September 2020, we initiated clinical trials for our lead engEx product candidates, exoSTING and exoIL-12, which are being developed to address solid tumors. To our knowledge, exoSTING and exoIL-12 are the first engineered exosomes to enter clinical development. In December 2020 and February 2021, we reported positive results from Part A of our Phase 1 clinical trial of exoIL-12 in healthy human volunteers. In this randomized, placebo controlled, double-blind study, exoIL-12 demonstrated a favorable safety and tolerability profile, with no local or systemic treatment-related adverse events and no detectable systemic exposure of IL-12. Results also confirmed retention of IL-12 at the injection site and prolonged pharmacodynamic effects. These results in healthy volunteers, which are consistent with our preclinical observations, provide validation of our engEx Platform and one of the founding principles of Codiak—that engineered exosomes can offer the opportunity to tailor therapeutic payloads to provide an active biological response while at the same time limiting unwanted side effects. We also have multiple preclinical and discovery programs of our engEx exosomes that we are advancing either independently or through our strategic collaborations with Jazz Pharmaceuticals Ireland Limited, or Jazz, and Sarepta Therapeutics, Inc., or Sarepta.

We were incorporated and commenced operations in 2015. Since inception, we have devoted substantially all of our resources to developing our engEx Platform, our engEx product candidates and engEx exosomes, clinical and preclinical candidates; building our intellectual property portfolio, process development and manufacturing function; business planning; raising capital and providing general and administrative support for these operations. To date, we have financed our operations primarily with proceeds from sales of our common stock and redeemable convertible preferred stock, and our term loan facility with Hercules Capital, Inc., or Hercules, and our collaborations with Jazz and Sarepta. As of March 31, 2021, we raised an aggregate of $168.2 million through the issuance of our redeemable convertible preferred stock, net of issuance costs, $24.6 million from our term loan facility with Hercules, net of issuance costs, and received $66.0 million in payments from our collaborations with Jazz and Sarepta. On October 16, 2020, we completed our initial public offering, or IPO, pursuant to which we issued and sold 5,500,000 shares of our common stock at a public offering price of $15.00 per share, resulting in net proceeds of $74.4 million, after deducting underwriting discounts and commissions and other offering expenses. On February 17, 2021, we completed a follow-on public offering, pursuant to which we issued and sold 3,162,500 shares of our common stock (inclusive of the exercise of the underwriter's option to purchase 412,500 additional shares of common stock) at a public offering price of $21.00 per share, resulting in aggregate net proceeds of $61.9 million, after deducting underwriting discounts and commissions and other offering expenses.

We have not generated any revenue from product sales and do not expect to do so for several years, and may never do so. We advanced our first two engEx product candidates, exoSTING and exoIL-12, into clinical trials in September 2020. All of our other engEx exosomes are still in preclinical development. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our engEx product candidates. Since our inception, we have incurred significant losses, including net losses of $91.7 million and $78.0 million for the years ended December 31, 2020 and 2019, respectively. During the three months ended March 31, 2021, we incurred a net loss of $10.3 million. As of March 31, 2021, we had an accumulated deficit of $298.4 million. We expect to incur substantial additional losses in the future as we expand our research and development activities. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- initiate and conduct clinical trials for exoSTING, exoIL-12 and any other engEx product candidates we identify and choose to develop;
- continue our current research programs and preclinical development of exoASO-STAT6 and our potential engEx product candidates;
- seek to identify additional research programs and additional engEx product candidates;
- further develop and expand the capabilities of our engEx Platform;
- establish, operate and maintain in-house manufacturing capabilities, including of our own Phase 1/2 clinical manufacturing facility, and secure supply chain capacity sufficient to support our planned preclinical studies and early-stage clinical trials;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, scientific, manufacturing and general and administrative personnel;
- acquire or in-license other biologically active molecules, potential engEx product candidates or technologies;
- seek regulatory approvals for any engEx product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure to commercialize any engEx products for which we may obtain regulatory approval;
- add operational, financial and management information systems and personnel, including personnel to support our product development and any future commercialization efforts, as well as to support our continued operations as a public company; and
- take temporary precautionary measures to minimize the risk of COVID-19 to our employees, contractors and those who may participate in our studies.

We do not anticipate generating revenue from product sales for the foreseeable future, if ever, unless and until we successfully complete clinical development and obtain marketing approvals for our engEx product candidates. In addition, if we obtain marketing approval for any of our engEx product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution.

As a result, we will need substantial additional funding 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 the sale of equity, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back or discontinue the development and commercialization of one or more of our engEx product candidates or delay our pursuit of potential in-licenses or acquisitions.

Further, business interruptions resulting from the COVID-19 pandemic or similar public health crises could cause a significant disruption in the development of our engEx product candidates and our business operations. Securing the necessary approvals for new drugs requires the expenditure of substantial time and resources and any delay or failure to obtain such approvals could materially adversely affect our development efforts. Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations. .

We expect that our existing cash and cash equivalents as of March 31, 2021 of $130.3 million will enable us to fund our operating expenses and capital expenditure requirements through at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. See ‘‘—Liquidity and capital resources’’ for further information.

