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

FORM 10-Q

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

For the quarterly period ended September 30, 2019

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 **1-12830**

Lineage Cell Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

California	**94-3127919**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
2173 Salk Avenue, Suite 200 Carlsbad, California	**92008**
(Address of principal executive offices)	(Zip code)

(442) 287-8990
(Registrant's telephone number, including area code)

Title of each class	**Trading Symbol**	**Name of exchange on which registered**
Common Stock	LCTX	NYSE American

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

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

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

Large accelerated filer ☐
Non-accelerated filer ☐
Emerging growth company ☐

Accelerated filer ☒
Smaller reporting 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 to Section 13(a) of the Exchange Act. ☐

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

The number of common shares outstanding as of November 8, 2019 was 149,794,177.

PART I - FINANCIAL INFORMATION

This Report on Form 10-Q (this "Report") contains forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this Report are forward-looking statements. In some cases, you can identify forward-looking statements by words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "seek," "should," "target," "will," "would," or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- our plans to research, develop and commercialize our product candidates;
- the initiation, progress, success, cost and timing of our clinical trials and product development activities;
- the therapeutic potential of our product candidates, and the disease indications for which we intend to develop our product candidates;
- our ability and timing to advance our product candidates into, and to successfully initiate, conduct, enroll and complete, clinical trials;
- our ability to manufacture our product candidates for clinical development and, if approved, for commercialization, and the timing and costs of such manufacture;
- the performance of third parties in connection with the development and manufacture of our product candidates, including third parties conducting our clinical trials as well as third-party suppliers and manufacturers;
- the potential of our cell therapy platform, and our plans to apply our platform to research, develop and commercialize our product candidates;
- our ability to obtain funding for our operations, including funding necessary to initiate and complete clinical trials of our product candidates;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- the potential scope and value of our intellectual property rights;
- our ability, and the ability of our licensors, to obtain, maintain, defend and enforce intellectual property rights protecting our product candidates, and our ability to develop and commercialize our product candidates without infringing the proprietary rights of third parties;
- our ability to recruit and retain key personnel;
- our ability to successfully integrate the operations of Asterias Biotherapeutics, Inc. ("Asterias") into Lineage; and
- other risks and uncertainties, including those described under Part II, Item 1A, "Risk Factors" of this Report and Part I, Item 1A, "Risk Factors" in our most recent Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (the "Commission") on March 14, 2019.

Any forward-looking statements in this Report reflect our current views with respect to future events or to our future 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. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Part II, Item 1A, "Risk Factors" of this Report and Part I, Item 1A, "Risk Factors" in our most recent Annual Report on Form 10-K filed with Commission on March 14, 2019. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

On August 9, 2019, BioTime, Inc. changed its corporate name to Lineage Cell Therapeutics, Inc. References to "Lineage," "we," and "our" means Lineage Cell Therapeutics, Inc. and its subsidiaries and affiliates unless the context otherwise indicates.

The description in this Report of any contract is a summary only and is qualified in all respects by reference to the full text of the applicable contract.

Recent Transactions Affecting Our Corporate Organization

Asterias Merger

On March 8, 2019, we acquired the outstanding shares of common stock of Asterias Biotherapeutics, Inc. ("Asterias") held by stockholders other than Lineage via merger. In the acquisition, the outstanding shares of Asterias common stock held by stockholders other than Lineage were converted into shares of our common stock at an exchange ratio of 0.71 Lineage shares for each Asterias share.

Prior to May 13, 2016, Asterias was a majority-owned and consolidated subsidiary of Lineage. On May 13, 2016, Lineage's percentage ownership of Asterias decreased from 57.1% to 48.7% as a result of the sale of shares of common stock by Asterias in a public offering, resulting in Lineage's loss of control of Asterias under generally accepted accounting principles in the U.S. ("GAAP"). Accordingly, Lineage deconsolidated Asterias effective May 13, 2016. From May 13, 2016 until the consummation of the merger on March 8, 2019, Lineage accounted for its ownership in Asterias under the equity method of accounting, electing the fair value option, with the investment carried on the consolidated balance sheet at fair value and all subsequent changes in fair value included in Lineage's consolidated statements of operations in other income and expenses, net. The deconsolidation of Asterias is sometimes referred to as the "Asterias Deconsolidation" in this Report.

AgeX Deconsolidation and Distribution

On August 30, 2018, we entered into a Stock Purchase Agreement with Juvenescence Limited ("Juvenescence") and AgeX Therapeutics, Inc. ("AgeX"), under which we sold 14,400,000 of our shares of AgeX common stock to Juvenescence for $3.00 per share. The transaction resulted in over $43 million in non-dilutive financing for Lineage.

Upon completion of that transaction, our percentage ownership of AgeX's outstanding shares of common stock decreased from 80.4% to 40.2%, and Juvenescence's percentage ownership increased from 5.6% to 45.8%. As a result of the transaction, as of August 30, 2018, AgeX was no longer our subsidiary and effective that date, due to the decrease in our percentage ownership in AgeX to below 50%, we deconsolidated AgeX's consolidated financial statements and consolidated results of operations from ours under GAAP. Prior to that date, AgeX was our majority-owned and consolidated subsidiary. Beginning on August 30, 2018 through November 28, 2018 (the date on which AgeX began trading as a public company as discussed below), we accounted for AgeX using the equity method of accounting, electing the fair value option, recording the retained interest in AgeX at fair value on August 30, 2018 with all subsequent changes in fair value included in our consolidated statements of operations in other income and expenses, net. The deconsolidation of AgeX is sometimes referred to as the "AgeX Deconsolidation" in this Report.

On November 28, 2018, AgeX began trading as a public company on the NYSE American (under the symbol "AGE") and, on that date, we distributed 12.7 million shares of AgeX common stock we owned to our shareholders, on a pro rata basis, in the ratio of one share of AgeX common stock for every 10 shares of our common stock they owned. This distribution was accounted for at fair value as a taxable, dividend-in-kind transaction in the aggregate amount of $34.4 million. Immediately following the distribution, we owned 1.7 million shares of AgeX common stock. As of September 30, 2019, we own 1.1 million shares of AgeX common stock. We hold our shares of AgeX common stock as marketable equity securities. The distribution of AgeX common stock is sometimes referred to as the "AgeX Distribution" in this Report.

As of, and for each reporting period after August 30, 2018, the fair value of our ownership interest in AgeX will be determined by multiplying the fair value of a share of AgeX common stock by the number of such shares we own.

AgeX's consolidated assets and liabilities are not included in Lineage's unaudited condensed consolidated balance sheet at September 30, 2019 and December 31, 2018, due to the AgeX Deconsolidation on August 30, 2018.

Lineage's unaudited consolidated statements of operations for the three and nine months ended September 30, 2019 do not include AgeX's consolidated results. For the three and nine months ended September 30, 2018, Lineage's unaudited consolidated results include AgeX's consolidated results.

For further discussion, see Notes to the Unaudited Condensed Consolidated Financial Statements and *Management's Discussion and Analysis of Financial Condition and Results of Operations* included elsewhere in this Report.

Item 1. Financial Statements

LINEAGE CELL THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS)

	September 30, 2019 (Unaudited) (Notes 1 and 3)	December 31, 2018 (Notes 1 and 6)
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 14,366	$ 23,587
Marketable equity securities	21,318	7,154
Promissory note from Juvenescence (Note 5)	23,238	-
Trade accounts and grants receivable, net	157	767
Receivables from affiliates, net (Note 10)	164	2,112
Prepaid expenses and other current assets	2,342	2,738
Total current assets	61,585	36,358
NONCURRENT ASSETS		
Property and equipment, net (Notes 7 & 15)	8,844	5,835
Deposits and other long-term assets	826	505
Promissory note from Juvenescence (Note 5)	-	22,104
Equity method investment in OncoCyte, at fair value (Note 4)	-	20,250
Equity method investment in Asterias, at fair value (Note 3)	-	13,483
Goodwill	12,977	-
Intangible assets, net	48,746	3,125
TOTAL ASSETS	$ 132,978	$ 101,660
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	$ 4,842	$ 6,463
Financing lease and right of use lease liabilities, current portion (Note 15)	1,138	237
Promissory notes, current portion	-	70
Deferred grant revenue	182	42
Total current liabilities	6,162	6,812
LONG-TERM LIABILITIES		
Deferred tax liability	6,343	-
Deferred revenues, net of current portion	240	-
Deferred rent liabilities, net of current portion	-	244
Right-of-use lease liability, net of current portion (Note 15)	4,087	1,854
Financing lease, net of current portion	87	104
Liability classified warrants, net of current portion, and other long-term liabilities	540	400
TOTAL LIABILITIES	17,459	9,414
Commitments and contingencies (Note 15)		
SHAREHOLDERS' EQUITY		
Preferred shares, no par value, authorized 2,000 shares; none issued and outstanding as of September 30, 2019 and December 31, 2018	-	-
Common shares, no par value, 250,000 shares authorized; 149,790 shares issued and outstanding as of September 30, 2019 and 127,136 shares issued and outstanding as of December 31, 2018	386,454	354,270
Accumulated other comprehensive income	(357)	1,426
Accumulated deficit	(268,940)	(261,856)
Lineage Cell Therapeutics, Inc. shareholders' equity	117,157	93,840
Noncontrolling interest (deficit)	(1,638)	(1,594)
Total shareholders' equity	115,519	92,246
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 132,978	$ 101,660

See accompanying notes to the condensed consolidated interim financial statements.

LINEAGE CELL THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)
(UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
REVENUES:				
Grant revenue	$ 350	$ 718	$ 1,628	$ 2,985
Royalties from product sales and license fees	164	85	390	312
Subscription and advertisement revenues	-	119	-	691
Sale of research products and services	53	60	256	242
Total revenues	567	982	2,274	4,230
Cost of sales	(114)	(35)	(289)	(250)
Gross profit	453	947	1,985	3,980
OPERATING EXPENSES:				
Research and development	4,266	4,882	14,462	17,175
Acquired in-process research and development	-	-	-	800
General and administrative	4,609	6,422	19,527	17,585
Total operating expenses	8,875	11,304	33,989	35,560
Loss from operations	(8,422)	(10,357)	(32,004)	(31,580)
OTHER INCOME/(EXPENSES):				
Interest income, net	399	174	1,278	278
Gain on sale of marketable equity securities	2,055	-	2,055	-
Gain on sale of equity method investment in OncoCyte	546	-	546	-
Gain on sale of equity method investment in Ascendance	-	-	-	3,215
Gain on sale of AgeX shares and deconsolidation of AgeX	-	78,511	-	78,511
Unrealized (loss) gain on marketable equity securities	(4,458)	23	(3,134)	635
Unrealized (loss) gain on equity method investment in OncoCyte at fair value	(8,287)	(734)	8,001	(31,550)
Unrealized (loss) gain on equity method investment in Asterias at fair value	-	(1,087)	6,744	(20,660)
Unrealized gain on warrant liability	79	21	350	372
Other income (expense), net	582	(7)	2,270	(1,021)
Total other (expense) income, net	(9,084)	76,901	18,110	29,780
(LOSS)/INCOME BEFORE INCOME TAXES	(17,506)	66,544	(13,894)	(1,800)
Deferred income tax benefit	991	-	6,623	-
NET (LOSS)/INCOME	(16,515)	66,544	(7,271)	(1,800)
Net loss attributable to noncontrolling interest	10	181	44	762
NET (LOSS)/INCOME ATTRIBUTABLE TO LINEAGE CELL THERAPEUTICS, INC.	$ (16,505)	$ 66,725	$ (7,227)	$ (1,038)
NET (LOSS)/INCOME PER COMMON SHARE:				
BASIC	$ (0.11)	$ 0.53	$ (0.05)	$ (0.01)
DILUTED	$ (0.11)	$ 0.53	$ (0.05)	$ (0.01)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:				
BASIC	149,659	126,878	144,097	126,872
DILUTED	149,659	126,973	144,097	126,872

See accompanying notes to the condensed consolidated interim financial statements.

LINEAGE CELL THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME/(LOSS)
(IN THOUSANDS)
(UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
NET (LOSS)/INCOME	$ (16,515)	$ 66,544	$ (7,271)	$ (1,800)
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustment, net of tax	(564)	92	(1,783)	1,051
COMPREHENSIVE (LOSS)/INCOME	(17,079)	66,636	(9,054)	(749)
Less: Comprehensive loss attributable to noncontrolling interest	10	181	44	762
COMPREHENSIVE (LOSS)/INCOME ATTRIBUTABLE TO LINEAGE CELL THERAPEUTICS, INC. COMMON SHAREHOLDERS	$ (17,069)	$ 66,817	$ (9,010)	$ 13

See accompanying notes to the condensed consolidated interim financial statements.

LINEAGE CELL THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS [UNDER REVIEW]
(IN THOUSANDS)
(UNAUDITED)

	Nine Months Ended September 30,	
	2019	**2018**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss attributable to Lineage Cell Therapeutics, Inc.	$ (7,227)	$ (1,038)
Net loss allocable to noncontrolling interest	(44)	(762)
Adjustments to reconcile net loss attributable to Lineage Cell Therapeutics, Inc. to net cash used in operating activities:		
Unrealized (gain) loss on equity method investment in OncoCyte at fair value	(8,001)	31,550
Unrealized (gain) loss on equity method investment in Asterias at fair value	(6,744)	20,660
Gain on sale of investments in OncoCyte, AgeX and Hadasit	(2,601)	
Gain on sale of AgeX shares and deconsolidation of AgeX	-	(78,511)
Gain on sale of equity method investment in Ascendance	-	(3,215)
Acquired in-process research and development	-	800
Unrealized loss (gain) on marketable equity securities	3,134	(635)
Deferred income tax benefit	(6,623)	-
Depreciation expense, including amortization of leasehold improvements	766	814
Amortization of right-of-use asset	59	-
Amortization of intangible assets	1,500	1,715
Stock-based compensation	2,961	3,397
Change in unrealized gain on warrant liability	(349)	-
Foreign currency remeasurement and other (gain) loss	(1,911)	788
Changes in operating assets and liabilities:		
Accounts and grants receivable, net	634	107
Accrued interest receivable	(1,134)	-
Receivables from affiliates, net of payables	1,948	486
Prepaid expenses and other current assets	(136)	(708)
Accounts payable and accrued liabilities	(2,788)	(314)
Deferred revenue and other liabilities	132	(204)
Net cash used in operating activities	(26,424)	(25,070)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from the sale of OncoCyte common shares	10,738	-
Proceeds from the sale of AgeX common shares	1,586	-
Proceeds from the sale of Hadasit common shares	1,231	-
Cash and cash equivalents acquired in the Asterias Merger	3,117	-
Purchase of equipment and other assets	(433)	(399)
Security deposit paid and other	(2)	(8)
Deconsolidation of cash and cash equivalents of AgeX	-	(9,704)
Proceeds from the sale of AgeX common stock to Juvenescence	-	10,800
Proceeds from the sale of equity method investment in Ascendance	-	3,215
Purchase of in-process research and development	-	(1,872)
Net cash provided by investing activities	16,237	2,032
CASH FLOWS FROM FINANCING ACTIVITIES:		
Common shares received and retired for employee taxes paid	(101)	(26)
Reimbursement from landlord on tenant improvements	750	-
Net proceeds from sale of common shares	103	-
Proceeds from sale of common shares of subsidiary	-	5,000
Proceeds from sale of subsidiary warrants	(40)	1,000
Repayment of financing lease liabilities	(20)	(155)
Repayment of principal portion of promissory notes	(70)	(101)
Payment to repurchase subsidiary shares	-	(38)
Net cash provided by financing activities	622	5,680
Effect of exchange rate changes on cash, cash equivalents and restricted cash	128	(40)
NET DECREASE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(9,437)	(17,398)
CASH, CASH EQUIVALENTS AND RESTRICTED CASH:		
At beginning of the period	24,399	37,685
At end of the period	$ 14,962	$ 20,287

See accompanying notes to the condensed consolidated interim financial statements.

1. Organization and Business Overview

Lineage is a clinical-stage biotechnology company developing novel cell therapies for unmet medical needs. Our current focus is on therapies for degenerative retinal diseases, neurological conditions associated with demyelination, and aiding the body in detecting and combating cancer. Lineage's programs are based on its proprietary cell-based therapy platform and associated development and manufacturing capabilities. With this platform, Lineage develops and manufactures specialized, terminally-differentiated human cells from its pluripotent and progenitor cell starting materials. These differentiated cells are developed either to replace or support cells that are dysfunctional or absent due to degenerative disease or traumatic injury, or administered as a means of helping the body mount an effective immune response to cancer.

Lineage has three cell therapy programs in clinical development:

- *OpRegen*®, a retinal pigment epithelium cell replacement therapy currently in a Phase I/IIa multicenter clinical trial for the treatment of advanced dry-age-related macular degeneration ("dry-AMD") with geographic atrophy. There currently are no therapies approved by the U.S. Food and Drug Administration ("FDA") for dry-AMD, which accounts for approximately 85-90% of all AMD cases and is a leading cause of blindness in people over the age of 65.

- *OPC1*, an oligodendrocyte progenitor cell therapy currently in a Phase I/IIa multicenter clinical trial for acute spinal cord injuries. This clinical trial has been partially funded by the California Institute for Regenerative Medicine.

- *VAC2*, an allogeneic (non-patient-specific or "off-the-shelf") cancer immunotherapy of antigen-presenting dendritic cells currently in a Phase I clinical trial in non-small cell lung cancer. This clinical trial is being funded and conducted by Cancer Research UK, the world's largest independent cancer research charity.