Financial operations overview

Revenue

We have not generated any revenue from product sales and do not expect to generate any revenue from the sale of products for several years, if at all. If our development efforts for our current or future engEx product candidates are successful and result in marketing approval or additional collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from current or additional collaboration or license agreements.

In January 2019, we entered into a Collaboration and License Agreement with Jazz, pursuant to which we granted Jazz an exclusive, worldwide, royalty-bearing license to use our engEx Platform for the purposes of developing, manufacturing and commercializing exosome therapeutic candidates directed at up to five targets. In April 2021, we and Jazz mutually agreed to discontinue our work on STAT3, one of five oncogene targets subject to the Collaboration and License Agreement. In June 2020, we entered into a Research License and Option Agreement with Sarepta, pursuant to which we are receiving funding to conduct collaborative research and provide Sarepta with options to obtain exclusive licenses for exosome therapeutic candidates directed at up to five targets. For the foreseeable future, we expect substantially all of our revenue to be generated from our collaborations with Jazz and Sarepta and any other collaboration and license agreements we may enter into in the future. During the three months ended March 31, 2021 and 2020, we recognized $11.6 million and $0.1 million, respectively, of revenue related to our Collaboration and License Agreement with Jazz. As of March 31, 2021 and December 31, 2020, we had $43.4 million and $55.0 million, respectively, of deferred revenue with respect to our Collaboration and License Agreement with Jazz. During the three months ended March 31, 2021, we recognized $1.6 million of revenue related to our Research License and Option Agreement with Sarepta. As of March 31, 2021 and December 31, 2020, we had $7.0 million and $7.7 million of deferred revenue in connection with the Research License and Option Agreement with Sarepta.

Operating expenses

Research and development expense

The nature of our business and primary focus of our activities generate a significant amount of research and development costs. Research and development expenses represent costs incurred by us for the following:

- initiation and conduct of the clinical development of exoSTING in a Phase 1/2 clinical trial;
- initiation and conduct of the clinical development of exoIL-12 in a Phase 1 clinical trial;
- costs to develop our engEx Platform;
- discovery efforts leading to the selection and advancement of engEx product candidates for clinical development.
- preclinical development costs for our programs; and
- costs to develop our manufacturing technology and infrastructure.

The costs above comprise the following categories:

- personnel-related expenses, including salaries, benefits and stock-based compensation expense;
- expenses incurred under agreements with third parties, such as contract research organizations, or CROs, that conduct our preclinical studies;
- licensing costs;
- costs of acquiring, developing and manufacturing materials for preclinical studies, including both internal manufacturing and third-party contract manufacturing organizations, or CMOs;

- costs of outside consultants and advisors, including their fees, stock-based compensation and related travel expenses;
- expenses incurred for the procurement of materials, laboratory supplies and non-capital equipment used in the research and development process; and
- facilities, depreciation, amortization and other direct and allocated expenses incurred as a result of research and development activities.

Our primary focus of research and development since inception has been the development of our engEx Platform and our pipeline of engEx product candidates, including our initial product candidates, exoSTING and exoIL-12, and discovery programs. Our research and development costs consist of personnel costs, external costs, such as fees paid to CMOs, CROs, and consultants in connection with our clinical and preclinical studies and experiments, and other internal costs, including rent, depreciation, and other miscellaneous costs. We do not allocate employee-related costs and other internal costs to specific research and development programs because these costs are used across all programs under development. We present external research and development costs for any individual engEx product candidate when we advance that product candidate into clinical trials. As exoSTING and exoIL-12 entered clinical trials in September 2020, we have presented our research and development costs for exoSTING and exoIL-12 below.

The following table reflects our research and development expenses for each period presented:

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
	(In thousands)	
exoSTING	$ 956	$ 2,356
exoIL-12	775	1,357
engEx Platform	4,911	6,315
Personnel-related (including stock-based compensation)	6,626	5,401
Other research and development expenses	3,282	2,962
Total research and development expenses	$ 16,550	$ 18,391

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase in the foreseeable future as we conduct clinical trials for our lead engEx product candidates, exoSTING and exoIL-12, continue to discover and develop additional engEx product candidates, continue to build manufacturing capabilities, enhance our engEx Platform, expand into additional therapeutic areas and incur expenses associated with hiring additional personnel to support our research and development efforts.

At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development of, and obtain regulatory approval for, any of our engEx product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from sales or licensing of our engEx product candidates. This is due to the numerous risks and uncertainties associated with drug development, including the uncertainty of:

- our ability to successfully develop, obtain regulatory approval for, and then successfully commercialize, our engEx product candidates;
- our successful enrollment in and completion of clinical trials, including our ability to generate positive data from any such clinical trials;
- the costs associated with the development of any additional development programs we identify in-house or acquire through collaborations;
- our ability to add and retain key research and development personnel;
- our ability to establish an appropriate safety profile with IND-enabling toxicology and other preclinical studies;
- our ability to discover, develop and utilize biomarkers to demonstrate target engagement, pathway engagement and the impact on disease progression, as applicable, of our engEx product candidates;

- our ability to establish and maintain agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our engEx product candidates are approved;
- our ability to maintain our collaborative arrangements with Jazz and Sarepta and earn milestone payments thereunder;
- the terms and timing of any additional collaboration, license or other arrangement, including the terms and timing of any milestone payments thereunder;
- our ability to obtain and maintain patent, trade secret and other intellectual property protection and regulatory exclusivity for our engEx product candidates if and when approved;
- our receipt of marketing approvals from applicable regulatory authorities; and
- the continued acceptable safety profiles of any engEx product following approval.