Lineage also has cell/drug delivery programs that are based upon its proprietary *HyStem*® cell and drug delivery matrix technology. *HyStem* was designed to support the formulation, transfer, retention, and engraftment of cellular therapies. *Renevia*® is a proprietary 3-D scaffold designed to support adipose tissue transplants. In a European pivotal clinical trial in patients with HIV-associated facial lipoatrophy, the primary endpoint of change in hemifacial volume at 6 months in treated patients compared to patients in the delayed treatment arm as measured by three-dimensional photographic volumetric assessment was met. In 2018, we submitted a design dossier for EU market clearance (CE Mark) for the use of Renevia as a device to aid in transferring a patient's own adipose tissue to treat certain forms of facial lipoatrophy, or fat loss. Lineage was granted a CE Mark for Renevia in September 2019 and is currently working to identify a commercialization partner in Europe.

Lineage is also enabling early-stage programs in other new technologies through its own research programs.

Asterias Merger

On November 7, 2018, Lineage, Asterias and Patrick Merger Sub, Inc., a wholly owned subsidiary of Lineage, entered into an Agreement and Plan of Merger (the "Merger Agreement") whereby Lineage agreed to acquire all of the outstanding common stock of Asterias in a stock-for-stock transaction (the "Asterias Merger").

On March 7, 2019, the shareholders of each of Lineage and Asterias approved the Merger Agreement. Prior to the Asterias Merger, Lineage owned approximately 38% of Asterias' issued and outstanding common stock and accounted for Asterias as an equity method investment.

On March 8, 2019, the Asterias Merger closed with Asterias surviving as a wholly owned subsidiary of Lineage. The former stockholders of Asterias (other than Lineage) received 0.71 common shares of Lineage for every share of Asterias common stock they owned. Lineage issued 24,695,898 common shares, including 58,085 shares issued in respect of restricted stock units issued by Asterias that immediately vested in connection with the closing of the Asterias Merger. The aggregate dollar value of such shares, based on the closing price of Lineage common shares on March 8, 2019, was $32.4 million. Lineage also assumed warrants to purchase shares of Asterias common stock.

The Asterias Merger has been accounted for using the acquisition method of accounting in accordance with Accounting Standards Codification ("ASC") Topic 805, *Business Combinations*, which requires, among other things, that the assets and liabilities assumed be recognized at their fair values as of the acquisition date.

See Note 3 for a full discussion of the Asterias Merger.

Investment in OncoCyte

Lineage has significant equity holdings in OncoCyte Corporation ("OncoCyte"), a publicly traded company, which Lineage founded and, in the past, was a majority-owned consolidated subsidiary until February 17, 2017. The deconsolidation of OncoCyte is sometimes referred to as the "OncoCyte Deconsolidation" in this Report. OncoCyte (NYSE American: OCX) is developing confirmatory diagnostic tests for lung cancer utilizing novel liquid biopsy technology. As of September 30, 2019, Lineage owned 8.4 million shares of OncoCyte common stock, or 16% of its outstanding shares (see Note 4).

2. Basis of Presentation, Liquidity and Summary of Significant Accounting Policies

The unaudited condensed consolidated interim financial statements presented herein, and discussed below, have been prepared in accordance with GAAP for interim financial information and with the instructions to Form 10-Q and Article 8 of Regulation S-X. In accordance with those rules and regulations certain information and footnote disclosures normally included in comprehensive consolidated financial statements have been condensed or omitted. The condensed consolidated balance sheet as of December 31, 2018 was derived from the audited consolidated financial statements at that date, but does not include all the information and footnotes required by GAAP. These condensed consolidated interim financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in Lineage's Annual Report on Form 10-K for the year ended December 31, 2018.

The accompanying condensed consolidated interim financial statements, in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of Lineage's financial condition and results of operations. The condensed consolidated results of operations are not necessarily indicative of the results to be expected for any other interim period or for the entire year.

Principles of consolidation

Lineage's condensed consolidated interim financial statements include the accounts of its subsidiaries. The following table reflects Lineage's ownership, directly or through one or more subsidiaries, of the outstanding shares of its operating subsidiaries as of September 30, 2019.

Subsidiary	Field of Business	Lineage Ownership	Country
Asterias BioTherapeutics, Inc.	Cell therapy clinical development programs in spinal cord injury and oncology	100%	USA
Cell Cure Neurosciences Ltd. ("Cell Cure")	Products to treat age-related macular degeneration	99% (1)	Israel
ES Cell International Pte. Ltd. ("ESI")	Stem cell products for research, including clinical grade cell lines produced under cGMP	100%	Singapore
OrthoCyte Corporation ("OrthoCyte")	Developing bone grafting products for orthopedic diseases and injuries	99.8%	USA

(1) Includes shares owned by Lineage and ESI.

For the three and nine months ended September 30, 2018, Lineage's unaudited consolidated results include AgeX's consolidated results for the period through August 30, 2018. As a result of the AgeX Deconsolidation, beginning on August 30, 2018 (a) AgeX's consolidated financial statements and consolidated results are no longer a part of Lineage's condensed consolidated interim financial statements and results, and (b) the fair value of AgeX common stock held by Lineage is now reflected on Lineage's condensed consolidated balance sheet and the changes in the fair value of those shares during the applicable reporting period are reflected as gains or losses in Lineage's condensed consolidated statements of operations included in other income and expenses, net.

All material intercompany accounts and transactions have been eliminated in consolidation. As of September 30, 2019, Lineage consolidated its direct and indirect wholly owned or majority-owned subsidiaries because Lineage has the ability to control their operating and financial decisions and policies through its ownership, and the noncontrolling interest is reflected as a separate element of shareholders' equity on Lineage's consolidated balance sheets.

Liquidity

Since inception, Lineage has incurred significant operating losses and has funded its operations primarily through the issuance of equity securities, sale of common stock of AgeX, a former subsidiary, receipt of research grants, royalties from product sales, license revenues and sales of research products. Additionally, Lineage raised $10.7 million in sales of a portion of its OncoCyte holdings, $1.6 million in sales of a portion of its AgeX holdings and $1.2 million in sales of a portion of its Hadasit Bio-Holdings Ltd. ("HBL") holdings in the third quarter of 2019. At September 30, 2019, Lineage had an accumulated deficit of approximately $268.9 million, working capital of $55.4 million and shareholders' equity of $115.5 million. Lineage has evaluated its projected cash flows and believes that its $35.7 million of cash, cash equivalents and marketable equity securities, including its positions in OncoCyte, AgeX and HBL, at September 30, 2019, provide sufficient cash, cash equivalents, and liquidity to carry out Lineage's current planned operations through at least twelve months from the issuance date of the consolidated financial statements included herein. If Lineage needs near term working capital or liquidity to supplement its cash and cash equivalents for its operations, Lineage may sell some, or all, of its marketable equity securities, as necessary.

If the promissory note issued by Juvenescence in favor of Lineage discussed in Note 5 is converted into equity securities of Juvenescence prior to its maturity date, the Juvenescence equity securities may be marketable securities that Lineage may use to supplement its liquidity, as needed. If such promissory note is not converted, it is payable in cash, plus accrued interest, at maturity on August 30, 2020.

On March 8, 2019, with the consummation of the Asterias Merger, Asterias became Lineage's wholly owned subsidiary. Lineage began consolidating Asterias' operations and results with its operations and results beginning on March 8, 2019 (see Note 3). As Lineage integrates Asterias' operations into its own, Lineage has made extensive reductions in headcount and reduced non-clinical related spend, in each case, as compared to Asterias' operations before the Asterias Merger.

Lineage's projected cash flows are subject to various risks and uncertainties, and the unavailability or inadequacy of financing to meet future capital needs could force Lineage to modify, curtail, delay, or suspend some or all aspects of its planned operations. Lineage's determination as to when it will seek new financing and the amount of financing that it will need will be based on Lineage's evaluation of the progress it makes in its research and development programs, any changes to the scope and focus of those programs, any changes in grant funding for certain of those programs, and projection of future costs, revenues, and rates of expenditure. Lineage may be required to delay, postpone, or cancel clinical trials or limit the number of clinical trial sites, unless it is able to obtain adequate financing. In addition, Lineage has incurred and expects to continue incurring significant costs in connection with the acquisition of Asterias and with integrating its operations. Lineage may incur additional costs to maintain employee morale and to retain key employees. Lineage cannot assure that adequate financing will be available on favorable terms, if at all. Sales of additional equity securities by Lineage or its subsidiaries and affiliates could result in the dilution of the interests of current shareholders.

Business Combinations

Lineage accounts for business combinations, such as the Asterias Merger completed in March 2019, in accordance with ASC Topic 805, which requires the purchase price to be measured at fair value. When the purchase consideration consists entirely of shares of Lineage's common stock, Lineage calculates the purchase price by determining the fair value, as of the acquisition date, of shares issued in connection with the closing of the acquisition. Lineage recognizes estimated fair values of the tangible assets and intangible assets acquired, including in-process research and development ("IPR&D"), and liabilities assumed as of the acquisition date, and records as goodwill any amount of the fair value of the tangible and intangible assets acquired and liabilities assumed in excess of the purchase price.

Marketable Equity Securities

Lineage accounts for the shares it holds in OncoCyte, AgeX and HBL as marketable equity securities in accordance with ASC 320-10-25, *Investments – Debt and Equity Securities*, as amended by Accounting Standards Update ("ASU") 2016-01, *Financial Instruments–Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*, further discussed below.

The OncoCyte and AgeX shares have readily determinable fair values quoted on the NYSE American under trading symbols "OCX" and "AGE". The HBL shares have a readily determinable fair value quoted on the Tel Aviv Stock Exchange ("TASE") under trading symbol "HDST" where share prices are denominated in New Israeli Shekels (NIS). Accordingly, the marketable equity securities are considered level 1 assets as defined by ASC 820. These securities are held principally to meet future working capital needs. These securities are measured at fair value and reported as current assets on the consolidated balance sheets based on the closing trading price of the security as of the date being presented.

Prior to September 11, 2019, Lineage accounted for its OncoCyte shares held at fair value, using the equity method of accounting. On September 11, 2019, Lineage's ownership percentage decreased from 24% to 16% when it sold 4.0 million shares of OncoCyte common stock. Accordingly, as the ownership percentage is less than 20%, Lineage is no longer considered to exercise significant influence over OncoCyte and is now accounting for its OncoCyte holdings as marketable equity securities.

Prior to the Asterias Merger completed on March 8, 2019 discussed in Note 3, Lineage accounted for its Asterias shares held at fair value, using the equity method of accounting.

Revenue Recognition

During the first quarter of 2018, Lineage adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") *ASU 2014-09, Revenues from Contracts with Customers (Topic 606)*, which created a single, principle-based revenue recognition model that supersedes and replaces nearly all existing U.S. GAAP revenue recognition guidance. Lineage adopted ASU 2014-09 using the modified retrospective transition method applied to those contracts which were not completed as of the adoption date. Results for reporting periods beginning on January 1, 2018 and thereafter are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with Lineage's historical revenue recognition accounting under Topic 605.

Lineage recognizes revenue in a manner that depicts the transfer of control of a product or a service to a customer and reflects the amount of the consideration it is entitled to receive in exchange for such product or service. In doing so, Lineage follows a five-step approach: (i) identify the contract with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations, and (v) recognize revenue when (or as) the customer obtains control of the product or service. Lineage considers the terms of a contract and all relevant facts and circumstances when applying the revenue recognition standard. Lineage applies the revenue recognition standard, including the use of any practical expedients, consistently to contracts with similar characteristics and in similar circumstances.

Lineage's largest source of revenue is currently related to government grants. In applying the provisions of ASU 2014-09, Lineage has determined that government grants are out of the scope of ASU 2014-09 because the government entities do not meet the definition of a "customer", as defined by ASU 2014-09, as there is not considered to be a transfer of control of good or services to the government entities funding the grant. Lineage has, and will continue to, account for grants received to perform research and development services in accordance with ASC 730-20, *Research and Development Arrangements*, which requires an assessment, at the inception of the grant, of whether the grant is a liability or a contract to perform research and development services for others. If Lineage or a subsidiary receiving the grant is obligated to repay the grant funds to the grantor regardless of the outcome of the research and development activities, then Lineage is required to estimate and recognize that liability. Alternatively, if Lineage or a subsidiary receiving the grant is not required to repay, or if it is required to repay the grant funds only if the research and development activities are successful, then the grant agreement is accounted for as a contract to perform research and development services for others, in which case, grant revenue is recognized when the related research and development expenses are incurred (see Note 15).

Deferred grant revenues represent grant funds received from the governmental funding agencies for which the allowable expenses have not yet been incurred as of the balance sheet date reported. As of September 30, 2019, deferred grant revenue was $182,000.

Basic and diluted net income (loss) per share attributable to common shareholders

Basic earnings per share is calculated by dividing net income or loss attributable to Lineage common shareholders by the weighted average number of common shares outstanding, net of unvested restricted stock or restricted stock units, subject to repurchase by Lineage, if any, during the period. Diluted earnings per share is calculated by dividing the net income or loss attributable to Lineage common shareholders by the weighted average number of common shares outstanding, adjusted for the effects of potentially dilutive common shares issuable under outstanding stock options and warrants, using the treasury-stock method, convertible preferred stock, if any, using the if-converted method, and treasury stock held by subsidiaries, if any.

For the three and nine months ended September 30, 2019, and for the nine months ended September 30, 2018, Lineage reported a net loss attributable to common shareholders, and therefore, all potentially dilutive common stock was considered antidilutive for those periods. For the three months ended September 30, 2018, Lineage reported net income attributable to common shareholders, and therefore, performed an analysis of common share equivalents to determine their impact on diluted net income, and determined that none of the common share equivalents were dilutive.

The following weighted average common share equivalents were excluded from the computation of diluted net income (loss) per common share for the periods presented because including them would have been antidilutive (in thousands):

	Three Months Ended September 30, (unaudited)		Nine Months Ended September 30, (unaudited)	
	2019	**2018**	**2019**	**2018**
Stock options	15,941	9,742	15,332	9,301
Warrants [1]	-	8,795	-	9,138
Lineage Warrants [2] (Note 3)	1,090	-	975	-
Restricted stock units	236	83	277	286

(1) The warrants expired on October 1, 2018.

(2) Although the Lineage Warrants are classified as liabilities, these warrants are considered for dilutive earnings per share calculations in accordance with ASC 260, *Earnings Per Share*, and determined to be anti-dilutive for the period presented.

Lease accounting and impact of adoption of the new lease standard

On January 1, 2019, Lineage adopted ASU 2016-02, *Leases* (Topic 842, "ASC 842") and its subsequent amendments affecting Lineage: (i) ASU 2018-10, *Codification Improvements to Topic 842, Leases*, and (ii) ASU 2018-11, *Leases (Topic 842): Targeted improvements*, using the modified retrospective method (see Note 15).

Lineage management determines if an arrangement is a lease at inception. Leases are classified as either financing or operating, with classification affecting the pattern of expense recognition in the consolidated statements of operations. When determining whether a lease is a finance lease or an operating lease, ASC 842 does not specifically define criteria to determine "major part of remaining economic life of the underlying asset" and "substantially all of the fair value of the underlying asset." For lease classification determination, Lineage continues to use (i) greater to or equal to 75% to determine whether the lease term is a major part of the remaining economic life of the underlying asset and (ii) greater to or equal to 90% to determine whether the present value of the sum of lease payments is substantially all of the fair value of the underlying asset. Under the available practical expedients, Lineage accounts for the lease and non-lease components as a single lease component. Lineage recognizes right-of-use ("ROU") assets and lease liabilities for leases with terms greater than twelve months in the condensed consolidated balance sheet.

ROU assets represent Lineage's right to use an underlying asset during the lease term and lease liabilities represent Lineage's obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of Lineage's leases do not provide an implicit rate, Lineage uses its incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Lineage uses the implicit rate when readily determinable. The operating lease ROU asset also includes any lease payments made and excludes lease incentives. Lineage's lease terms may include options to extend or terminate the lease when it is reasonably certain that Lineage will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Operating leases are included as right-of-use assets in property and equipment (see Note 7), and ROU lease liabilities, current and long-term, in the condensed consolidated balance sheets. Financing leases are included in property and equipment, and in financing lease liabilities, current and long-term, in Lineage's condensed consolidated balance sheets.

In connection with the adoption on ASC 842 on January 1, 2019, Lineage derecognized net book value of leasehold improvements and corresponding lease liabilities of $1.9 million and $2.0 million, respectively, which was the carrying value of certain operating leases as of December 31, 2018, included in property and equipment and lease liabilities, respectively, recorded pursuant to build to suit lease accounting under the previous ASC 840 lease standard. The derecognition of these amounts from the superseded ASC 840 lease standard was offset by a cumulative effect adjustment of $0.1 million as a reduction of Lineage's accumulated deficit on January 1, 2019. These build to suit leases were primarily related to the Alameda and the Cell Cure Leases described in Note 15. ASC 842 requires build to suit leases recognized on Lineage's consolidated balance sheets as of December 31, 2018 to be derecognized upon the adoption of the new lease standard and be recognized in accordance with the new standard on January 1, 2019.

The adoption of ASC 842 had a material impact in Lineage's consolidated balance sheets, with the most significant impact resulting from the recognition of ROU assets and lease liabilities for operating leases with remaining terms greater than twelve months on the adoption date (see Note 15). Lineage's accounting for financing leases (previously referred to as "capital leases") remained substantially unchanged.

Other recently adopted accounting pronouncements

Adoption of ASU 2016-18, Statement of Cash Flows (Topic 230) - On January 1, 2018, Lineage adopted ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*, which requires that the statement of cash flows explain the change during the period in the total of cash, cash equivalents and restricted cash, and that restricted cash be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the condensed consolidated statements of cash flows. The adoption of ASU 2016-18 did not have a material effect on Lineage's condensed consolidated financial statements. However, prior period restricted cash balances included in prepaid expenses and other current assets, and in deposits and other long-term assets, on the condensed consolidated balance sheets was added to the beginning-of-period and end-of-period total consolidated cash and cash equivalents in the condensed consolidated statements of cash flows to conform to the current presentation shown below.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the condensed consolidated balance sheet dates that comprise the total of the same such amounts shown in the condensed consolidated statements of cash flows for all periods presented herein and effected by the adoption of ASU 2016-18 (in thousands):

	September 30, 2019	December 31, 2018	September 30, 2018	December 31, 2017
	(unaudited)		(unaudited)	
Cash and cash equivalents	$ 14,366	$ 23,587	$ 19,467	$ 36,838
Restricted cash included in prepaid expenses and other current assets (see Note 15)	-	346	424	-
Restricted cash included in deposits and other long-term assets (see Note 15)	596	466	396	847
Total cash, cash equivalents, and restricted cash as shown in the condensed consolidated statements of cash flows	$ 14,962	$ 24,399	$ 20,287	$ 37,685

Adoption of ASU 2018-07, Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting - In June 2018, the FASB issued ASU 2018-07, *Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, which simplifies the accounting for non-employee share-based payment transactions. The new standard expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from non-employees. ASU 2018-07 is effective for fiscal years beginning after December 15, 2018 (including interim periods within that fiscal year). Lineage adopted ASU 2018-07 on January 1, 2019. As Lineage does not have a significant number of nonemployee share-based awards, the application of the new standard did not have a material impact on its consolidated financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted - The recently issued accounting pronouncements applicable to Lineage that are not yet effective should be read in conjunction with the recently issued accounting pronouncements, as applicable and disclosed in Lineage's Annual Report on Form 10-K for the year ended December 31, 2018.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies certain disclosure requirements for reporting fair value measurements. ASU 2018-13 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. Lineage will adopt this standard on January 1, 2020 and does not believe adoption of the guidance will have a significant impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. ASU 2016-13 is intended to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. This standard is currently effective for interim and annual reporting periods beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted for annual periods beginning after December 15, 2018. In October 2019, the FASB affirmed a proposed ASU deferring the effective date of ASU 2016-13 for all entities except public companies that are not smaller reporting companies to fiscal years beginning after December 15, 2022, including interim periods within those years. This proposed ASU has not been finalized as of the date of this report. When finalized, Lineage plans to adopt ASU 2016-13 effective January 1, 2023. Lineage has not yet completed its assessment of the impact of the new standard on its consolidated financial statements.

3. Asterias Merger

On March 8, 2019, the Asterias Merger closed with Asterias surviving as a wholly owned subsidiary of Lineage. The former stockholders of Asterias (other than Lineage) received 0.71 common shares of Lineage (the "Merger Consideration") for every share of Asterias common stock they owned (the "Merger Exchange Ratio"). Lineage issued 24,695,898 common shares, including 58,085 shares issued in respect of restricted stock units issued by Asterias that immediately vested in connection with the closing of the Asterias Merger. The fair value of such shares, based on the closing price of Lineage common shares on March 8, 2019, was $32.4 million.

In connection with the closing of the Asterias Merger, Lineage assumed outstanding warrants to purchase shares of Asterias common stock, as further discussed below and in Note 11, and assumed sponsorship of the Asterias 2013 Equity Incentive Plan (see Note 12). All stock options to purchase shares of Asterias common stock outstanding immediately prior to the closing of the Asterias Merger were canceled at the closing for no consideration.

As of September 30, 2019, the assets and liabilities of Asterias have been included in the condensed consolidated balance sheet of Lineage. The results of operations of Asterias from March 8, 2019 through September 30, 2019 have been included in the condensed consolidated statement of operations of Lineage for the nine months ended September 30, 2019.

Calculation of the purchase price

The calculation of the purchase price for the Asterias Merger and the Merger Consideration transferred on March 8, 2019 was as follows (in thousands, except for share and per share amounts):

	Lineage (38% ownership interest)	Shareholders other than Lineage (approximate 62% ownership interest)	Total
Outstanding Asterias common stock as of March 8, 2019	21,747,569	34,783,333(1)	56,530,902(1)
Exchange ratio	0.710	0.710	0.710
Lineage common shares issuable	15,440,774(2)	24,695,898(3)	40,136,672
Per share price of Lineage common shares as of March 8, 2019	$ 1.31	$ 1.31	$ 1.31
Purchase price (in $000s)	$ 20,227(2)	$ 32,353	$ 52,580

(1) Includes 81,810 shares of Asterias restricted stock unit awards that immediately vested on March 8, 2019 and converted into the right to receive common shares of Lineage based on the Merger Exchange Ratio, resulting in 58,085 common shares of Lineage issued on March 8, 2019 as part of the Merger Consideration. These restricted stock units were principally attributable to pre-combination services and included as part of the purchase price in accordance with ASC 805. See Note 12 for Asterias restricted stock units that vested on the closing of the Asterias Merger attributable to post-combination services that were recorded outside of the purchase price as an immediate charge to stock-based compensation expense.

(2) Estimated fair value for Lineage's previously held 38% ownership interest in Asterias common stock is part of the total purchase price of Asterias for purposes of the purchase price allocation under ASC 805 and for Lineage's adjustment of its 38% interest to fair value at the effective date of the Asterias Merger and immediately preceding the consolidation of Asterias' results with Lineage. No actual common shares of Lineage were issued to Lineage in connection with the Asterias Merger.

(3) Net of a de minimis number of fractional shares which were paid in cash.

Estimated purchase price allocation

Lineage allocated the acquisition consideration to tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values as of the acquisition date. The fair value of the acquired tangible and identifiable intangible assets were determined based on inputs that are unobservable and significant to the overall fair value measurement. It is also based on estimates and assumptions made by management at the time of the acquisition. As such, this was classified as Level 3 fair value hierarchy measurements and disclosures.

The Merger Consideration allocation below is preliminary and as additional information becomes available, Lineage may further revise the preliminary acquisition consideration allocation. Lineage expects to finalize the acquisition consideration allocation by the end of 2019. Any such revisions or changes may be material.

The following table sets forth a preliminary allocation of the purchase price to Asterias' tangible and identifiable intangible assets acquired and liabilities assumed on the closing of the Asterias Merger, with the excess recorded as goodwill (in thousands):

Assets acquired:	
Cash and cash equivalents	$ 3,117
Prepaid expenses and other assets, current and noncurrent	660
Machinery and equipment	369
Long-lived intangible assets - royalty contracts	650
Acquired in-process research and development ("IPR&D")	46,540
Total assets acquired	51,336
Liabilities assumed:	
Accrued liabilities and accounts payable	1,136
Liability classified warrants	867
Deferred license revenue	200
Long-term deferred income tax liability	12,965
Total liabilities assumed	15,168
Net assets acquired, excluding goodwill (a)	36,168
Fair value of Lineage common shares held by Asterias (b)	3,435
Total purchase price (c)	52,580
Estimated goodwill (c-a-b)	$ 12,977

The valuation of identifiable intangible assets and their estimated useful lives are as follows (in thousands, except for useful life):

	Preliminary Estimated Asset Fair Value	Useful Life (Years)
	(in thousands, except for useful life)	
In process research and development ("IPR&D")	$ 46,540	n/a
Royalty contracts	650	5
	$ 47,190	

The following is a discussion of the valuation methods used to determine the fair value of Asterias' significant assets and liabilities in connection with the Asterias Merger:

Acquired In-Process Research and Development (" IPR&D") and Deferred Income Tax Liability - The fair value of identifiable acquired in-process research and development intangible assets consisting of $31.7 million pertaining to the OPC1 program that is currently in a Phase 1/2a clinical trial for spinal cord injuries ("SCI"), which has been partially funded by the California Institute for Regenerative Medicine and $14.8 million pertaining to the VAC2 program, which is a non-patient-specific ("off-the-shelf") cancer immunotherapy derived from pluripotent stem cells for which a clinical trial in non-small cell lung cancer is being funded and sponsored by Cancer Research UK. The identification of these intangible assets are based on consideration of historical experience and a market participant's view further discussed below; collectively, OPC1 and the VAC2 are referred to as the "AST-Clinical Programs". These intangible assets are valued primarily through the use of a probability weighted discounted cash flow method under the income approach further discussed below. Lineage considered the VAC1 program, an autologous product candidate, manufactured from cells that come from the patient, and due to significant risks, substantial costs and limited opportunities in its current state associated with the VAC1 program, Lineage management considered this program to have de minimis value.

Lineage determined that the estimated aggregate fair value of the AST-Clinical programs was $46.5 million as of the acquisition date using a probability weighted discounted cash flow method for each respective program. This approach estimates the probability of the AST-Clinical Programs achieving successful completion of remaining clinical trials and related approvals into the valuation technique.

To calculate fair value of the AST-Clinical programs under the discounted cash flow method, Lineage used probability-weighted, projected cash flows discounted at a rate considered appropriate given the significant inherent risks associated with cell therapy development by clinical-stage companies. Cash flows were calculated based on estimated projections of revenues and expenses related to each respective program. Cash flows were assumed to extend through a seven-year market exclusivity period for the OPC1 program from the date of market launch. Revenues from commercialization of the AST-Clinical Programs were based on estimated market potential for the indication of each program. The resultant cash flows were then discounted to present value using a weighted-average cost of capital for companies with profiles substantially similar to that of Lineage, which Lineage believes represents the rate that market participants would use to value the assets. Lineage compensated for the phase of development of the program by applying a probability factor to its estimation of the expected future cash flows. The projected cash flows were based on significant assumptions, including the indications in which Lineage will pursue development of the AST-Clinical programs, the time and resources needed to complete the development and regulatory approval, estimates of revenue and operating profit related to the program considering its stage of development, the life of the potential commercialized product, market penetration and competition, and risks associated with achieving commercialization, including delay or failure to obtain regulatory approvals to conduct clinical studies, failure of clinical studies, delay or failure to obtain required market clearances, and intellectual property litigation.

These IPR&D assets are indefinite-lived intangible assets until the completion or abandonment of the associated research and development ("R&D") efforts. Once the R&D efforts are completed or abandoned, the IPR&D will either be amortized over the asset life as a finite-lived intangible asset or be impaired, respectively, in accordance with ASC 350, *Intangibles - Goodwill and Other*. In accordance with ASC 350, goodwill and acquired IPR&D are determined to have indefinite lives and, therefore, are not amortized. Instead, they are tested for impairment at least annually and between annual tests if Lineage becomes aware of an event or a change in circumstances that would indicate the asset may be impaired.

Because the IPR&D (prior to completion or abandonment of the R&D) is considered an indefinite-lived asset for accounting purposes, the fair value of the IPR&D on the acquisition date creates a deferred income tax liability ("DTL") in accordance with ASC 740, *Income Taxes* (see Note 13). This DTL is computed using the fair value of the IPR&D assets on the acquisition date multiplied by Lineage's federal and state income tax rates. While this DTL would reverse on impairment or sale or commencement of amortization of the related intangible assets, those events are not anticipated under ASC 740 for purposes of predicting reversal of a temporary difference to support the realization of deferred tax assets, except for certain deferred tax assets and credit carryforwards that are also indefinite in nature as of the closing of the Asterias Merger, which may be considered for reversal under ASC 740 as further discussed in Note 13.

Royalty contracts - Asterias has certain royalty revenues for "research only use" culture media for pre-clinical research applications under certain, specific patent families under contracts which preclude the customers to sell for commercial use or for clinical trials. These royalty cash flows are generated under certain specific patent families which Asterias previously acquired from Geron Corporation ("Geron"). Asterias pays Geron a royalty for all royalty revenues received from these contracts. Because these patents are a subset of the clinical programs discussed above, are expected to continue to generate revenues for Asterias and are not to be used in the OPC1 or the VAC2 programs, these patents are considered to be separate long-lived intangible assets under ASC 805. These intangible assets are also valued primarily through the use of the discounted cash flow method under the income approach, and will be amortized over their useful life, estimated to be 5 years. The discounted cash flow method estimated the amount of net royalty income that can be expected under the contracts in future years. The amounts were based on observed historical trends in the growth of these revenue streams, and were estimated to terminate in approximately five years, when the key patents under these contracts will begin to expire. The resulting cash flows were discounted to the valuation date based on a rate of return that recognizes a lower level of risk associated with these assets as compared to the AST-Clinical programs discussed above.

Deferred license revenue - In September 2018, Asterias and Novo Nordisk A/S ("Novo Nordisk") entered into an option for Novo Nordisk or its designated U.S. affiliate to license, on a non-exclusive basis, certain intellectual property related to culturing pluripotent stem cells, such as hES cells, in suspension. Under the terms of the option, Asterias received a one-time upfront payment of $1.0 million, in exchange for a 24-month period option to negotiate a non-exclusive license during which time Asterias has agreed to not grant any exclusive licenses inconsistent with the Novo Nordisk option. This option is considered a performance obligation as it provides Novo Nordisk with a material right that it would not receive without entering into the contract.

For business combination purposes under ASC 805, the fair value of this performance obligation to Lineage, from a market participant perspective, is the estimated costs Lineage may incur, plus a normal profit margin for the level of effort required to perform under the contract after the acquisition date, assuming Novo Nordisk exercised its option, including, but not limited to, negotiation costs, legal fees, arbitration, if any, and other related costs. Management has estimated those costs, plus a normal profit margin, to be approximately $200,000 in the estimated purchase price allocation.

Liability classified warrants - On May 13, 2016, in connection with a common stock offering, Asterias issued warrants to purchase 2,959,559 shares of Asterias common stock (the "Asterias Warrants") with an exercise price of $4.37 per share that expire in five years from the issuance date, or May 13, 2021. As of the closing of the Asterias Merger, there were 2,813,159 Asterias Warrants outstanding. The Asterias Warrants contain certain provisions in the event of a Fundamental Transaction, as defined in the warrant agreement governing the Asterias Warrants ("Warrant Agreement"), that Asterias or any successor entity will be required to purchase, at a holder's option, exercisable at any time concurrently with or within thirty days after the consummation of the fundamental transaction, the Asterias Warrants for cash in an amount equal to the calculated value of the unexercised portion of such holder's warrants, determined in accordance with the Black-Scholes option pricing model with significant inputs as specified in the Warrant Agreement. The Asterias Merger was a Fundamental Transaction for purposes of the Asterias Warrants.

The fair value of the Asterias Warrants was determined by using Black-Scholes option pricing models which take into consideration the probability of the fundamental transaction, which for purposes of the above valuation was assumed to be at 100% and net cash settlement occurring, using the contractual remaining term of the warrants. In applying these models, these inputs included key assumptions including the per share closing price of Lineage common shares on March 8, 2019, volatility computed in accordance with the provisions of the Warrant Agreement and, to a large extent, assumptions based on discussions with a majority of the holders of the Asterias Warrants since the closing of the Asterias Merger to settle the Asterias Warrants in cash or in common shares of Lineage. Based on such discussions, Lineage believes the fair value of the Asterias Warrants as of the closing of the Asterias Merger is not subject to change significantly, however, to the extent any Asterias Warrants that were not settled in cash or in Lineage common shares discussed below, were automatically converted to Lineage warrants 30 days after the closing of the Asterias Merger. In April 2019, Asterias Warrants representing approximately $372,000 in fair value were settled: $332,000 in fair value was settled in exchange for 251,835 common shares of Lineage, and $40,000 in fair value was settled in exchange for cash. The Asterias Warrants settled in exchange for common shares of Lineage were held by Broadwood Partners, L.P., an Asterias and Lineage shareholder. The Asterias Warrants settled in exchange for cash were held by other parties. The remaining Asterias Warrants (representing approximately $495,000 in fair value as of March 31, 2019) were converted into warrants to purchase common shares of Lineage using the Merger Exchange Ratio (the "Lineage Warrants").

As of September 30, 2019, the total number of common shares of Lineage subject to warrants that were assumed by Lineage in connection with the Asterias Merger was 1,089,900, with similar terms and conditions retained under the Lineage Warrants as per the original Warrant Agreements. The Lineage Warrants have an exercise price of $6.15 per warrant share and expire on May 13, 2021. Lineage is accounting for the outstanding Lineage Warrants as a liability at fair value, with subsequent changes to the fair value of the Lineage Warrants at each reporting period thereafter included in the consolidated statement of operations (see Note 11).

Fair value of Lineage common shares held by Asterias - As of March 8, 2019, Asterias held 2,621,811 common shares of Lineage as marketable securities on its standalone financial statements. The fair value of those shares acquired by Lineage from Asterias is determined based on the $1.31 per share closing price of Lineage common shares on March 8, 2019. Although treasury shares are not considered an asset and were retired upon Lineage's acquisition of Asterias, the fair value of those shares is a part of the purchase price allocation shown in the tables above. These Lineage shares were retired at the completion of the Asterias Merger.

Goodwill - Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the values assigned to the assets acquired and liabilities assumed. Goodwill is not amortized but is tested for impairment at least annually, or more frequently if circumstances indicate potential impairment.

Depending on the structure of a particular acquisition, goodwill and identifiable intangible assets may not be deductible for tax purposes. Goodwill recorded in the Asterias Merger is not expected to be deductible for tax purposes (see Note 13).

During the three and nine months ended September 30, 2019, Lineage incurred $30,000 and $4.4 million, respectively, in acquisition related costs which were recorded in general and administrative expenses in the accompanying condensed consolidated statements of operations.