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

General and administrative expense

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, finance, business development and administrative functions. General and administrative expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and administrative consulting services; insurance costs; administrative travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs. These costs relate to the operation of the business unrelated to the research and development function or any individual program.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support the expected growth in our research and development activities and the potential commercialization of our engEX product candidates, if approved. We also expect to incur increased expenses associated with being a public company, including increased costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance costs and investor and public relations costs. We also expect to incur additional intellectual property-related expenses as we file patent applications to protect innovations arising from our research and development activities.

Interest income

Interest income consists of interest income earned from our cash, cash equivalents and investments.

Interest expense

Interest expense consists of interest expense incurred from our term loan facility with Hercules.

Other income

Other income primarily consists of the sublease income under the sublease of a portion of our 35 CambridgePark Drive office and laboratory space that commenced in May 2020.

Income taxes

Since our inception in 2015, we have not recorded any US federal or state income tax benefits for the net losses we have incurred in each year or our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2020, we had federal and state net operating loss carryforwards of $137.6 million and $138.1 million, respectively, which may be available to offset future taxable income. During the year ended December 31, 2020, we generated a federal net operating loss of $101.2 million, which has an indefinite carryforward period. The remaining $36.4 million of federal net operating loss carryforwards and our state net operating loss carryforwards as of December 31, 2020 would begin to expire in 2035. As of December 31, 2020, we also had federal and state research and development tax credit carryforwards of $8.3 million and $3.9 million, respectively, which may be available to offset future income tax liabilities and which would begin to expire in 2035 and 2031, respectively During the three months ended March 31, 2021 and 2020, the Company recorded no income tax benefits for the net operating losses incurred or research and development tax credits earned in each interim period due to its uncertainty of realizing a benefit from those items.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief and Economic Security Act, or the CARES Act, was signed into law in March 2020. The CARES Act lifts certain deduction limitations originally imposed by the Tax Cuts and Jobs Act of 2017, or the TCJA. Corporate taxpayers may carryback NOLs originating during 2018 through 2020 for up to five years, which was not previously allowed under the TCJA. The CARES Act also eliminates the 80% of taxable income limitations by allowing corporate entities to fully utilize NOL carryforwards to offset taxable income in 2018, 2019 or 2020. Taxpayers may generally deduct interest up to the sum of 50% of adjusted taxable income plus business interest income (30% limit under the TCJA) for tax years beginning January 1, 2019 and 2020. The CARES Act allows taxpayers with alternative minimum tax credits to claim a refund in 2020 for the entire amount of the credits instead of recovering the credits through refunds over a period of years, as originally enacted by the TCJA.

In addition, the CARES Act raises the corporate charitable deduction limit to 25% of taxable income and makes qualified improvement property generally eligible for 15-year cost-recovery and 100% bonus depreciation. The enactment of the CARES Act did not result in any adjustments to our income tax provision for the three months ended March 31, 2021, or net deferred tax assets as of March 31, 2021 since we have not recorded any US federal or state income tax benefits for the net losses incurred in any period due to our uncertainty of realizing a benefit from those items.

Results of operations

The following table summarizes our condensed consolidated statements of operations for each period presented (in thousands):

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
Revenue:		
Collaboration revenue	$ 13,191	$ 134
Total revenue	13,191	134
Operating expenses:		
Research and development	16,550	18,391
General and administrative	6,588	4,233
Total operating expenses	23,138	22,624
Loss from operations	(9,947)	(22,490)
Other income (expense):		
Interest expense	(698)	(295)
Interest income	5	223
Other income	332	60
Total other expense, net	(361)	(12)
Net loss	$ (10,308)	$ (22,502)

Comparison of the three months ended March 31, 2021 and 2020

Collaboration revenue

Collaboration revenue increased by $13.1 million from $0.1 million for the three months ended March 31, 2020 to $13.2 million for the three months ended March 31, 2021. This increase was primarily due to our mutual decision with Jazz to discontinue our work on STAT3, one of five oncogene targets subject in our Collaboration and License Agreement with Jazz. The Company recognized the remaining $10.9 million in deferred revenue allocated to this target as revenue during the three months ended March 31, 2021. An additional $1.6 million of revenue was recognized during the three months ended March 31, 2021 related to our Sarepta Research License and Option Agreement that was signed during June 2020.

Research and development expense

The following table summarizes our research and development expenses for each period presented, along with the changes in those items (in thousands):

	THREE MONTHS ENDED MARCH 31,		CHANGE
	2021	2020	$
exoSTING	$ 956	$ 2,356	$ (1,400)
exoIL-12	775	1,357	(582)
engEx Platform	4,911	6,315	(1,404)
Personnel-related (including stock-based compensation)	6,626	5,401	1,225
Other research and development expenses	3,282	2,962	320
Total research and development expenses	$ 16,550	$ 18,391	$ (1,841)

Research and development expenses decreased $1.8 million from $18.4 million for the three months ended March 31, 2020 to $16.6 million for the three months ended March 31, 2021.