Prior to the Asterias Merger being consummated in March 2019, Lineage elected to account for its 21.7 million shares of Asterias common stock at fair value using the equity method of accounting. The fair value of the Asterias shares was approximately $20.2 million as of March 8, 2019, the closing date of the Asterias Merger, based on $0.93 per share, which was calculated by multiplying (a) $1.31, the closing price of Lineage common shares on such date by (b) the Merger Exchange Ratio. The fair value of the Asterias shares was approximately $13.5 million as of December 31, 2018, based on the closing price of Asterias common stock of $0.62 per share on such date. Accordingly, Lineage recorded an unrealized gain of $6.7 million for the nine months ended September 30, 2019, representing the change in fair value of Asterias common stock from December 31, 2018 to March 8, 2019. For the nine months ended September 30, 2018, Lineage recorded an unrealized loss of $20.7 million on the Asterias shares due to the decrease in Asterias' stock price from December 31, 2017 to September 30, 2018 from $2.25 per share to $1.30 per share. All share prices were determined based on the closing price of Lineage or Asterias common stock on the NYSE American on the applicable dates.

Asterias Merger Related Litigation - See Note 15 Commitments and Contingencies for discussion regarding litigation related to the Asterias Merger.

4. Accounting for Common Stock of OncoCyte, at Fair Value

Lineage elected to account for its shares of OncoCyte common stock at fair value using the equity method of accounting beginning on February 17, 2017, the date of the OncoCyte Deconsolidation, through September 11, 2019. Lineage sold 2.25 million shares of OncoCyte common stock for net proceeds of $4.2 million in July 2019. Accordingly, Lineage's ownership in OncoCyte was reduced from 28% to 24%. Lineage sold an additional 4.0 million shares of OncoCyte common stock for net proceeds of $6.5 million on September 11, 2019. Lineage's ownership in OncoCyte was further reduced to 16% at this time. Effective September 11, 2019, Lineage began accounting for its shares of OncoCyte common stock as marketable equity securities. The calculation of fair value is the same under the equity method and as a marketable equity security.

As of September 30, 2019, Lineage owned 8.4 million shares of OncoCyte common stock. These shares had a fair value of $17.7 million, based on the closing price of OncoCyte of $2.10 per share on September 30, 2019. As of December 31, 2018, Lineage had 14.7 million shares of OncoCyte common stock. These shares had a fair value of $20.3 million, based on the closing price of OncoCyte of $1.38 per share on December 31, 2018.

For the three months ended September 30, 2019, Lineage recorded a realized gain of $0.6 million due to sales of OncoCyte shares in the period. Lineage also recorded an unrealized loss of $8.7 million due to the decrease in OncoCyte's stock price from $2.49 per share at June 30, 2019 to $2.10 per share at September 30, 2019. $8.3 million of the unrealized loss was recorded as an unrealized loss on an equity method investment as it was prior to September 11, 2019; the remaining $0.4 million was recorded as an unrealized loss on marketable equity securities. For the three months ended September 30, 2018, Lineage recorded an unrealized loss of $0.7 million due to the decrease in OncoCyte's stock price from $2.55 per share at June 30, 2018 to $2.50 per share at September 30, 2018.

For the nine months ended September 30, 2019, Lineage recorded a realized gain of $0.6 million due to sales of OncoCyte shares in the period. Lineage also recorded an unrealized gain of $7.6 million due to the increase in OncoCyte's stock price from $1.38 per share at December 31, 2018 to $2.10 per share at September 30, 2019. $8.0 million of the unrealized gain was recorded as an unrealized gain on an equity method investment as it was prior to September 11, 2019; the unrealized loss of $0.4 million was recorded as an unrealized loss on marketable equity securities. For the nine months ended September 30, 2018, Lineage recorded an unrealized loss of $31.6 million due to the decrease in OncoCyte's stock price from $4.65 per share at December 31, 2017 to $2.50 per share at September 30, 2018.

All share prices are determined based on the closing price of OncoCyte common stock on the NYSE American on the applicable dates, or the last day of trading of the applicable quarter, if the last day of a quarter fell on a weekend.

5. Sale of Significant Ownership Interest in AgeX to Juvenescence Limited

On August 30, 2018, Lineage entered into a Stock Purchase Agreement with Juvenescence Limited and AgeX, pursuant to which Lineage sold 14.4 million shares of common stock of AgeX to Juvenescence for $3.00 per share, or an aggregate purchase price of $43.2 million (the "Purchase Price"). Juvenescence paid $10.8 million of the Purchase Price at closing, issued an unsecured convertible promissory note dated August 30, 2018 in favor of Lineage for $21.6 million (the "Promissory Note"), and paid $10.8 million on November 2, 2018. The Stock Purchase Agreement contains customary representations, warranties and indemnities from Lineage relating to the business of AgeX, including an indemnity cap of $4.3 million, which is subject to certain exceptions. The transactions contemplated by the Stock Purchase Agreement are referred to as the Juvenescence Transaction in this Report.

The Promissory Note bears interest at 7% per annum, with principal and accrued interest payable at maturity on August 30, 2020. The Promissory Note cannot be prepaid prior to maturity or conversion. On the maturity date, if a "Qualified Financing" (as defined below) has not occurred, Lineage will have the right, but not the obligation, to convert the principal balance of the Promissory Note and accrued interest then due into Series A preferred shares of Juvenescence at a conversion price of $15.60. Upon the occurrence of a Qualified Financing on or before the maturity date, the principal balance of the Promissory Note and accrued interest will automatically convert into a number of shares of the class of equity securities of Juvenescence sold in the Qualified Financing, at the price per share at which the Juvenescence securities are sold in the Qualified Financing; and, if AgeX common stock is listed on a national securities exchange in the U.S., the number of shares of the class of equity securities issuable upon conversion may be increased depending on the market price of AgeX common stock. A Qualified Financing is generally defined as an underwritten initial public offering of Juvenescence equity securities in which gross proceeds are not less than $50.0 million. The Promissory Note is not transferable, except in connection with a change of control of Lineage.

For the three and nine months ended September 30, 2019, Lineage recognized $378,000 and $1,134,000, respectively, in interest income on the Promissory Note. As of September 30, 2019, the principal and accrued interest balance of the Promissory Note was $23.2 million.

Shareholder Agreement

Lineage and Juvenescence entered into a Shareholder Agreement, dated August 30, 2018, setting forth the governance, approval and voting rights of the parties with respect to their holdings of AgeX common stock, including rights of representation on AgeX's board of directors, approval rights, preemptive rights, rights of first refusal and co-sale and drag-along and tag-along rights for so long as either Lineage or Juvenescence continue to own at least 15% of the outstanding shares of AgeX common stock. Under the Shareholder Agreement, Juvenescence and Lineage each had the right to designate two persons to a six-member AgeX board of directors, with the remaining two individuals to be independent of Juvenescence and Lineage. Following Juvenescence's payment of $10.8 million on November 2, 2018 under the Stock Purchase Agreement, Juvenescence had the right to designate an additional member of the AgeX board of directors. As of October 31, 2019, Juvenescence has not exercised such right. Immediately following the AgeX Distribution on November 28, 2018 (see Note 6), Lineage owned 1.7 million shares of AgeX common stock, representing 4.8% of AgeX's then issued and outstanding shares of common stock. Accordingly, in accordance with the Shareholder Agreement, as of November 28, 2018, Lineage had no right to designate any member to the AgeX board of directors.

In connection with the Juvenescence Transaction, the termination provision of the Shared Facilities Agreement (see Note 10) entitling AgeX or Lineage to terminate the agreement upon six months advance written notice was amended. Pursuant to the amendment, following the AgeX Deconsolidation on August 30, 2018 (see Note 6), each party retained the right to terminate the Shared Facilities Agreement at any time by giving the other party six months advance written notice, provided that Lineage could not do so prior to September 1, 2020.

Shared services with AgeX were terminated on July 31, 2019 with respect to the use of Lineage's office and laboratory facilities and September 30, 2019 with respect to all other remaining shared services.

6. Deconsolidation and Distribution of AgeX

Deconsolidation of AgeX

On August 30, 2018, Lineage sold 14.4 million shares of the common stock of AgeX to Juvenescence (see Note 5). Immediately before that sale, Lineage and Juvenescence owned 80.4% and 5.6%, respectively, of AgeX's outstanding common stock. Immediately following that sale, Lineage and Juvenescence owned 40.2% and 45.8%, respectively, of AgeX's outstanding common stock. As a result, on August 30, 2018, AgeX was no longer a subsidiary of Lineage and, as of that date, Lineage experienced a "loss of control" of AgeX, as defined by GAAP. Loss of control is deemed to have occurred when, among other things, a parent company owns less than a majority of the outstanding common stock of a subsidiary, lacks a controlling financial interest in the subsidiary, and is unable to unilaterally control the subsidiary through other means such as having, or being able to obtain, the power to elect a majority of the subsidiary's board of directors based solely on contractual rights or ownership of shares representing a majority of the voting power of the subsidiary's voting securities. All of these loss-of-control factors were present with respect to Lineage's ownership interest in AgeX as of August 30, 2018. Accordingly, Lineage deconsolidated AgeX's consolidated financial statements and consolidated results from Lineage's unaudited condensed consolidated financial statements and consolidated results effective on August 30, 2018, in accordance with ASC, 810-10-40-4(c).

In connection with the Juvenescence Transaction discussed in Note 5 and the AgeX Deconsolidation on August 30, 2018, in accordance with ASC 810-10-40-5, Lineage recorded a gain on deconsolidation of $78.5 million, which includes a financial reporting gain on the sale of the AgeX shares of $39.2 million, during the year ended December 31, 2018, included in other income and expenses, net, in the consolidated statements of operations.

Distribution of AgeX Shares

On November 28, 2018, Lineage distributed 12.7 million shares of AgeX common stock owned by Lineage to holders of Lineage common shares, on a pro rata basis, in the ratio of one share of AgeX common stock for every 10 common shares of Lineage owned. The AgeX Distribution was accounted for at fair value as a dividend-in-kind in the aggregate amount of $34.4 million, which was determined by multiplying (a) the 12.7 million shares distributed to Lineage shareholders by (b) $2.71, the closing price of AgeX common stock on the NYSE American on November 29, 2018, the first trading day of AgeX common stock.

Because Lineage has an accumulated deficit in its consolidated shareholders' equity, the entire fair value of the AgeX Distribution was charged against common stock equity included in the consolidated statements of changes in shareholders' equity for the year ended December 31, 2018.

Immediately following the AgeX Distribution, Lineage owned 1.7 million shares of AgeX common stock. During the three months ended September 30, 2019, Lineage sold a total of 651,839 shares of AgeX common stock for net proceeds of approximately $1.6 million. As of September 30, 2019, Lineage owns 1.1 million shares of AgeX common stock, which represents approximately 2.8% of AgeX's outstanding common stock as of September 30, 2019 and which shares Lineage holds as marketable equity securities.

7. Property and Equipment, Net

At September 30, 2019 and December 31, 2018, property and equipment was comprised of the following (in thousands):

	September 30, 2019	December 31, 2018
	(unaudited)	
Equipment, furniture and fixtures	$ 4,397	$ 3,842
Leasehold improvements	2,848	3,910
Right-of-use assets [(1)]	5,740	-
Accumulated depreciation and amortization	(4,141)	(3,185)
Property and equipment, net	8,844	4,567
Construction in progress	-	1,268
Property and equipment, net, and construction in progress	$ 8,844	$ 5,835

(1) Lineage adopted ASC 842 on January 1, 2019. For additional information on this standard and right-of-use assets and liabilities see Notes 2 and 15.

Property and equipment at both September 30, 2019 and December 31, 2018 includes $146,000 in financing leases. Depreciation and amortization expense amounted to $253,000 and $254,000 for the three months ended September 30, 2019 and 2018, and $766,000 and $814,000 for the nine months ended September 30, 2019 and 2018, respectively. During the three months ended September 30, 2019, Lineage sold equipment with a net book value of $156,000 and recognized a gain of $159,000, which is included in research and development expenses on the statement of operations.

Construction in progress

Construction in progress of $1.3 million as of December 31, 2018 entirely relates to the leasehold improvements made at Cell Cure's leased facilities in Jerusalem, Israel, primarily financed by the landlord. The leasehold improvements were substantially completed in December 2018 and the assets placed in service in January 2019 (see adoption of ASC 842 impact discussed in Notes 2 and 15).

8. Goodwill and Intangible Assets, Net

At September 30, 2019 and December 31, 2018, goodwill and intangible assets, net consisted of the following (in thousands):

	September 30, 2019	December 31, 2018
	(unaudited)	
Goodwill[1]	$ 12,977	$ -
Intangible assets:		
Acquired IPR&D - OPC1 (from the Asterias Merger) [2]	$ 31,700	$ -
Acquired IPR&D - VAC2 (from the Asterias Merger) [2]	14,840	-
Intangible assets subject to amortization:		
Acquired patents	18,953	19,010
Acquired royalty contracts [2]	650	
Other	-	10
Total intangible assets	66,143	19,020
Accumulated amortization	(17,397)	(15,895)
Intangible assets, net	$ 48,746	$ 3,125

(1) Goodwill represents the excess of the purchase price over the fair value of the net tangible and identifiable intangible assets acquired and liabilities assumed in the Asterias Merger (see Note 3).

(2) See Note 3 for information on the Asterias Merger which was consummated on March 8, 2019.

Lineage recognized in research and development expenses $0.5 million and $0.6 million of amortization expense in the three months ended September 30, 2019 and 2018, respectively, and $1.4 million and $1.8 million in the nine months ended September 30, 2019 and 2018, respectively.

9. Accounts Payable and Accrued Liabilities

At September 30, 2019 and December 31, 2018, accounts payable and accrued liabilities consisted of the following (in thousands):

	September 30, 2019	December 31, 2018
	(unaudited)	
Accounts payable [1]	$ 2,009	$ 2,359
Accrued compensation	1,926	2,456
Accrued liabilities	904	1,639
Other current liabilities	3	9
Total	$ 4,842	$ 6,463

(1) Includes $0.1 million of transaction costs related to the Asterias Merger (see Note 3) recorded outside of the business combination.

In connection with the Asterias Merger, several Asterias employees were terminated as of the Asterias Merger date. Three of these employees had employment agreements with Asterias which entitled them to change in control and separation payments in the aggregate of $2.0 million, which such conditions were met on the Asterias Merger date. Accordingly, $2.0 million was accrued and recorded in general and administrative expenses on the merger date and paid in April 2019.

Additionally, Lineage entered into a plan of termination with substantially all other previous employees of Asterias with potential separation payments in the aggregate of $0.5 million. Termination dates for these individuals ranged from May 31, 2019 to June 28, 2019. These employees were required to provide services related to the transition and be an employee of the combined company as of their date of termination in order to receive separation benefits. Since the employees were required to render future services after the merger date, Lineage recorded the aggregate liability ratably over their respective service periods from the Asterias Merger date through the above termination dates, in accordance with ASC 420, *Exit or Disposal Cost Obligations*. All payments were completed by July 31, 2019.

In connection with the planned relocation of Lineage's corporate headquarters to Carlsbad, California, discussed in Note 15, Lineage entered into a plan of termination with certain Lineage employees with potential separation payments in the aggregate of $0.7 million. Termination dates for these individuals range from August 9, 2019 to September 30, 2019. These employees had to provide services related to the transition of services and activities in connection with the relocation and be an employee of Lineage as of their date of termination in order to receive separation benefits. Lineage recorded the aggregate liability ratably over their respective service periods from June through the above termination dates, in accordance with ASC 420. As of September 30, 2019, a total of $0.2 million of separation payments had been made, and the remaining $0.5 million was accrued for payments expected to be made in the fourth quarter of 2019.

10. Related Party Transactions

Shared Facilities and Service Agreements with Affiliates

The receivables from affiliates shown on the condensed consolidated balance sheet as of December 31, 2018, primarily represent amounts owed to Lineage by OncoCyte and AgeX under separate Shared Facilities and Service Agreements (each a "Shared Facilities Agreement"), with amounts owed by OncoCyte comprising most of that amount. These outstanding amounts were paid in full in the first quarter of 2019. Under the terms of the Shared Facilities Agreements, Lineage allowed OncoCyte and AgeX to use Lineage's premises and equipment located at Lineage's headquarters in Alameda, California for the purpose of conducting business. Lineage also provided accounting, billing, bookkeeping, payroll, treasury, payment of accounts payable, and other similar administrative services to OncoCyte and AgeX. The Shared Facilities Agreements also allowed Lineage to provide the services of attorneys, accountants, and other professionals who may provide professional services to Lineage. Lineage also provided OncoCyte and AgeX with the services of laboratory and research personnel, including Lineage employees and contractors, for the performance of research and development work for OncoCyte and AgeX at the premises. Shared services with AgeX were terminated on July 31, 2019 with respect to the use of Lineage's office and laboratory facilities and September 30, 2019 with respect to all other remaining shared services. Shared services with OncoCyte were terminated on September 30, 2019, except for the use of Lineage's office and laboratory facilities, which remains in place.

Lineage charged AgeX a "Use Fee" for services provided and for use of Lineage facilities, equipment, and supplies. For each billing period, Lineage prorated and allocated to OncoCyte and AgeX costs incurred, including costs for services of Lineage employees and use of equipment, insurance, leased space, professional services, software licenses, supplies and utilities. The allocation of costs depended on key cost drivers, including actual documented use, square footage of facilities used, time spent, costs incurred by Lineage for OncoCyte and AgeX, or upon proportionate usage by Lineage, OncoCyte and AgeX, as reasonably estimated by Lineage. Lineage, at its discretion, had the right to charge OncoCyte and AgeX a 5% markup on such allocated costs. The allocated cost of Lineage employees and contractors who provided services was based upon the number of hours or estimated percentage of efforts of such personnel devoted to the performance of services.

The Use Fee was determined and invoiced to OncoCyte and AgeX on a regular basis, generally monthly or quarterly. Each invoice was payable in full within 30 days after receipt. Any invoice, or portion thereof, not paid in full when due bore interest at the rate of 15% per annum until paid, unless the failure to make a payment was due to any inaction or delay in making a payment by Lineage. Through September 30, 2019, Lineage did not charge OncoCyte or AgeX any interest.

In addition to the Use Fee, OncoCyte and AgeX reimbursed Lineage for any out of pocket costs incurred by Lineage for the purchase of office supplies, laboratory supplies, and other goods and materials and services for the account or use of OncoCyte or AgeX. Lineage was not obligated to purchase or acquire any office supplies or other goods and materials or any services for OncoCyte or AgeX, and if any such supplies, goods, materials or services were obtained, Lineage could arrange for the suppliers to invoice OncoCyte or AgeX directly.

In the aggregate, Lineage charged Use Fees to OncoCyte and AgeX as follows (in thousands):

	Three Months Ended September 30, (unaudited)		Nine Months Ended September 30, (unaudited)	
	2019	2018	2019	2018
Research and development	$ 301	$ 355	$ 1,285	$ 792
General and administrative	236	187	647	533
Total use fees	$ 537	$ 542	$ 1,932	$ 1,325

The Use Fees charged to OncoCyte and AgeX shown above are not reflected in revenues, but instead Lineage's general and administrative expenses and research and development expenses are shown net of those charges in the condensed consolidated statements of operations.

Lineage accounts for receivables from affiliates, net of payables to affiliates, if any, for similar shared services and other transactions Lineage's consolidated subsidiaries may enter into with nonconsolidated affiliates. Lineage and the affiliates record those receivables and payables on a net basis since Lineage and the affiliates intend to exercise a right of offset of the receivable and the payable and to settle the balances net by having the party that owes the other party pay the net balance owed.

Transactions with Ascendance Biotechnology, Inc.

On March 21, 2018, AgeX and Ascendance Biotechnology, Inc. ("Ascendance"), an equity method investee of AgeX and former equity method investee of Lineage, entered into an Asset Purchase Agreement (the "Asset Agreement") in which AgeX purchased for $800,000 in cash certain assets consisting primarily of in-process research and development assets related to stem cell derived cardiomyocytes (heart muscle cells) to be developed by AgeX. The transaction was considered an asset acquisition rather than a business combination in accordance with ASC 805. Accordingly, the $800,000 purchase price was expensed on the acquisition date as acquired in-process research and development as those assets have no alternative future use. Also, on March 21, 2018, Lineage received $0.2 million from Ascendance as settlement of its accounts receivable from Ascendance.

Disposition of ownership interest in Ascendance

On March 23, 2018, Ascendance was acquired by a third party in a merger through which AgeX received approximately $3.2 million in cash for its shares of Ascendance common stock. AgeX recognized a $3.2 million gain on the sale of its equity method investment in Ascendance, which is included in other income and expenses, net, for the nine months ended September 30, 2018.

Other related party transactions

In February 2018, Alfred D. Kingsley, the Chairman of our board of directors and a former officer and director of AgeX, purchased AgeX stock purchase warrants entitling him to purchase 248,600 shares of AgeX common stock at an exercise price of $2.50 per share. AgeX received $124,300, or $0.50 per warrant, from Mr. Kingsley. The warrants were sold to Mr. Kingsley on the same terms as other warrants were sold by AgeX to other unaffiliated investors.

Lineage currently pays $5,050 per month for the use of approximately 900 square feet of office space in New York City, which is made available to Lineage on a month-by-month basis by one of its directors at an amount that approximates his cost (see Note 15).

In April 2019, Lineage issued 251,835 common shares of Lineage to Broadwood Partners, L.P., an Asterias and Lineage shareholder, in exchange for the settlement of Asterias Warrants in connection with the Asterias Merger (see Note 3).

In connection with the putative shareholder class action lawsuit filed in February 2019 challenging the Asterias Merger (see Note 15), Lineage has agreed to pay for the legal defense of Neal Bradsher, director, and Broadwood Partners, L.P., a shareholder of Lineage, and Broadwood Capital, Inc., which manages Broadwood Partners, L.P., all of which were named in the lawsuit. Through September 30, 2019, Lineage has incurred a total of $170,000 in legal expenses on behalf of the director, shareholder and the manager of the shareholder.

As part of financing transactions, Broadwood Partners, L.P. purchased 1,000,000 shares and 2,000,000 shares of OncoCyte common stock from Lineage in July 2019 and September 2019, respectively.

11. Shareholders' Equity

Preferred Shares

Lineage is authorized to issue 2,000,000 preferred shares. The preferred shares may be issued in one or more series as our board of directors may determine by resolution. Our board of directors is authorized to fix the number of shares of any series of preferred shares and to determine or alter the rights, preferences, privileges, and restrictions granted to or imposed on the preferred shares as a class, or upon any wholly unissued series of any preferred shares. Our board of directors may, by resolution, increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series of preferred shares subsequent to the issue of shares of that series. There are no preferred shares issued and outstanding.

Common Shares

At September 30, 2019, Lineage was authorized to issue 250,000,000 common shares, no par value. As of September 30, 2019, and December 31, 2018, Lineage had 149,790,387 and 127,135,774 issued and outstanding common shares, respectively.

In April 2017, Lineage entered into a Controlled Equity Offering^{SM} Sales Agreement (the "Sales Agreement") with Cantor Fitzgerald & Co., as sales agent ("Cantor Fitzgerald"), pursuant to which Lineage may offer and sell, from time to time, through Cantor Fitzgerald, common shares of Lineage having an aggregate offering price of up to $25,000,000. Lineage is not obligated to sell any shares under the Sales Agreement. Subject to the terms and conditions of the Sales Agreement, Cantor Fitzgerald will use commercially reasonable efforts, consistent with its normal trading and sales practices, applicable state and federal law, rules and regulations, and the rules of the NYSE American, to sell the shares from time to time based upon Lineage's instructions, including any price, time or size limits specified by Lineage. Under the Sales Agreement, Cantor Fitzgerald may sell the shares by any method deemed to be an "at-the-market" offering as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, or by any other method permitted by law, including in privately negotiated transactions. Cantor Fitzgerald's obligations to sell the shares under the Sales Agreement are subject to satisfaction of certain conditions, including the continued effectiveness of Lineage's Registration Statement on Form S-3, which became effective on May 5, 2017. As of September 30, 2019, $24.1 million remained available for sale through the Sales Agreement.

Lineage agreed to pay Cantor Fitzgerald a commission of 3.0% of the aggregate gross proceeds from each sale of shares, reimburse legal fees and disbursements and provide Cantor Fitzgerald with customary indemnification and contribution rights. The Sales Agreement may be terminated by Cantor Fitzgerald or Lineage at any time upon notice to the other party, or by Cantor Fitzgerald at any time in certain circumstances, including the occurrence of a material and adverse change in Lineage's business or financial condition that makes it impractical or inadvisable to market the shares or to enforce contracts for the sale of the shares.

Reconciliation of Changes in Shareholders' Equity

The following table documents the changes in shareholders' equity for the three and nine months ended September 30, 2019 (unaudited and in thousands):

	Preferred Shares		Common Shares				Accumulated Other	
	Number of Shares	Amount	Number of Shares	Amount	Accumulated Deficit	Noncontrolling Interest/ (Deficit)	Comprehensive Income	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2018	-	$ -	127,136	$ 354,270	$ (261,856)	$ (1,594)	$ 1,426	$ 92,246
Shares issued in connection with the Asterias Merger	-	-	24,696	32,353	-	-	-	32,353
Shares retired in connection with the Asterias Merger	-	-	(2,622)	(3,435)	-	-	-	(3,435)
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	118	(75)	-	-	-	(75)
Stock-based compensation	-	-	-	1,361	-	-	-	1,361
Stock-based compensation for shares issued upon vesting of Asterias restricted stock units attributable to post combination services	-	-	60	79	-	-	-	79
Adjustment upon adoption of leasing standard	-	-	-	-	143	-	-	143
Foreign currency translation loss	-	-	-	-	-	-	(732)	(732)
NET INCOME/(LOSS)	-	-	-	-	39,310	(14)	-	39,296
BALANCE AT MARCH 31, 2019	-	$ -	149,388	$ 384,553	$ (222,403)	$ (1,608)	$ 694	$ 161,236
Shares issued for settlement of Lineage Warrants	-	-	252	302	-	-	-	302
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	3	(2)	-	-	-	(2)
Stock-based compensation	-	-	-	762	-	-	-	762
Foreign currency translation loss	-	-	-	-	-	-	(487)	(487)
NET LOSS	-	-	-	-	(30,032)	(20)	-	(30,052)
BALANCE AT JUNE 30, 2019	—	$ -	149,643	$ 385,615	$ (252,435)	$ (1,628)	$ 207	$ 131,759
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	54	(23)	-	-	-	(23)
Stock-based compensation	-	-	-	759	-	-	-	759
Shares issued through ATM	-	-	93	103	-	-	-	103
Foreign currency translation loss	-	-	-	-	-	-	(564)	(564)
NET LOSS	-	-	-	-	(16,505)	(10)	-	(16,515)
BALANCE AT SEPTEMBER 30, 2019	—	$ -	149,790	$ 386,454	$ (268,940)	$ (1,638)	$ (357)	$ 115,519

The following table documents the changes in shareholders' equity for the three and nine months ended September 30, 2018 (unaudited and in thousands):

	Preferred Shares		Common Shares					
	Number of Shares	Amount	Number of Shares	Amount	Accumulated Deficit	Noncontrolling Interest/ (Deficit)	Accumulated Other Comprehensive Income	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2017	-	$ -	126,866	$ 378,487	$ (216,297)	$ 1,622	$ 451	$ 164,263
Cumulative-effect adjustment for adoption of ASU 2016-01 on January 1, 2018	-	-	-	-	328	-	(328)	-
Cumulative-effect adjustment for adoption of Accounting Standard Codification, Topic 606, on January 1, 2018	-	-	-	-	101	-	-	101
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	3	(7)	-	-	-	(7)
Stock-based compensation	-	-	-	809	-	-	-	809
Stock-based compensation in subsidiaries	-	-	-	-	-	175	-	175
Sale of subsidiary warrants in AgeX	-	-	-	-	-	737	-	737
Subsidiary financing transactions with noncontrolling interests - AgeX	-	-	-	(103)	-	103	-	-
Foreign currency translation adjustments	-	-	-	-	-	-	75	75
NET LOSS	-	-	-	-	(63,548)	(150)	-	(63,698)
BALANCE AT MARCH 31, 2018	-	$ -	126,869	$ 379,186	$ (279,416)	$ 2,487	$ 198	$ 102,455
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	5	(5)	-	-	-	(5)
Stock-based compensation	-	-	-	825	-	-	-	825
Stock-based compensation of subsidiaries	-	-	-	-	-	278	-	278
Additional adjustment for ASC Topic 606	-	-	-	-	1	-	-	1
Sale of subsidiary shares in AgeX	-	-	-	-	-	5,000	-	5,000
Subsidiary financing transactions with noncontrolling interests - AgeX	-	-	-	3,634	-	(3,634)	-	-
Subsidiary financing and other transactions with noncontrolling interests – Cell Cure	-	-	-	(111)	-	70	-	(41)
Foreign currency translation adjustments	-	-	-	-	-	-	884	884
NET LOSS	-	-	-	-	(4,215)	(431)	-	(4,646)
BALANCE AT JUNE 30, 2018	-	-	126,874	$ 383,529	$ (283,630)	$ 3,770	$ 1,082	$ 104,751
Stock-based compensation	-	-	-	1,272	-	-	-	1,272
Stock-based compensation of subsidiaries	-	-	-	-	-	38	-	38
Deconsolidation of AgeX	-	-	-	(164)	-	(3,467)	-	(3,631)
Subsidiary financing and other transactions with noncontrolling interests – Cell Cure	-	-	-	1,975	-	(1,973)	-	2
Sales subsidiary shares and warrants and other transactions - AgeX	-	-	-	259	-	244	-	503
Shares issued upon vesting of restricted stock units, net of shares retired to pay employees' taxes	-	-	10	(13)	-	-	-	(13)
Foreign currency translation adjustments	-	-	-	-	-	-	92	92
NET INCOME/(LOSS)	-	-	-	-	66,725	(181)	-	66,544
BALANCE AT SEPTEMBER 30, 2018	—	-	126,884	$ 386,858	$ (216,905)	$ (1,569)	$ 1,174	$ 169,558

Warrants

Lineage (previously Asterias) Warrants - Liability Classified

In March 2019, in connection with the closing of the Asterias Merger, Lineage assumed outstanding Asterias Warrants. As of September 30, 2019, the total number of common shares of Lineage subject to warrants that were assumed by Lineage in connection with the Asterias Merger was 1,089,900, which were converted to Lineage Warrants 30 days after the closing of the Asterias Merger, with similar terms and conditions retained under the Lineage Warrants as per the original Warrant Agreements. The Lineage Warrants have an exercise price of $6.15 per warrant share and expire on May 13, 2021. Lineage is accounting for the outstanding Lineage Warrants as a liability at fair value, with subsequent changes to the fair value of the Lineage Warrants at each reporting period thereafter included in the consolidated statement of operations (see Note 3).

For the three and nine months ended months ended September 30, 2019, Lineage recorded an unrealized gain of $38,000 and $245,000, respectively, due to the decline in the fair value of the Lineage Warrants from the Asterias Merger date through September 30, 2019. As of September 30, 2019, the fair value of the Lineage Warrants was $251,000 included in long-term liabilities on the condensed consolidated balance sheets.

Cell Cure Warrants - Liability Classified

Cell Cure has two sets of issued warrants. Warrants to purchase 24,566 Cell Cure ordinary shares at an exercise price of $40.5359 were issued to HBL in July 2017. These warrants expire in July 2022. Warrants to purchase 13,738 Cell Cure ordinary shares at exercise prices ranging from $32.02 to $40.00 per share have been issued to consultants. These warrants expire in October 2020 and January 2024.

ASC 815 requires freestanding financial instruments, such as warrants, with exercise prices denominated in currencies other than the functional currency of the issuer to be accounted for as liabilities at fair value, with all subsequent changes in fair value after the issuance date to be recorded as gains or losses in the consolidated statements of operations.

As of September 30, 2019 and December 31, 2018, the total value of all warrants issued by Cell Cure was $0.3 million and $0.4 million, respectively. Such warrants are classified as long-term liabilities on the condensed consolidated balance sheets.

12. Stock-Based Awards

Equity Incentive Plan Awards

Effective November 8, 2019, Lineage adopted an amendment changing the name of the BioTime, Inc. 2012 Equity Incentive 2012 Plan to the Lineage Cell Therapeutics, Inc. 2012 Equity Incentive Plan (the “2012 Plan”). The 2012 provides for the grant of stock options, restricted stock, restricted stock units and stock appreciation rights. As of September 30, 2019, a maximum of 24,000,000 common shares were available for grant under the 2012 Plan.

A summary of Lineage’s 2012 Plan activity and other stock option awards granted outside of the 2012 Plan related information is as follows (in thousands, except per share amounts):

	Shares Available for Grant	Number of Options Outstanding	Number of RSUs Outstanding	Weighted Average Exercise Price
December 31, 2018	1,885	13,867	402	$ 2.44
AgeX distribution adjustment	117	(2)	3	-
Restricted stock units vested	-	-	(218)	-
Additional shares added to Plan	8,000			
Options granted	(3,526)	3,526	-	1.07
Options exercised	-	-	-	-
Options expired/forfeited/cancelled	1,883	(1,883)	-	2.04
September 30, 2019	8,359	15,508	187	$ 2.18
Options exercisable at September 30, 2019		9,872		$ 2.55

At the effective time of the Asterias Merger, Lineage assumed sponsorship of the Asterias 2013 Equity Incentive Plan (the "Asterias Equity Plan"), with references to Asterias and Asterias common stock therein to be deemed references to Lineage and Lineage common shares. There were 7,309,184 shares available under the Asterias Equity Plan immediately before the closing of the Asterias Merger, which became 5,189,520 shares immediately following the Asterias Merger. The shares available under the Asterias Equity Plan will be for awards granted to those former Asterias employees who continued as Lineage employees upon consummation of the Asterias Merger. A summary of activity under the Asterias Equity Plan from the closing date of the Asterias Merger through September 30, 2019 is as follows (in thousands, except per share amounts):

	Shares Available for Grant	Number of Options Outstanding	Number of RSUs Outstanding	Weighted Average Exercise Price
March 8, 2019	5,190	-	-	$ -
Options granted	(490)	490	-	1.59
Options exercised	-	-	-	-
Options forfeited	140	(140)	-	1.63
September 30, 2019	4,840	350	-	1.57
Options exercisable at September 30, 2019		-		$ -

Stock-based compensation expense

The fair value of each option award is estimated on the date of grant using a Black-Scholes option pricing model applying the weighted-average assumptions noted in the following table:

	Nine Months Ended September 30, (unaudited)	
	2019	2018
Expected life (in years)	6.01	5.68
Risk-free interest rates	2.2%	2.8%
Volatility	60.9%	66.2%
Dividend yield	-%	-%

Operating expenses include stock-based compensation expense as follows (in thousands):

	Three Months Ended September 30, (unaudited)		Nine Months Ended September 30, (unaudited)	
	2019	2018	2019	2018
Research and development	$ 135	$ 166	$ 418	$ 548
General and administrative	624	1,144	2,543	2,849
Total stock-based compensation expense	$ 759	$ 1,310	$ 2,961	$ 3,397

The expense related to 84,940 shares of Asterias restricted stock unit awards that immediately vested on the closing of the Asterias Merger and converted into the right to receive common shares of Lineage based on the Merger Exchange Ratio, resulting in 60,304 common shares of Lineage issued on March 8, 2019, was included in stock-based compensation expense for the nine months ended September 30, 2019. The expense was not included as part of the purchase price of the Asterias Merger because these awards were principally attributable to post-combination services.