The decrease in research and development expenses was primarily attributable to the following:

- $1.4 million decrease in engEx Platform expenses driven a $3.7M decrease in manufacturing costs, partially offset by a $1.9M increase in laboratory and preclinical expenses and $0.4M increase in consultants;
- $1.4 million decrease in exoSTING related costs driven by decreased manufacturing and pre-clinical costs, offset by increased clinical trial costs as the program entered the clinical stage in September 2020;
- $0.6 million decrease in exoIL-12 expenses driven by lower manufacturing and pre-clinical costs, partially offset by increased clinical costs as the program entered the clinical stage in September 2020;
- $1.2 million offsetting increase in personnel-related costs primarily driven by an increase in headcount to support increased research and development activities; and
- $0.3 million offsetting increase in other research and development costs, including rent, depreciation, and other miscellaneous costs, primarily due to occupying our new facilities.

General and administrative expense

The following table summarizes our general and administrative expenses for each period presented, along with the changes in those items (in thousands):

	THREE MONTHS ENDED MARCH 31,		CHANGE
	2021	2020	$
Personnel-related (including stock-based compensation)	$ 1,293	$ 798	$ 495
Professional fees	3,266	2,667	599
Facility-related and other general and administrative expenses	2,029	768	1,261
Total general and administrative expenses	$ 6,588	$ 4,233	$ 2,355

General and administrative expenses increased $2.4 million from $4.2 million for the three months ended March 31, 2020 to $6.6 million for the three months ended March 31, 2021.

The increase in general and administrative expenses was primarily attributable to the following:

- $1.3 million increase in facility-related and other general business expenses primarily driven by increased corporate insurance costs of being a public company;
- $0.6 million increase in professional fees driven primarily by increases in legal and accounting services incurred in connection with being a public company; and
- $0.5 million increase in personnel-related costs primarily driven by an increase in headcount in relation to being a public company.

Interest income

Interest income decreased $0.2 million from $0.2 million for the three months ended March 31, 2020 to less than $0.1 million for the three months ended March 31, 2021. The decrease in interest income was primarily driven by the maturity of all our investments in April 2020. As of March 31, 2021, we did not hold any investments.

Interest expense

Interest expense increased $0.4 million from $0.3 million for the three months ended March 31, 2020 to $0.7 million for the three months ended March 31, 2021. The increase was driven by an additional draw down of $10.0 million in July 2020 under our term loan facility with Hercules.

Other income

Other income increased by $0.3 million from less than $0.1 million for the three months ended March 31, 2020 to $0.3 million for the three months ended March 31, 2021. The increase in other income was driven by rental income received from our sublease beginning in Q2 2020, partially offset by a reduction in the amortization of purchased premiums and discounts associated with our investments as a result of the maturity of all of our investments in April 2020.

Liquidity and capital resources

Sources of liquidity

Since our inception, we have incurred significant losses in each period and on an aggregate basis. We have not yet commercialized any of our engEx product candidates, which are in various phases of early-stage and clinical development, and we do not expect to generate revenue from sales of any products for several years, if at all. We have funded our operations through March 31, 2021 with aggregate net proceeds of $168.2 million from sales of our redeemable convertible preferred stock, $24.6 million from our term loan facility Hercules, net of issuance costs, and $66.0 million received from our collaborations with Jazz and Sarepta. On October 16, 2020, we completed our IPO for net proceeds of $74.4 million, after deducting underwriting discounts and commissions and other offering expenses. On February 17, 2021, we completed a follow-on public offering for net proceeds of $61.9 million, after deducting underwriting discounts and commissions and other offering expenses. As of March 31, 2021, we had cash and cash equivalents of $130.3 million.

Hercules Loan Agreement

On September 30, 2019, or the Closing Date, we entered into a Loan and Security Agreement, or the Loan Agreement, with Hercules pursuant to which a term loan in an aggregate principal amount of up to $75.0 million, or the Term Loan Facility, is available to us in four tranches, subject to certain terms and conditions. The first tranche of $10.0 million was advanced to us on the Closing Date and an additional $15.0 million under the first tranche was drawn down in July 2020. Upon satisfaction of certain liquidity and clinical milestones, the second tranche was available under the Term Loan Facility, which allowed us to borrow an additional amount of up to $10.0 million through March 31, 2021. As of March 31, 2021, we did not elect to borrow against the second $10.0 million tranche. Upon satisfaction of certain additional clinical milestones, the third tranche is available under the Term Loan Facility, which allows us to borrow an additional amount up to $10.0 million through June 30, 2021. The fourth tranche, which allows us to borrow an additional amount up to $30.0 million, will be available upon Hercules' approval on or prior to December 15, 2021. As of March 31, 2021, there was $25.0 million drawn and outstanding under the Term Loan Facility.

Advances under the Term Loan Facility bear interest at a rate equal to the greater of (i) 9.00% plus the prime rate less 5.25% and (ii) 9.00%. We will make interest only payments through April 1, 2022. The interest only period may be extended to November 1, 2022 upon satisfaction of certain milestones. Following the interest only period, we will repay the principal balance and interest of the advances in equal monthly installments through October 1, 2024.

We may prepay advances under the Loan Agreement, in whole or in part, at any time subject to a prepayment charge equal to (i) 2.0% of amounts so prepaid, if such prepayment occurs during the first year following the Closing Date; (ii) 1.5% of the amount so prepaid, if such prepayment occurs during the second year following the Closing Date; and (iii) 1.0% of the amount so prepaid, if such prepayment occurs after the second year following the Closing Date.

Upon prepayment or repayment of all or any of the term loans under the Term Loan Facility, we will pay, in addition to any prepayment premium, an end of term charge of 5.5% of the aggregate funded amount under the Term Loan Facility. With respect to the total outstanding principal under the first tranche, an end of term charge of $1.4 million will be payable upon any prepayment or repayment. To the extent that we are provided additional advances under the Term Loan Facility, the 5.5% end of term charge will be applied to any such additional amounts.

The Term Loan Facility is secured by a lien on substantially all of our assets, other than our intellectual property. We have agreed to not pledge or grant a security interest on our intellectual property to any third party. The Term Loan Facility also contains customary covenants and representations, including a liquidity covenant whereby we are obligated to maintain, in an account covered by Hercules' account control agreement, an amount equal to the lesser of: (i) 110% of the amount of our obligations under the Term Loan Facility and (ii) our then existing cash and cash equivalents; a financial reporting covenant; and limitations on dividends, indebtedness, collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, deposit accounts, and subsidiaries.

The events of default under the Loan Agreement include, without limitation, and subject to customary grace periods, the following: (i) any failure by us to make any payments of principal or interest under the Loan Agreement, (ii) any breach or default in the performance of any covenant under the Loan Agreement, (iii) the occurrence of a material adverse effect, (iv) any making of false or misleading representations or warranties in any material respect, (v) our insolvency or bankruptcy, (vi) certain attachments or judgments on our assets or (vii) the occurrence of any material default under certain of our agreements or obligations involving indebtedness. If an event of default occurs, Hercules is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

Historical cash flows

The following table provides information regarding our cash flows for each period presented:

	THREE MONTHS ENDED MARCH 31,	
	2021	2020
	(In thousands)	
Net cash provided by (used in):		
Operating activities	$ (19,637)	$ (18,989)
Investing activities	(1,526)	56,497
Financing activities	62,520	18
Net increase in cash, cash equivalents and restricted cash	$ 41,357	$ 37,526

Operating activities

The cash used in operating activities resulted primarily from our net losses adjusted for non-cash charges and changes in components of operating assets and liabilities, which are generally attributable to timing of payments, and the related effect on certain account balances, operational and strategic decisions and contracts to which we may be a party.

During the three months ended March 31, 2021, operating activities used $19.6 million of cash, primarily due to a net loss of $10.3 million, partially offset by non-cash charges of $2.3 million for stock-based compensation, $1.4 million for depreciation and amortization, and $0.1 million for non-cash interest expense. Additionally, changes in our operating assets and liabilities primarily consisted of a $12.3 million decrease in deferred revenue, a $1.4 million net decrease in accounts payable and accrued expenses, a $0.2 million decrease in our operating lease right-of-use assets, a $0.3 million net increase in prepaid expenses and other current assets, and a $0.1 million increase in our operating lease liabilities. The change in our deferred revenue was due to activity under our Collaboration and License Agreement with Jazz.

During the three months ended March 31, 2020, operating activities used $19.0 million of cash. Cash from operating activities was primarily driven by a net loss of $22.5 million, offset by non-cash charges of $1.8 million for stock-based compensation, $1.0 million for depreciation and amortization, and $0.1 million for non-cash interest expense; these non-cash charges were partially offset by less than $0.1 million for accretion of investments. Additionally, changes in our operating assets and liabilities primarily consisted of a $5.2 million net decrease in accounts payable and accrued expenses, a $0.5 million decrease related to our operating lease right-of-use assets, and a $0.1 million decrease in deferred revenue; offset by, a $3.2 million net increase in prepaid expenses and other current assets, and a $2.4 million increase in our operating lease liabilities. The change in our prepaid expenses and other current assets was driven by the recognition of prepaid manufacturing costs during Q1 2020. The change in our operating lease liabilities and operating lease right-of-use assets were driven by our 4 Hartwell Place and 35 CambridgePark Drive leases and lease incentive payments received during the three months ended March 31, 2020.

Investing activities

During the three months ended March 31, 2021, net cash used in investing activities was $1.5 million for purchases of property and equipment. During the three months ended March 31, 2020, net cash provided by investing activities was $56.5 million, consisting of $70.6 million of maturities of short-term investments, partially offset by $14.1 million for purchases of property and equipment to outfit our new office, laboratory and manufacturing spaces.

Financing activities

During the three months ended March 31, 2021, net cash provided by financing activities was $62.5 million, driven by our follow-on public offering, completed on February 17, 2021, resulting in aggregate net proceeds of $62.2 million, and $0.3 million resulting from the proceeds from the exercise of common stock options. During the three months ended March 31, 2020, net cash provided by financing activities was less than $0.1 million.