13. Income Taxes

The provision for income taxes for interim periods is generally determined using an estimated annual effective tax rate as prescribed by ASC 740-270, *Income Taxes, Interim Reporting*. The effective tax rate may be subject to fluctuations during the year as new information is obtained, which may affect the assumptions used to estimate the annual effective tax rate, including factors such as valuation allowances and changes in valuation allowances against deferred tax assets, the recognition or de-recognition of tax benefits related to uncertain tax positions, if any, and changes in or the interpretation of tax laws in jurisdictions where Lineage conducts business. ASC 740-270 also states that if an entity is unable to reliably estimate some or a part of its ordinary income or loss, the income tax provision or benefit applicable to the item that cannot be estimated shall be reported in the interim period in which the item is reported.

For items that Lineage cannot reliably estimate on an annual basis (principally unrealized gains or losses generated by changes in the market prices of the OncoCyte, and AgeX shares of common stock Lineage holds, and prior to March 8, 2019, Asterias shares Lineage held), Lineage uses the actual year to date effective tax rate rather than an estimated annual effective tax rate to determine the tax effect of each item, including the use of all available net operating losses and other credits or deferred tax assets.

Although the OncoCyte Deconsolidation was not a taxable transaction to Lineage and did not create a current income tax payment obligation to Lineage, the market value of the shares of OncoCyte common stock Lineage holds creates a deferred tax liability to Lineage based on the closing prices of the shares, less Lineage's tax basis in the shares. The deferred tax liability generated by the OncoCyte shares that Lineage holds as of September 30, 2019, is a source of future taxable income to Lineage, as prescribed by ASC 740-10-30-17, that will more likely than not result in the realization of its deferred tax assets to the extent of the deferred tax liability. This deferred tax liability is determined based on the closing prices of the OncoCyte shares as of September 30, 2019. Due to the inherent unpredictability of future prices of those shares, Lineage cannot reliably estimate or project those deferred tax liabilities on an annual basis. Therefore, the deferred tax liability pertaining to OncoCyte shares, determined based on the actual closing prices on the last stock market trading day of the applicable accounting period, and the related impacts to the valuation allowance and deferred tax asset changes, are recorded in the accounting period in which they occur.

Prior to the Asterias Merger discussed in Note 3, the Asterias shares of common stock Lineage held generated similar deferred tax liabilities to Lineage as the OncoCyte shares discussed above. As of the Asterias Merger date and due to Asterias becoming a wholly owned subsidiary of Lineage, the Asterias deferred tax liabilities were eliminated with a corresponding adjustment to Lineage's valuation allowance, resulting in no tax provision or benefit from this adjustment.

On March 23, 2018, Ascendance was acquired by a third party in a merger through which AgeX received approximately $3.2 million in cash for its shares of Ascendance common stock. For financial reporting purposes, AgeX recognized a $3.2 million gain as a sale of its equity method investment in Ascendance. The sale was a taxable transaction to AgeX generating a taxable gain of approximately $2.2 million. Lineage had sufficient losses from operations to offset the entire gain resulting in no income taxes due.

The income tax consequences of the AgeX Deconsolidation are discussed below.

The Juvenescence Transaction discussed in Note 5 was a taxable event for Lineage that resulted in a gross taxable gain of approximately $29.4 million, which Lineage fully offset with available net operating losses ("NOL") and NOL carryforwards, resulting in no net income taxes due. Although the AgeX Deconsolidation on August 30, 2018 was not a taxable transaction to Lineage and did not result in a current tax payment obligation, the unrealized financial reporting gain (see Note 6) on the AgeX Deconsolidation generated a deferred tax liability in accordance with ASC 740, primarily representing Lineage's difference between book and tax basis of AgeX common stock on the AgeX Deconsolidation date. This deferred tax liability was fully offset by a corresponding release of Lineage's valuation allowance on deferred tax assets, resulting in no income tax provision or benefit from the AgeX Deconsolidation. The deferred tax liabilities on Lineage's investments in OncoCyte, Asterias and AgeX are considered to be sources of taxable income as prescribed by ASC 740-10-30-17 that will more likely than not result in the realization of its deferred tax assets to the extent of those deferred tax liabilities, thereby reducing the need for a valuation allowance.

The distribution of AgeX shares of common stock to Lineage shareholders (see Note 6) on November 28, 2018 was a taxable event for Lineage that resulted in a gross taxable gain of approximately $26.4 million, which was fully offset by NOL carryforwards, resulting in no income taxes due.

In connection with the Asterias Merger, a deferred tax liability of $13.0 million was recorded as part of the acquisition accounting (see Note 3). The deferred tax liability ("DTL") is related to fair value adjustments for the assets and liabilities acquired in the Asterias Merger, principally consisting of IPR&D. This estimate of deferred taxes was determined based on the excess of the estimated fair values of the acquired assets and liabilities over the tax basis of the assets and liabilities acquired. The statutory tax rate was applied, as appropriate, to the adjustment based on the jurisdiction in which the adjustment is expected to occur. This estimate of deferred income tax liabilities is preliminary and is subject to change based upon Lineage's final determination of the fair value of assets acquired and liabilities assumed. Because the IPR&D (prior to completion or abandonment of the R&D) is considered an indefinite-lived asset for accounting purposes, the fair value of the IPR&D on the acquisition date creates a deferred income tax liability in accordance with ASC 740. This DTL is computed using the fair value of the IPR&D assets on the acquisition date multiplied by Lineage's respective federal and state income tax rates. While this DTL would reverse on impairment or sale or commencement of amortization of the related intangible assets, those events are not anticipated under ASC 740 for purposes of predicting reversal of a temporary difference to support the realization of deferred tax assets, except for certain deferred tax assets and credit carryforwards that are also indefinite in nature as of the Asterias Merger date, which may be considered for reversal under ASC 740 as further discussed below.

A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized. For federal and state income tax purposes, as a result of the deconsolidation of AgeX, Asterias and OncoCyte and the deferred tax liabilities generated from the market values of AgeX, Asterias and OncoCyte shares from the respective deconsolidation dates, including the changes to those deferred tax liabilities due to changes in the AgeX, Asterias and OncoCyte stock prices, Lineage's deferred tax assets exceeded its deferred tax liabilities as of December 31, 2018. As a result, Lineage established a full valuation allowance as of December 31, 2018 due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets.

For the three and nine months ended September 30, 2019, Lineage reversed a portion of its valuation allowance. The partial reversal of the historical valuation allowance is related to Lineage's deferred tax assets and credit carryforwards and is due to the acquired taxable temporary differences, primarily consisting of the acquired IPR&D discussed above and in Notes 3 and 8. ASC 740 allows for deferred tax assets and credit carryforwards, that are both available and indefinite in nature, to be used against similar deferred tax liabilities as a source of income to support the realization of those deferred tax assets and credit carryforwards. Any benefit recognized from such a reversal of the valuation allowance is recorded outside of the acquisition accounting. Accordingly, the $1.0 million and $6.6 million valuation allowance release and the corresponding tax benefits were primarily related to state research and development credits, including current year federal net operating losses generated for the three and nine months ended September 30, 2019, respectively, both of which are available and indefinite in nature.

Lineage did not record any provision or benefit for income taxes for the three and nine months ended September 30, 2018 as Lineage had a full valuation allowance for the periods presented.

14. Supplemental Cash Flow Information

Non-cash investing and financing transactions presented separately from the condensed consolidated statements of cash flows for the nine months ended September 30, 2019 and 2018 are as follows (in thousands):

	Nine Months Ended September 30, (unaudited)	
	2019	**2018**
Supplemental disclosures of non-cash investing and financing activities:		
Issuance of common shares for the Asterias Merger (Note 3)	$ 32,353	$ -
Assumption of liabilities in the Asterias Merger (Note 3)	1,136	-
Assumptions of warrants in the Asterias Merger (Note 3)	867	-
Issuance of common shares for settlement of Lineage Warrants	332	-

15. Commitments and Contingencies

Alameda Lease

In December 2015, Lineage entered into a lease for approximately 30,795 square feet of rentable space in two buildings located in an office park in Alameda, California (the "Alameda Lease"). The term of the Alameda Lease commenced effective February 1, 2016 and expires on January 31, 2023, unless Lineage exercises its option to renew the lease for an additional five years.

Base rent under the Alameda Lease beginning on February 1, 2019 is $70,521 per month and will increase by approximately 3% annually on every February 1 thereafter during the lease term.

Prior to the adoption of ASC 842 on January 1, 2019 (see Note 2), the lease payments allocated to the lease liability for leasehold improvements reimbursed by the landlord were amortized as debt service on that liability using the effective interest method over the lease term.

See Note 2 for discussion of the impact of adoption of ASC 842 on January 1, 2019, and below for the ROU assets and liabilities recorded in connection with the adoption of ASC 842 as of, and during the nine months ended September 30, 2019 for the Alameda Lease.

In addition to base rent, Lineage will pay a pro rata portion of increases in certain expenses, including real property taxes, utilities (to the extent not separately metered to the leased space) and the landlord's operating expenses, over the amounts of those expenses incurred by the landlord. As security for the performance of its obligations under the Alameda Lease, Lineage provided the landlord with a security deposit of approximately $424,000, which was reduced to $78,000 on January 24, 2019 in accordance with the terms of the lease. The security deposit amount is considered restricted cash and $78,000 is included in deposits and other long-term assets as of September 30, 2019 (see Note 2).

Carlsbad Lease

In May 2019, Lineage entered into a lease for approximately 8,841 square feet of rentable space in an office park in Carlsbad, California (the "Carlsbad Lease"). The term of the Carlsbad Lease commenced on August 1, 2019 and expires on October 31, 2022.

Base rent under the Carlsbad Lease beginning on August 1, 2019 is $17,850 per month and will increase by 3% annually on every August 1 thereafter during the lease term. Base rent for the first twenty-four months of the lease is based upon a deemed rentable area of 7,000 square feet. Base rent is abated for months two through five of the lease.

In addition to base rent, Lineage will pay a pro rata portion of increases in certain expenses, including real property taxes, utilities (to the extent not separately metered to the leased space) and the landlord's operating expenses, over the amounts of those expenses incurred by the landlord. As security for the performance of its obligations under the Carlsbad Lease, Lineage provided the landlord with a security deposit of approximately $17,850.

New York Leased Office Space

Lineage currently pays $5,050 per month for the use of approximately 900 square feet of office space in New York City, which is made available to Lineage for use in conducting meetings and other business affairs, on a month-by-month basis, by one of its directors at an amount that approximates his cost. This lease was not in the scope of ASC 842 because it is a month to month lease (see Note 2).

Cell Cure Lease

Cell Cure leases 728.5 square meters (approximately 7,842 square feet) of office and laboratory space in Jerusalem, Israel under a lease that expires December 31, 2020, with two options to extend the lease for 5 years each. Base monthly rent is NIS 37,882 (approximately US $11,000 per month using the December 31, 2018 exchange rate). In addition to base rent, Cell Cure pays a pro rata share of real property taxes and certain costs related to the operation and maintenance of the building in which the leased premises are located.

On January 28, 2018, Cell Cure entered into another lease agreement for an additional 934 square meters (approximately 10,054 square feet) of office space in the same facility in Jerusalem, Israel under a lease that expires on December 31, 2025, with two options to extend the lease for 5 years each (the "January 2018 Lease"). The January 2018 Lease commenced on April 1, 2018 and included a leasehold improvement construction allowance of up to NIS 4,000,000 (approximately up to $1.1 million using the December 31, 2018 exchange rate) from the landlord. The leasehold improvements were completed in December 2018 and the entire allowance was used. Beginning on January 1, 2019, combined base rent and construction allowance payments for the January 2018 Lease are NIS 93,827 per month (approximately $26,000 per month).

Prior to the adoption of ASC 842 on January 1, 2019, Cell Cure was considered the owner of the tenant improvements under construction under ASC 840-40-55 as Cell Cure, among other things, had the primary obligation to pay for construction costs and Cell Cure retains exclusive use of the leased facilities for its office, research and cGMP manufacturing facility requirements after construction was completed ("build to suit" lease). In accordance with the ASC 840 guidance, amounts expended by Cell Cure for construction was reported as construction in progress, and the proceeds received from the landlord, if any, are reported as a lease liability. As of December 31, 2018, approximately $1.1 million under the January 2018 Lease was incurred and recorded as leasehold improvement construction in progress (see Note 7), with a corresponding amount included in long term lease liability representing the full amount utilized from the landlord's leasehold improvement construction allowance. By March 2019, the landlord paid the complete leasehold improvement construction allowance and the property was placed in service.

See Note 2 for discussion of the impact of adoption of ASC 842 on January 1, 2019, and below for the ROU assets and liabilities recorded in connection with the adoption of ASC 842 as of, and during the nine months ended September 30, 2019 for the Cell Cure and January 2018 Leases above (the "Cell Cure Leases").

In December 2018, Cell Cure made a $388,000 deposit required under the January 2018 Lease, which amount is included in deposits and other long-term assets on the consolidated balance sheet as of December 31, 2018, to be held as restricted cash during the term of the January 2018 Lease.

Adoption of ASC 842

The below tables provide the amounts recorded in connection with the adoption of ASC 842 as of, and during the nine months ended September 30, 2019, for Lineage's operating and financing leases, as applicable.

Supplemental cash flow information related to leases was as follows (in thousands):

	Nine Months Ended September 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 1,026
Operating cash flows from financing leases	24
Financing cash flows from financing leases	20
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	89
Financing leases	-

Supplemental balance sheet information related to leases was as follows (in thousands, except lease term and discount rate):

	September 30, 2019
Operating leases	
Right-of-use assets, net	$ 4,950
Right-of-use lease liabilities, current	1,105
Right-of-use lease liabilities, noncurrent	4,088
Total operating lease liabilities	$ 5,193
Financing leases	
Property and equipment, gross	$ 146
Accumulated depreciation	(42)
Property and equipment, net	$ 104
Current liabilities	33
Long-term liabilities	87
Total finance lease liabilities	$ 120
Weighted average remaining lease term	
Operating leases	4.3 years
Finance leases	3.7 years
Weighted average discount rate	
Operating leases	9.1%
Finance leases	10.0%

Future minimum lease commitments are as follows (in thousands):

	Operating Leases	Finance Leases
Year Ending December 31,		
2019	$ 339	$ 11
2020	1,589	43
2021	1,528	36
2022	1,508	36
2023	397	15
Thereafter	1,015	-
Total lease payments	$ 6,376	$ 141
Less imputed interest	(1,183)	(21)
Total	$ 5,193	$ 120

Research and Option Agreement

On January 5, 2019, Lineage and Orbit Biomedical Limited ("Orbit") entered into a Research and Option Agreement (the "Orbit Agreement") for an exclusive partnership to assess Orbit's vitrectomy-free subretinal injection device as a means of delivering OpRegen in Lineage's ongoing Phase I/IIa clinical trial. The term of the Orbit Agreement is for one year unless certain research activities and related data specified in the Orbit Agreement is obtained sooner. The access fees payable by Lineage to Orbit for its technology and the injection device are $2.5 million in the aggregate, of which $1.25 million was paid in January 2019 upon execution of the Orbit Agreement and the remaining $1.25 million payment which was due on the earlier of (i) six months from the Orbit Agreement date or, (ii) upon completion of certain collaborative research activities using the Orbit technology for the OpRegen Phase I/IIa clinical trial, as specified in the Orbit Agreement. In addition to the access fees, Lineage reimburses Orbit for costs of consumables, training services, travel costs and other out of pocket expenses incurred by Orbit for performing services under the Orbit Agreement. Lineage has exclusive rights to the Orbit technology and its injection device for the treatment of dry-AMD during the term of the Orbit Agreement and may extend the term for an additional three months by paying Orbit a cash fee of $500,000. In July 2019, Lineage completed the collaborative research activities referred to above and the second $1.25 million payment was made in August 2019. For the three and nine months ended September 30, 2019, Lineage amortized $0.6 million and $1.9 million of the Orbit fees included in research and development expenses.

Litigation

Lineage is subject to various claims and contingencies in the ordinary course of its business, including those related to litigation, business transactions, employee-related matters, and others. When Lineage is aware of a claim or potential claim, it assesses the likelihood of any loss or exposure. If it is probable that a loss will result and the amount of the loss can be reasonably estimated, Lineage will record a liability for the loss. If the loss is not probable or the amount of the loss cannot be reasonably estimated, Lineage will disclose the claim if the likelihood of a potential loss is reasonably possible and the amount involved could be material. Lineage is not aware of any claims likely to have a material adverse effect on its financial condition or results of operations.

On February 19, 2019, a putative shareholder class action lawsuit was filed (captioned *Lampe v. Asterias Biotherapeutics, Inc. et al*., Case No. RG19007391) in the Superior Court of the State of California, County of Alameda challenging the Asterias Merger. On March 1, 2019, Asterias made certain amendments and supplements to its public disclosures regarding the Asterias Merger (the "Supplemental Disclosures"). On May 3, 2019, an amended class action complaint (the "Amended Complaint") was filed. The Amended Complaint named Lineage, Patrick Merger Sub, Inc., the Asterias board of directors, one member of Lineage's board of directors, and certain stockholders of both Lineage and Asterias. The action was brought by two purported stockholders of Asterias, on behalf of a putative class of Asterias stockholders, and asserted breach of fiduciary duty and aiding and abetting claims under Delaware law. The Amended Complaint alleged, among other things, that the process leading up to the Asterias Merger was conflicted and inadequate, and that the proxy statement filed by Asterias with the Commission omitted certain material information, which allegedly rendered the information disclosed materially misleading. The Amended Complaint sought, among other things, that a class be certified, the recovery of monetary damages, and attorneys' fees and costs.

On June 3, 2019, defendants filed demurrers to the Amended Complaint. On August 13, 2019, the parties submitted a stipulation to the court seeking dismissal of the action with prejudice as to the named Plaintiffs and without prejudice as to the unnamed putative class members, and disclosing to the court the parties' agreement to resolve, for $200,000, Plaintiffs' claim for an award of attorneys' fees and expenses in connection with the purported benefit conferred on Asterias stockholders by the Supplemental Disclosures. The court granted the stipulation and dismissed the action August 14, 2019. Lineage continues to believe that the claims and allegations in the action lack merit, but believed that it was in Lineage's shareholders' best interest for the action to be dismissed and to resolve the fee claim in a timely manner without additional costly litigation expenses.

On October 14, 2019, another putative class action lawsuit was filed challenging the Asterias Merger. This action (captioned *Ross v. Lineage Cell Therapeutics, Inc., et al.*, C.A. No. 2019-0822) was filed in Delaware Chancery Court and names Lineage, the Asterias board of directors, one member of Lineage's board of directors, and certain stockholders of both Lineage and Asterias as defendants. The action was brought by a purported stockholder of Asterias, on behalf of a putative class of Asterias stockholders, and asserts breach of fiduciary duty and aiding and abetting claims under Delaware law. The complaint alleges, among other things, that the process leading up to the Asterias Merger was conflicted, that the Asterias Merger consideration was inadequate, and that the proxy statement filed by Asterias with the Commission omitted certain material information, which allegedly rendered the information disclosed materially misleading. The complaint seeks, among other things, that a class be certified, the recovery of monetary damages, and attorneys' fees and costs.

Lineage believes the allegations in the action lack merit and intends to vigorously defend the claims asserted. It is impossible at this time to assess whether the outcome of this proceeding will have a material adverse effect on Lineage's consolidated results of operations, cash flows or financial position. Therefore, in accordance with ASC 450, *Contingencies*, Lineage has not recorded any accrual for a contingent liability associated with this legal proceeding based on its belief that a liability, while possible, is not probable nor estimable, and any range of potential contingent liability amounts cannot be reasonably estimated at this time. Lineage records legal expenses as incurred.

Employment contracts

Lineage has entered into employment agreements with certain executive officers. Under the provisions of the agreements, Lineage may be required to incur severance obligations for matters relating to changes in control, as defined in the agreements, and involuntary terminations.

Indemnification

In the normal course of business, Lineage may provide indemnifications of varying scope under Lineage's agreements with other companies or consultants, typically Lineage's clinical research organizations, investigators, clinical sites, suppliers and others. Pursuant to these agreements, Lineage will generally agree to indemnify, hold harmless, and reimburse the indemnified parties for losses and expenses suffered or incurred by the indemnified parties arising from claims of third parties in connection with the use or testing of Lineage's products and services. Indemnification provisions could also cover third party infringement claims with respect to patent rights, copyrights, or other intellectual property pertaining to Lineage products and services. The term of these indemnification agreements will generally continue in effect after the termination or expiration of the particular research, development, services, or license agreement to which they relate. The potential future payments Lineage could be required to make under these indemnification agreements will generally not be subject to any specified maximum amount. Historically, Lineage has not been subject to any claims or demands for indemnification. Lineage also maintains various liability insurance policies that provide Lineage with insurance against claims or demands for indemnification in specified circumstances. As a result, Lineage believes the fair value of these indemnification agreements is minimal. Accordingly, Lineage has not recorded any liabilities for these agreements as of September 30, 2019 and December 31, 2018.

Royalty obligations and license fees

Lineage and its subsidiaries or affiliates are parties to certain licensing agreements with research institutions, universities and other parties for the rights to use those licenses and other intellectual property in conducting research and development activities. These licensing agreements provide for the payment of royalties by Lineage or the applicable party to the agreement on future product sales, if any. In addition, in order to maintain these licenses and other rights during the product development, Lineage or the applicable party to the contract must comply with various conditions including the payment of patent related costs and annual minimum maintenance fees. Annual minimum maintenance fees are approximately $135,000 to $150,000 per year. The research and development risk for these products is significant. License fees and related expenses under these agreements were immaterial for the periods presented in the condensed consolidated interim financial statements provided herein.

Grants

Under the terms of the grant agreement between Cell Cure and Israel Innovation Authority ("IIA") (formerly the Office of the Chief Scientist of Israel) of the Ministry of Economy and Industry, for the development of OpRegen, Cell Cure will be required to pay royalties on future product sales, if any, up to the amounts received from the IIA, plus interest indexed to LIBOR. Cell Cure's research and product development activities under the grant are subject to substantial risks and uncertainties and performed on a best efforts basis. As a result, Cell Cure is not required to make any payments under the grant agreement unless it successfully commercializes OpRegen. Accordingly, pursuant to ASC 730-20, the grant is considered a contract to perform research and development services for others and grant revenue is recognized as the related research and development expenses are incurred (see Note 2).

Israeli law pertaining to such government grants contain various conditions, including substantial penalties and restrictions on the transfer of intellectual property, or the manufacture, or both, of products developed under the grant outside of Israel, as defined by the IIA.

16. Subsequent Events

On October 14, 2019, a putative shareholder class action lawsuit was filed (captioned *Ross v. Lineage Cell Therapeutics, Inc., et al.* C.A. No. 2019-0822) in Delaware Chancery Court. See Note 15.

On November 10, 2019, Lineage sold 400,000 HBL shares for net proceeds of $0.5 million. After the transaction, Lineage holds 495,317 HBL shares.

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

The matters addressed in this Item 2 that are not historical information constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, including statements about any of the following: any projections of earnings, revenue, gross profit, cash, effective tax rate, use of net operating losses, or any other financial items; the plans, strategies and objectives of management for future operations or prospects for achieving such plans; and any statements of assumptions underlying any of the foregoing. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "seeks," "estimates," and similar expressions are intended to identify forward-looking statements. While Lineage may elect to update forward-looking statements in the future, it specifically disclaims any obligation to do so, even if Lineage's estimates change, and readers should not rely on those forward-looking statements as representing Lineage's views as of any date subsequent to the date of the filing of this Report. Although we believe that the expectations reflected in these forward-looking statements are reasonable, such statements are inherently subject to risks and Lineage can give no assurances that its expectations will prove to be correct. Actual results could differ materially from those described in this Report because of numerous factors, many of which are beyond the control of Lineage. A number of important factors could cause the results of the company to differ materially from those indicated by such forward-looking statements, including those detailed under the heading "Risk Factors" in Part I, Item 1A of Lineage's Form 10-K for the year ended December 31, 2018.

The following discussion should be read in conjunction with Lineage condensed consolidated interim financial statements and the related notes provided under "Item 1- Financial Statements" above.

Company and Business Overview

Lineage is a clinical-stage biotechnology company developing novel cell therapies for unmet medical needs. Our current focus is on therapies for degenerative retinal diseases, neurological conditions associated with demyelination, and aiding the body in detecting and combating cancer. Lineage's programs are based on our proprietary cell-based therapy platform and associated development and manufacturing capabilities. With this platform, Lineage develops and manufactures specialized, terminally-differentiated human cells from our pluripotent and progenitor cell starting materials. These differentiated cells are developed either to replace or support cells that are dysfunctional or absent due to degenerative disease or traumatic injury, or are administered as a means of helping the body mount an effective immune response to cancer.

We have three cell therapy programs in clinical development:

- *OpRegen*®, a retinal pigment epithelium cell replacement therapy currently in a Phase I/IIa multicenter clinical trial for the treatment of advanced dry age-related macular degeneration ("dry-AMD") with geographic atrophy ("OpRegen trial"). Dry-AMD accounts for approximately 85-90% of all age-related macular degeneration cases and is a leading cause of blindness in people over the age of 65. There currently are no therapies approved by the U.S. Food and Drug Administration ("FDA") for dry-AMD.

- *OPC1*, an oligodendrocyte progenitor cell therapy currently in a Phase I/IIa multicenter clinical trial for acute spinal cord injuries. This clinical trial has been partially funded by the California Institute for Regenerative Medicine.

- *VAC2*, an allogeneic (non-patient-specific or "off-the-shelf") cancer immunotherapy of antigen-presenting dendritic cells currently in a Phase I clinical trial in non-small cell lung cancer. This clinical trial is being funded and conducted by Cancer Research UK, the world's largest independent cancer research charity.

We also have cell/drug delivery programs based upon our proprietary HyStem® cell and drug delivery matrix technology. HyStem was designed to support the formulation, transfer, retention, and engraftment of cellular therapies. We also established and support multiple collaborations with both academic and for-profit partners to develop HyStem for additional therapeutic uses.

Our lead cell delivery clinical program is Renevia®, a medical device developed as a replacement for whole adipose tissue in cell assisted lipotransfer (CAL) procedures. In a European pivotal clinical trial in patients with HIV-associated facial lipoatrophy, the primary endpoint of change in hemifacial volume at 6 months in treated patients compared to patients in the delayed treatment arm as measured by three-dimensional photographic volumetric assessment was met. In 2018, we submitted a design dossier for EU market clearance (CE Mark) for the use of Renevia as a device to aid in transferring a patient's own adipose tissue to treat certain forms of facial lipoatrophy, or fat loss. Lineage was granted a CE Mark for Renevia in September 2019 and is currently working to identify a commercialization partner in Europe.

We completed our acquisition of the remaining ownership interests in Asterias Biotherapeutics, Inc. on March 8, 2019. We added OPC1 and VAC2 to our cell therapy product portfolio as a result of that acquisition.

We have equity holdings in two publicly traded companies: OncoCyte Corporation ("OncoCyte") (approximately 16% ownership) and AgeX Therapeutics, Inc. ("AgeX") (approximately 3% ownership). We founded both companies and they were once majority-owned and consolidated subsidiaries. OncoCyte (NYSE American: OCX) is developing confirmatory diagnostic tests for lung cancer utilizing novel liquid biopsy technology, and AgeX (NYSE American: AGE) is focused on the development of early-stage programs relating to cell immortality, regenerative biology, aging, and age-related diseases.

Critical Accounting Policies

This Management's Discussion and Analysis of Financial Condition and Results of Operations discusses and analyzes data in our unaudited Condensed Consolidated Interim Financial Statements, which we have prepared in accordance with GAAP. Preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. Management bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Senior management has discussed the development, selection and disclosure of these estimates with the Audit Committee of our board of directors. Actual conditions may differ from our assumptions and actual results may differ from our estimates.

An accounting policy is deemed critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably likely to occur could materially impact the financial statements. Management believes that there have been no significant changes during the three and nine months ended September 30, 2019 to the items that we disclosed as our critical accounting policies and estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the year ended December 31, 2018, except as follows:

Leases

We account for leases in accordance with Accounting Standards Codification, ("ASC") 842, *Leases*. We determine if an arrangement is a lease at inception. Leases are classified as either financing or operating, with classification affecting the pattern of expense recognition in the consolidated statements of operations. Under the available practical expedients for the adoption of ASC 842, we account for the lease and non-lease components as a single lease component. We recognize right-of-use ("ROU") assets and lease liabilities for leases with terms greater than twelve months in the condensed consolidated balance sheet.

ROU assets represent our right to use an underlying asset during the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. We use the implicit rate when readily determinable. The operating lease ROU asset also includes any lease payments made and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Operating leases are included as right-of-use assets in property and equipment, and ROU lease liabilities, current and long-term, in the condensed consolidated balance sheets. Financing leases are included in property and equipment, and in financing lease liabilities, current and long-term, in the condensed consolidated balance sheets.

Business Combinations

We account for business combinations, such as the Asterias Merger completed in March 2019, in accordance with ASC Topic 805, *Business Combinations*, which requires the purchase price to be measured at fair value. When the purchase consideration consists entirely of our common shares, we calculate the purchase price by determining the fair value, as of the acquisition date, of shares issued in connection with the closing of the acquisition. We recognize estimated fair values of the tangible assets and intangible assets acquired, including in-process research and development ("IPR&D"), and liabilities assumed as of the acquisition date, and we record as goodwill any amount of the fair value of the tangible and intangible assets acquired and liabilities assumed in excess of the purchase price.

Goodwill and IPR&D

Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the values assigned to the assets acquired and liabilities assumed. Goodwill is not amortized but is tested for impairment at least annually, or more frequently if circumstances indicate potential impairment.

IPR&D assets are indefinite-lived intangible assets until the completion or abandonment of the associated research and development ("R&D") efforts. Once the R&D efforts are completed or abandoned, the IPR&D will either be amortized over the asset life as a finite-lived intangible asset or be impaired, respectively, in accordance with ASC 350, *Intangibles - Goodwill and Other*. In accordance with ASC 350, goodwill and acquired IPR&D are determined to have indefinite lives and, therefore, are not amortized. Instead, they are tested for impairment at least annually and between annual tests if we become aware of an event or a change in circumstances that would indicate the asset may be impaired.

Results of Operations

Comparison of Three and Nine Months Ended September 30, 2019 and 2018

Revenues and Cost of Sales

The amounts in the tables below show our consolidated revenues, by source, and cost of sales for the periods presented (in thousands).

	Three Months Ended September 30, (unaudited)		$ Increase/	% Increase/
	2019	2018	(Decrease)	(Decrease)
Grant revenue	$ 350	$ 718	$ (368)	(51)%
Royalties from product sales and license fees	164	85	79	93%
Subscription and advertisement revenues	-	119	(119)	(100)%
Sale of research products and services	53	60	(7)	(12)%
Total revenues	567	982	(415)	(42)%
Cost of sales	(114)	(35)	79	226%
Gross profit	$ 453	$ 947	$ (494)	(52)%

	Nine Months Ended September 30, (unaudited)		$ Increase/	% Increase/
	2019	2018	(Decrease)	(Decrease)
Grant revenue	$ 1,628	$ 2,985	$ (1,357)	(45)%
Royalties from product sales and license fees	390	312	78	25%
Subscription and advertisement revenues	-	691	(691)	(100)%
Sale of research products and services	256	242	14	6%
Total revenues	2,274	4,230	(1,956)	(46)%
Cost of sales	(289)	(250)	39	16%
Gross profit	$ 1,985	$ 3,980	$ (1,995)	(50)%

Our total revenues decreased by $0.4 million for the three months ended September 30, 2019 as compared to the same period in the prior year, primarily reflecting a $0.4 million decrease in grant revenues primarily due to the timing of grant-related activities.

Our total revenues decreased by $2.0 million for the nine months ended September 30, 2019 as compared to the same period in the prior year, primarily reflecting a $1.4 million decrease in grant revenues and a $0.7 million decrease in subscriptions and advertisement revenues.

Our grant revenues are generated primarily by Cell Cure from the IIA for the development of OpRegen® and from a Small Business Innovation Research grant from the National Institutes of Health for our vision restoration program (the "NIH grant"). The decreases in our grant revenues for the three and nine months ended September 30, 2019 as compared to the same periods in the prior year, were primarily due to timing of grant-related activities. Grant revenues generated by Cell Cure from the IIA for the development of OpRegen amounted to $0.3 million and $1.2 million for the three and nine months ended September 30, 2019, respectively, and grant revenues generated by the NIH grant amounted to $0.1 million and $0.4 million for the three and nine months ended September 30, 2019, respectively.

Our subscription and advertising revenues, including certain service revenues, were generated entirely by LifeMap Sciences, AgeX's majority-owned subsidiary and are included in our revenues prior to the AgeX Deconsolidation. As a result, the decrease in those revenues is due to the AgeX Deconsolidation on August 30, 2018. Due to the AgeX Deconsolidation, we do not expect to earn subscription and advertising revenues in future periods.

Revenues from the sale of research products and services are primarily derived from service revenues and the sale of hydrogels and stem cell products.

Operating expenses

The amounts in the tables below are our consolidated operating expenses for the periods presented (in thousands).

	Three Months Ended September 30 (unaudited)		$ Increase/	% Increase/
	2019	2018	(Decrease)	(Decrease)
Research and development expenses	$ 4,266	$ 4,882	$ (616)	(13)%
General and administrative expenses	4,609	6,422	(1,813)	(28)%

	Nine Months Ended September 30 (unaudited)		$ Increase/	% Increase/
	2019	2018	(Decrease)	(Decrease)
Research and development expenses	$ 14,462	$ 17,175	$ (2,713)	(16)%
Acquired in-process research and development	-	800	(800)	(100)%
General and administrative expenses	19,527	17,585	1,942	11%

Research and development expenses

The following tables show the amount of our total research and development expenses allocated to our primary research and development projects, by respective entity conducting the research and development, for the periods presented (in thousands).