Plan of operation and future funding requirements

We expect our expenses to increase substantially in connection with our ongoing research and development activities, particularly as we advance our clinical trials of exoSTING and exoIL-12 and our preclinical activities for our engEx development programs. In addition, we expect to incur additional costs associated with operating as a public company. As a result, we expect to incur substantial operating losses and negative operating cash flows for the foreseeable future.

Based on our current operating plan, we expect our cash and cash equivalents as of March 31, 2021, will enable us to fund our operating expenses and capital expenditure requirements through at least the next 12 months. However, we have based this estimate on assumptions that may prove to be wrong and we could exhaust our capital resources sooner than we expect.

Because of the numerous risks and uncertainties associated with the development of our engEx Platform, exoSTING, exoIL-12, exoASO-STAT6 and other engEx development programs, and because the extent to which we may receive payments under our existing collaboration agreements or enter into collaborations with third parties for development of our product candidates is unknown, we may incorrectly estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our funding requirements and timing and amount of our operating expenditures will depend on many factors, including, but not limited to:

- the rate of progress in the development of our engEx Platform, engEx product candidates and development programs;
- the scope, progress, results and costs of preclinical studies and clinical trials for any engEx product candidates and development programs;
- the number and characteristics of programs and technologies that we develop or may in-license;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the costs necessary to obtain regulatory approvals, if any, for any approved products in the US and other jurisdictions, and the costs of post-marketing studies that could be required by regulatory authorities in jurisdictions where any such approval is obtained;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the continuation of our existing strategic collaborations and licensing arrangements and entry into new collaborations and licensing arrangements;
- the costs we incur in maintaining business operations;
- the costs associated with being a public company;
- the revenue, if any, received from commercial sales of our engEx product candidates for which we receive marketing approval;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our engEx product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of holders of our common stock. Additional debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends and may require the issuance of warrants, which could potentially result in dilution to the holders of our common stock.

If we raise additional funds through strategic collaborations 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 grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates to third parties that we would otherwise prefer to develop and market ourselves.

Contractual obligations

The following table summarizes our contractual obligations as of March 31, 2021 and the effects that such obligations are expected to have on our liquidity and cash flows in future periods (in thousands):

	Payments due by period				
	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Operating lease commitments(1)(2)	$ 58,367	$ 5,990	$ 19,068	$ 13,685	$ 19,624
Long-term debt obligations(3)	25,000	—	25,000	—	—
Total	$ 83,367	$ 5,990	$ 44,068	$ 13,685	$ 19,624

(1) On March 5, 2019, we entered into a non-cancelable property lease for 18,707 square feet of manufacturing space in Lexington, Massachusetts. The lease term commenced in July 2019 and is expected to end in December 2029. We have the option to extend the lease twice, each for a five-year period, at market-based rent. We fully occupied the space in late-2020. Included in the table above are the future lease payments, which exclude operating expenses and real estate taxes. Lease payments began in January 2020 and are expected to be approximately $0.9 million in each of 2021 and 2022, $1.0 million in each of 2023, 2024, and 2025, and $4.4 million thereafter. The landlord contributed a total of up to $1.3 million toward the cost of tenant improvements. We were required to provide a $0.4 million security deposit, which we provided in the form of a letter of credit in the favor of the landlord. These amounts are excluded from the table above.

(2) On March 22, 2019, we entered into a non-cancelable property lease for 68,258 square feet of office and laboratory space in Cambridge, Massachusetts. The lease term commenced upon execution of the lease on March 26, 2019 and is expected to end in November 2029. We have the option to extend the lease once for a 10-year period at market-based rent. We occupied the space in February 2020 as our new corporate headquarters. Included in the table above are the future lease payments, which exclude operating expenses and real estate taxes. Lease payments began in November 2019 and are expected to be approximately $5.0 million in 2021, $5.2 million in 2022, $5.3 million in 2023, $5.5 million in 2024, $5.7 million in 2025 and $23.9 million thereafter. The landlord has contributed a total of $12.3 million toward the cost of tenant improvements. We were required to provide a $3.7 million security deposit, which we provided in the form of a letter of credit in the favor of the landlord. These amounts are excluded from the table above.

(3) On September 30, 2019, we entered into the Hercules Loan Agreement pursuant to which we may receive advances in four separate tranches based on specified terms and provisions, of up to an aggregate principal amount of $75.0 million. As of December 31, 2020, we received advances under the first tranche totaling $25.0 million and paid issuance costs of $0.6 million. We are obligated to pay interest-only payments through April 1, 2022 at a rate equal to the greater of (i) 9.0% plus the prime rate as reported in the Wall Street Journal less 5.25% and (ii) 9.0%. The interest only period may be extended to November 1, 2022 upon satisfaction of certain milestones. Thereafter, we are obligated to make principal payments in equal monthly installments expected to total approximately $6.1 million in 2022, $9.9 million in 2023, and $9.0 million in 2024, with final payment due in October 2024. The amounts above reflect only the scheduled minimum principal payments due for our outstanding advances of $25.0 million under the term loan. We may prepay in whole or in part amounts due under the term loan at any time subject to a prepayment charge.

Commencing on May 18, 2020, we entered into a sublease for 23,280 square feet of our leased space in Cambridge, Massachusetts. The term of the sublease is two years with one option to extend for one year at the sublessee's option at a rate equal to the greater of (i) an increase of 3% of the annual rent owed by the sublessee in year two and (ii) market rent for the subleased premises. Cash receipts under the sublease are expected to be approximately $1.3 million and $0.5 million for the years ended December 31, 2021 and 2022, respectively, excluding reimbursement for a ratable portion of operating expenses. We remain jointly and severally liable under the terms of the head lease and therefore present the cash payments, inclusive of our obligation under the head lease for the subleased premises, in the table above. As such, the operating lease commitments in the table above do not include the expected cash receipts under the sublease.

We have a license agreement with MDACC under which, pursuant to exclusive license rights granted to us under certain patents owned or co-owned by MDACC, we are obligated to pay milestone payments upon the achievement of development and regulatory milestones and the execution of sublicenses for qualifying products covered by rights granted under the agreement. MDACC is eligible to receive, on a product-by-product basis, milestone payments upon the achievement of development and regulatory milestones totaling up to $2.4 million for diagnostic products and up to $9.5 million for therapeutic products. Under this agreement, we may also be obligated to pay royalty payments on commercial products, on a product-by-product basis. Due to the variable and contingent nature of these payments, they are excluded from the table above as they are not fixed and estimable. We may terminate the license for convenience upon 180 days prior written notice to MDACC. The license automatically terminates upon our bankruptcy, if we challenge the validity or enforceability of any of the licensed patent rights, or our failure to make a number of payments in a timely manner over a specified period of time. Additionally, MDACC may terminate the license for our breach subject to certain specified cure periods.

We have a license agreement with Kayla Therapeutics, pursuant to which we obtained a co-exclusive worldwide, sublicensable license, under certain patent rights and to related know-how and methods to research, develop, manufacture and commercialize compounds and products covered by such patent rights in all diagnostic, prophylactic and therapeutic uses. Such license rights include certain exclusive rights to the STING agonist compound in our exoSTING product candidate. Under the terms of the agreement, we are obligated to use commercially reasonable efforts to develop and commercialize products under the licensed patent rights, and are obligated to pay up to $100.0 million in cash payments and up to $13.0 million payable in shares of our common stock upon the achievement of specified clinical and regulatory milestones. The first milestone was achieved upon the first dosing of exoSTING to the first subject in a Phase 1/2 clinical trial in September 2020. Upon the achievement of the milestone, the Company was obligated to make a nonrefundable payment of $15.0 million in cash and issue 177,318 shares of common stock to Kayla. The common stock was issued as of the date of dosing, and the cash payment of $15.0 million and was paid in October 2020. In addition, we are required to pay Kayla a percentage of the payments that we receive from sublicensees of the rights licensed to us by Kayla, excluding any royalties. The royalty term is determined on a product-by-product and country-by-country basis and continues until the later of (i) the expiration of the last valid claim of the licensed patent rights that covers such product in such country, (ii) the loss or expiration of any period of marketing exclusivity for such product in such country, or (iii) ten years after the first commercial sale of such product in such country; provided that if the royalty is payable when no valid claim covers a given product in a given country, the royalty rate for sales of such product in such country is decreased. We do not include these variable and contingent payments in the table above as they are not fixed and estimable. We may terminate the license agreement on a licensed compound-by-licensed compound basis and on a region-by region basis for any reason upon 30 days prior written notice to Kayla. We or Kayla may terminate the license agreement for the other's material breach that remains uncured for 60 days after receiving notice thereof.

We have agreements with certain vendors for various services, including services related to preclinical operations and support, for which we are not contractually able to terminate for convenience and avoid any and all future obligations to the vendors. Certain agreements provide for termination rights subject to termination fees or wind down costs. Under such agreements, we are contractually obligated to make certain payments to vendors, mainly, to reimburse them for their unrecoverable outlays incurred prior to cancellation. The exact amounts of such obligations are dependent on the timing of termination, and the exact terms of the relevant agreement and cannot be reasonably estimated. We do not include these payments in the table above as they are not fixed and estimable.

Off-balance sheet arrangements

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

Critical accounting policies and significant judgments and estimates

Our condensed consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these condensed consolidated financial statements requires the application of appropriate technical accounting rules and guidance, as well as the use of estimates. The application of these policies necessarily involves judgments regarding future events. These estimates and judgments, in and of themselves, could materially impact the condensed consolidated financial statements and disclosures based on varying assumptions. The accounting policies discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the SEC on March 17, 2021, or the Annual Report, are considered by management to be the most important to an understanding of the consolidated financial statements because of their significance to the portrayal of our financial condition and results of operations. There have been no material changes to that information disclosed in our Annual Report during the three months ended March 31, 2021.

The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including expenses, clinical trials and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international markets. We have made estimates of the impact of COVID-19 within our financial statements and there may be changes to those estimates in future periods. Actual results could differ from our estimates.

Emerging growth company and smaller reporting company status

In April 2012, the Jumpstart Our Business Startups Act, or the JOBS Act, was enacted. As an emerging growth company, or EGC, under the JOBS Act, we may delay the adoption of certain accounting standards until such time as those standards apply to private companies. Other exemptions and reduced reporting requirements under the JOBS Act for EGCs include an exemption from the requirement to provide an auditor's report on internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, an exemption from any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation, and less extensive disclosure about our executive compensation arrangements. We have elected to avail ourselves of the exemption regarding the timing of the adoption of accounting standards and, therefore, while we are an emerging growth company we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not EGCs.

We will remain classified as an EGC until the earlier of: (i) the last day of our first fiscal year in which we have total annual gross revenues of $1.07 billion or more, (ii) the last day of the fiscal year following the fifth anniversary of our IPO, (iii) the date on which we have issued more than $1.0 billion of non-convertible debt instruments during the previous three fiscal years, or (iv) the date on which we are deemed a "large accelerated filer" under the rules of the SEC with at least $700.0 million of outstanding equity securities held by non-affiliates.

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

Recently issued accounting pronouncements

We have reviewed all recently issued standards and have determined that, other than as disclosed in Note 2 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q, such standards will not have a material impact on our financial statements or do not otherwise apply to our operations.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Interest rate fluctuation risk

We are exposed to market risk related to changes in interest rates. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of US interest rates, particularly because our cash equivalents are primarily invested in short-term US Treasury obligations, and our Term Loan Facility bears interest at a variable rate.

Given the short-term nature of the instruments in our portfolio, an immediate change in market interest rates of 100 basis points would not have a material impact on the fair market value of our portfolio or on our financial position or results of operations.

Our Term Loan Facility bears interest at a rate equal to the greater of (i) 9.0% plus the prime rate as reported in the Wall Street Journal less 5.25% and (ii) 9.0%. Accordingly, increases in such prime rate could increase our interest payments under the Term Loan Facility. An increase of 100 basis points in the interest rate of the Term Loan Facility would not have a material impact on our financial position or results of operations.

Foreign currency fluctuation risk

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we have contracted with and may continue to contract with foreign vendors. Our operations may be subject to fluctuations in foreign currency exchange rates in the future.

Inflation fluctuation risk

Inflation generally affects us by increasing our cost of labor. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the three months ended March 31, 2021 or 2020.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, under the supervision and with the participation of our Principal Executive Officer (our Chief Executive Officer) and Principal Financial Officer (our Chief Financial Officer, Treasurer), has evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2021. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or 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 the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2021, our Principal Executive Officer and Principal Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

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

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

We are not currently a party to any material legal proceedings. From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. Information regarding risks and uncertainties related to our business appears in Part I, Item 1A. “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2020, which was filed with the Securities and Exchange Commission, or the SEC, on March 17, 2021. There have been no material changes from the risk factors previously disclosed in the Annual Report. You should carefully consider the risks and uncertainties described in our Annual Report, together with all of the other information contained in this Quarterly Report on Form 10-Q. If any of the risks actually occur, it could harm our business, prospects, operating results and financial condition and future prospects. In such event, the market price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. This Quarterly Report on Form 10-Q also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this Quarterly Report.

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

Recent Sales of Unregistered Securities

None.

Use of Proceeds

On October 13, 2020, the Registration Statement on Form S-1 (File No. 333-248692) for our initial public offering of our common stock was declared effective by the SEC. Shares of our common stock began trading on the Nasdaq Global Market on October 14, 2020.

The underwriters of our initial public offering were Goldman Sachs & Co. LLC, Evercore Group L.L.C., William Blair & Company, L.L.C. and Wedbush Securities Inc. The offering commenced on October 13, 2020 and did not terminate until the sale of all of the shares offered.

We paid to the underwriters of our initial public offering an underwriting discount totaling approximately $5.78 million. In addition, we incurred expenses of approximately $2.37 million which, when added to the underwriting discount, amount to total expenses of approximately $8.15 million. Thus, the net offering proceeds, after deducting underwriting discounts and offering expenses, were approximately $74.4 million. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10.0% or more of any class of our equity securities or to any other affiliates.

There has been no material change in the planned use of IPO proceeds from that described in the final prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b)(4) under the Securities Act of 1933, as amended, dated October 14, 2020.

Issuer Repurchases of Equity Securities

Not applicable.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit Number	Description
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	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.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

** Furnished herewith.

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.

Codiak BioSciences, Inc.

Date: May 6, 2021

By: /s/ Douglas E. Williams

Douglas E. Williams, Ph.D.
Chief Executive Officer, Director
(Principal Executive Officer)

Date: May 6, 2021

By: /s/ Linda C. Bain

Linda C. Bain
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

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

I, Douglas E. Williams, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Codiak BioSciences, Inc.;

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

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

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

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

   (b) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

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

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

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

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

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

Date: May 6, 2021

By: /s/ DOUGLAS E. WILLIAMS
Douglas E. Williams, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

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

I, Linda C. Bain, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended March 31, 2021 of Codiak BioSciences, Inc.;

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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. (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

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

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

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

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

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

Date: May 6, 2021

By: /s/ LINDA C. BAIN
Linda C. Bain
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATIONS OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report on Form 10-Q of Codiak BioSciences, Inc. (the "Company") for the period ended March 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers herby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to his knowledge:

1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated in the Report.

Date: May 6, 2021 By: /s/ DOUGLAS E. WILLIAMS

Douglas E. Williams, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 6, 2021 By: /s/ LINDA C. BAIN

Linda C. Bain
Chief Financial Officer
(Principal Financial and Accounting Officer)