		Three Months Ended September 30, (unaudited)			
		Amount [1]		Percent of Total	
Company	**Program**	**2019**	**2018**	**2019**	**2018**
Lineage and subsidiaries other than AgeX [2]	OpRegen®, OPC1, VAC2, Renevia® and other HyStem ® products, and PureStem ® progenitor cell lines for orthopedic applications	$ 4,266	$ 4,060	100%	83%
AgeX including ReCyte [3]	PureStem® progenitor cell lines, brown adipose fat, iTR technology, and pre-clinical cardiovascular therapy research and development	-	599	0%	12%
LifeMap Sciences [5]	Biomedical, gene, and disease databases and tools	-	223	0%	5%
Total research and development expenses		$ 4,266	$ 4,882	100%	100%

Company	Program	Nine Months Ended September 30, (unaudited)			
		Amount [1]		Percent of Total	
		2019	2018	2019	2018
Lineage and subsidiaries other than AgeX [2]	OpRegen®, OPC1, VAC2, Renevia® and other HyStem ® products, and PureStem ® progenitor cell lines for orthopedic applications	$ 14,462	$ 13,378	100%	74%
AgeX including ReCyte [3]	PureStem® progenitor cell lines, brown adipose fat, iTR technology, and pre-clinical cardiovascular therapy research and development	-	2,779	0%	16%
AgeX [4]	Acquired in-process research and development	-	800	0%	4%
LifeMap Sciences [5]	Biomedical, gene, and disease databases and tools	-	1,018	0%	6%
Total research and development expenses		$ 14,462	$ 17,975	100%	100%

(1) Amount includes research and development expenses incurred directly by Lineage or the named entity and certain general research and development expenses, such as lab supplies, lab expenses, rent and insurance allocated to research and development expenses, incurred directly by Lineage on behalf of the subsidiary and allocated to the subsidiary.

(2) Lineage includes Cell Cure, ESI, and OrthoCyte.

(3) AgeX was capitalized during August 2017 by the contribution of assets from Lineage and cash from outside investors. Research and development expenses shown for the periods presented in 2018 are prior to the AgeX Deconsolidation.

(4) On March 23, 2018, AgeX purchased certain in-process research and development assets, primarily related to stem cell derived cardiomyocytes (heart muscle cells) to be developed by AgeX, for a total cash consideration of $800,000. The transaction was considered an asset acquisition rather than a business combination. Accordingly, the $800,000 was expensed on the acquisition date as acquired in-process research and development as those assets have no alternative future use.

(5) LifeMap Sciences is a subsidiary of AgeX. Research and development expenses shown for the periods presented in 2018 are prior to the AgeX Deconsolidation.

The decrease of $0.6 million in total research and development expenses for the three months ended September 30, 2019 as compared to the same period in the prior year is mainly attributable to the following: decreases of $0.8 million in AgeX related programs, including LifeMap Sciences, due to the AgeX Deconsolidation on August 30, 2018, offset by a net increase of $0.2 million in Lineage programs primarily related to: (1) an increase of $1.4 million in OPC1 and VAC2 expenses (these programs were acquired in the Asterias Merger), offset by (2) decreases of $1.2 million in Renevia, OpRegen and other research-related expenses.

The decrease of $3.5 million in total research and development expenses for the nine months ended September 30, 2019 as compared to the same period in the prior year is mainly attributable to the following: decreases of $3.8 million in AgeX related programs, including LifeMap Sciences, due to the AgeX Deconsolidation on August 30, 2018, and $0.8 million related to the absence of a nonrecurring $0.8 million expense incurred by AgeX on March 23, 2018 with respect to certain acquired in-process research and development assets that have no alternative future uses, offset by a net increase of $1.1 million in Lineage programs primarily related to an increase of $3.7 million in OPC1 and VAC2 expenses (these programs were acquired in the Asterias Merger), offset by a decrease of $2.6 million in Renevia, HyStem and OpRegen related expenses.

General and administrative expenses

The following table shows the amount of general and administrative expenses of Lineage and named subsidiaries for the periods presented (in thousands):

	Three Months Ended September 30, (unaudited)			
	Amount [1]		Percent of Total	
Company	**2019**	**2018**	**2019**	**2018**
Lineage and subsidiaries other than AgeX [2]	$ 4,609	$ 5,652	100%	88%
AgeX including ReCyte [3]	-	605	0%	9%
LifeMap Sciences [4]	-	165	0%	3%
Total general and administrative expenses	$ 4,609	$ 6,422	100%	100%

	Nine Months Ended September 30, (unaudited)			
	Amount [1]		Percent of Total	
Company	**2019**	**2018**	**2019**	**2018**
Lineage and subsidiaries other than AgeX [2]	$ 19,527	$ 14,455	100%	82%
AgeX including ReCyte [3]	-	2,584	0%	15%
LifeMap Sciences [4]	-	546	0%	3%
Total general and administrative expenses	$ 19,527	$ 17,585	100%	100%

(1) Amount includes general and administrative expenses incurred directly by the named subsidiary and allocations from Lineage for certain general overhead expenses to the subsidiary.

(2) Lineage includes Cell Cure, ESI, and OrthoCyte.

(3) AgeX was capitalized during August 2017 by the contribution of assets from Lineage and cash from outside investors. General and administrative expenses shown for the periods presented in 2018 are prior to the AgeX Deconsolidation.

(4) LifeMap Sciences is a subsidiary of AgeX. General and administrative expenses shown for the periods presented in 2018 are prior to the AgeX Deconsolidation.

The total net decrease of $1.8 million in general and administrative expense for the three months ended September 30, 2019 compared to the same period in 2018, was primarily attributable to a $0.8 million decrease in AgeX related general and administrative expenses, a $0.5 million reduction in legal and patent expenses, a $0.4 million decrease in salaries, benefits and severance costs primarily related to terminated personnel and a $0.3 million reduction in consulting expenses, offset by a $0.2 million increase in rent expense, which is primarily related to the implementation of ASC 842 *Leases* in 2019.

The total net increase of $1.9 million in general and administrative expense for the nine months ended September 30, 2019 compared to the same period in 2018, was primarily attributable to a $6.1 million increase in severance, legal, accounting and other expenses related to the Asterias Merger and a $0.5 million increase in rent expense which is primarily related to the implementation of ASC 842 *Leases* in 2019; these increases were partially offset by a $3.1 million decrease in AgeX related general and administrative expenses, a $1.1 million decrease in legal expenses and a $0.5 million decrease in consulting fees.

General and administrative expenses include employee and director compensation allocated to general and administrative expenses, consulting fees other than those paid for science or research related consulting, facilities and equipment rent and maintenance related expenses, insurance costs allocated to general and administrative expenses, stock exchange-related costs, depreciation expense, marketing costs, legal, compliance and accounting costs, and other miscellaneous expenses which are allocated to general and administrative expense.

Other income and expenses, net

The following table shows the amount of other income and expenses, net, for the periods presented (in thousands):

	Three Months Ended September 30, (unaudited)	
	2019	**2018**
Other income and expenses, net		
Interest income, net	$ 399	$ 174
Loss on equity method investment in OncoCyte at fair value	(8,287)	(734)
Loss on equity method investment in Asterias at fair value	-	(1,087)
Gain on deconsolidation of AgeX	-	78,511
Gain on sale of marketable securities	2,055	-
Gain on sale of equity investment in OncoCyte	546	-
Unrealized (loss) gain on marketable equity securities	(4,458)	23
Unrealized gain on warrant liability	79	21
Other income (expense), net	582	(7)
Total other income (expense), net	$ (9,084)	$ 76,901

	Nine Months Ended September 30, (unaudited)	
	2019	**2018**
Other income and expenses, net		
Interest income, net	$ 1,278	$ 278
Gain on sale of equity method investment in Ascendance	-	3,215
Gain (loss) on equity method investment in OncoCyte at fair value	8,001	(31,550)
Gain (loss) on equity method investment in Asterias at fair value	6,744	(20,660)
Gain on deconsolidation of AgeX	-	78,511
Gain on sale of marketable securities	2,055	-
Gain on sale of equity investment in OncoCyte	546	-
Unrealized (loss) gain on marketable equity securities	(3,134)	635
Unrealized gain on warrant liability	350	372
Other income (expense), net	2,270	(1,021)
Total other income (expense), net	$ 18,110	$ 29,780

Gain (loss) on equity method investment in Asterias shares - Prior to the closing of the Asterias Merger on March 8, 2019, where we acquired 100% of its outstanding shares, we owned 21.7 million shares of common stock of Asterias. We elected to account for our shares in Asterias at fair value using the equity method of accounting beginning on May 13, 2016, the date of the Asterias Deconsolidation. The fair value of our Asterias shares was approximately $20.2 million as of March 8, 2019, the closing date of the Asterias Merger, based on $0.93 per share, which was calculated by multiplying (a) $1.31, the closing price of our common stock on such date by (b) the Merger Exchange Ratio. The fair value of our Asterias shares was approximately $13.5 million as of December 31, 2018, based on the closing price of Asterias common stock of $0.62 per share on such date. Accordingly, we recorded an unrealized gain of $6.7 million for both the three and nine months ended September 30, 2019, representing the change in fair value of Asterias common stock from December 31, 2018 to March 8, 2019. Our Asterias shares had a fair value of $28.3 million, $29.4 million and $48.9 million as of September 30, 2018, June 30, 2018 and December 31, 2017, respectively, based on the closing price of Asterias common stock on the NYSE American of $1.30 per share, $1.35 per share and $2.25 per share, respectively, on those dates or the last trading day of the quarter. Accordingly, we recorded an unrealized loss of $1.1 million and $20.7 million, respectively, for the three and nine months ended September 30, 2018.

Gain (loss) on investment in OncoCyte - Lineage elected to account for its shares of OncoCyte common stock at fair value using the equity method of accounting beginning on February 17, 2017, the date of the OncoCyte Deconsolidation, through September 11, 2019. Lineage sold 2.25 million shares of OncoCyte common stock for net proceeds of $4.2 million in July 2019. Accordingly, Lineage's ownership in OncoCyte was reduced from 28% to 24%. Lineage sold an additional 4.0 million shares of OncoCyte common stock for net proceeds of $6.5 million on September 11, 2019. Lineage's ownership in OncoCyte was further reduced to 16% at this time. Effective September 11, 2019, Lineage began accounting for its shares of OncoCyte common stock as marketable equity securities.

As of September 30, 2019, Lineage had 8.4 million shares of OncoCyte common stock. These shares had a fair value of $17.7 million, based on the closing price of OncoCyte of $2.10 per share on September 30, 2019. As of December 31, 2018, Lineage had 14.7 million shares of OncoCyte common stock. These shares had a fair value of $20.3 million, based on the closing price of OncoCyte of $1.38 per share on December 31, 2018.

For the three months ended September 30, 2019, Lineage recorded a realized gain of $0.6 million due to sales of OncoCyte shares in the period. Lineage also recorded an unrealized loss of $8.7 million due to the decrease in OncoCyte's stock price from $2.49 per share at June 30, 2019 to $2.10 per share at September 30, 2019. $8.3 million of the unrealized loss was recorded as an unrealized loss on an equity method investment as it was prior to September 11, 2019; the remaining $0.4 million was recorded as an unrealized loss on marketable equity securities. For the three months ended September 30, 2018, Lineage recorded an unrealized loss of $0.7 million due to the decrease in OncoCyte's stock price from $2.55 per share at June 30, 2018 to $2.50 per share at September 30, 2018.

For the nine months ended September 30, 2019, Lineage recorded a realized gain of $0.6 million due to sales of OncoCyte shares in the period. Lineage also recorded an unrealized gain of $7.6 million due to the increase in OncoCyte's stock price from $1.38 per share at December 31, 2018 to $2.10 per share at September 30, 2019. $8.0 million of the unrealized gain was recorded as an unrealized gain on an equity method investment as it was prior to September 11, 2019; the unrealized loss of $0.4 million was recorded as an unrealized loss on marketable equity securities. For the nine months ended September 30, 2018, Lineage recorded an unrealized loss of $31.6 million due to the decrease in OncoCyte's stock price from $4.65 per share at December 31, 2017 to $2.50 per share at September 30, 2018.

All share prices are determined based on the closing price of OncoCyte common stock on the NYSE American on the applicable dates, or the last day of trading of the applicable quarter, if the last day of a quarter fell on a weekend.

We expect our other income and expenses, net, to continue to fluctuate each reporting period based on the changes in the market price of our OncoCyte shares, which could significantly impact our net income or loss reported in our condensed consolidated statements of operations for each period.

Marketable equity securities - We also account for the shares we hold in HBL and AgeX as marketable equity securities, carried at fair market value on our consolidated balance sheets. Beginning on January 1, 2018, in accordance with our adoption of ASU 2016-01, all gains and losses we generate each period due to changes in fair market value, including changes in foreign currency exchange rates, from these securities are included in other income and expenses, net, in our condensed consolidated statements of operations. For the three months ended September 30, 2019, Lineage recorded a realized gain of $2.0 million due to sales of HBL and AgeX shares in the period. For the three and nine months ended September 30, 2019, we recorded an unrealized loss of $4.0 million and $2.7 million, respectively, due to changes in fair market value of these marketable equity securities from June 30, 2019 to September 30, 2019 and December 31, 2018 to September 30, 2019.

Gain on sale of equity method investment in Ascendance - On March 23, 2018, Ascendance, AgeX's equity method investee and Lineage's former equity method investee, was acquired by a third party in a merger. AgeX received $3.2 million in cash for its Ascendance common stock from which we recognized a gain on sale for the same amount during the three months ended March 31, 2018.

Other income (expense), net, interest income, net - Other income and expenses, net, in 2019 and 2018 consist primarily of net foreign currency transaction gains and losses recognized by Cell Cure and ESI, changes in the fair value of the Cell Cure Warrants, dividend income and interest income, net. Foreign currency transaction gains and losses for the periods presented are principally related to the remeasurement of the US dollar denominated notes payable by Cell Cure to Lineage.

Income Taxes

For items that we cannot reliably estimate on an annual basis (principally unrealized gains or losses generated by changes in the market prices of the OncoCyte and AgeX shares of common stock we hold, and prior to March 8, 2019, Asterias shares we held), we use the actual year to date effective tax rate rather than an estimated annual effective tax rate to determine the tax effect of each item, including the use of all available net operating losses and other credits or deferred tax assets.

The market value of the shares of OncoCyte common stock we hold creates a deferred tax liability based on the closing prices of the shares, less our tax basis in the shares. The deferred tax liability generated by the OncoCyte shares that we hold as of September 30, 2019, is a source of future taxable income to us, as prescribed by ASC 740-10-30-17, that will more likely than not result in the realization of our deferred tax assets to the extent of the deferred tax liability. This deferred tax liability is determined based on the closing prices of the OncoCyte shares as of September 30, 2019. Due to the inherent unpredictability of future prices of those shares, we cannot reliably estimate or project those deferred tax liabilities on an annual basis. Therefore, the deferred tax liability pertaining to OncoCyte shares, determined based on the actual closing prices on the last stock market trading day of the applicable accounting period, and the related impacts to the valuation allowance and deferred tax asset changes, are recorded in the accounting period in which they occur.

On March 23, 2018, Ascendance was acquired by a third party in a merger though which AgeX received approximately $3.2 million in cash for its shares of Ascendance common stock. For financial reporting purposes, AgeX recognized a $3.2 million gain as a sale of its equity method investment in Ascendance. The sale was a taxable transaction to AgeX generating a taxable gain of approximately $2.2 million, for which we had sufficient losses from operations to offset the entire gain resulting in no income taxes due.

The Juvenescence Transaction was a taxable event for us that resulted in a gross taxable gain of approximately $29.4 million, which was fully offset with available current year net operating losses (NOL) and NOL carryforwards, resulting in no net income taxes due. Although the AgeX Deconsolidation on August 30, 2018 was not a taxable transaction to us and did not result in a current tax payment obligation, the financial reporting gain on the AgeX Deconsolidation generated a deferred tax liability, primarily representing the difference between book and tax basis of AgeX common stock on the AgeX Deconsolidation date. We expect this deferred tax liability to be fully offset by a corresponding release of our valuation allowance on deferred tax assets, resulting in no income tax provision or benefit from the AgeX Deconsolidation. The deferred tax liabilities on our investments in OncoCyte and Asterias, combined with the estimated deferred tax liability generated by the fair value of our retained noncontrolling investment in AgeX, are considered to be sources of taxable income that will more likely than not result in the realization of its deferred tax assets to the extent of those deferred tax liabilities, thereby reducing the need for a valuation allowance.

The distribution of AgeX shares of common stock to our shareholders on November 28, 2018 was a taxable event for us that resulted in a gross taxable gain of approximately $26.4 million, which we fully offset with available NOL Carryforwards, resulting in no income taxes due.

In connection with the Asterias Merger, a deferred tax liability of $13.0 million was recorded as part of acquisition accounting. This liability is related to fair value adjustments for the assets and liabilities acquired in the Asterias Merger, principally consisting of IPR&D. This estimate of deferred taxes was determined based on the excess of the estimated fair values of the acquired assets and liabilities over the tax basis of the assets and liabilities acquired. The statutory tax rate was applied, as appropriate, to the adjustment based on the jurisdiction in which the adjustment is expected to occur. This estimate of deferred income tax liabilities is preliminary and is subject to change based upon our final determination of the fair value of assets acquired and liabilities assumed.

A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized. For federal and state income tax purposes, as a result of the deconsolidation of AgeX, Asterias and OncoCyte and the deferred tax liabilities generated from the market values of AgeX, Asterias and OncoCyte shares from the respective deconsolidation dates, including the changes to those deferred tax liabilities due to changes in the Asterias and OncoCyte stock prices, our deferred tax assets exceeded our deferred tax liabilities as of December 31, 2018. As a result, we established a full valuation allowance as of December 31, 2018 due to the uncertainty of realizing future tax benefits from our net operating loss carryforwards and other deferred tax assets.

Because the IPR&D (prior to completion or abandonment of the R&D) is considered an indefinite-lived asset for accounting purposes, the fair value of the IPR&D on the acquisition date creates a deferred income tax liability in accordance with ASC 740. This DTL is computed using the fair value of the IPR&D assets on the acquisition date multiplied by our respective federal and state income tax rates. While this DTL would reverse on impairment or sale or commencement of amortization of the related intangible assets, those events are not anticipated under ASC 740 for purposes of predicting reversal of a temporary difference to support the realization of deferred tax assets, except for certain deferred tax assets and credit carryforwards that are also indefinite in nature as of the Asterias Merger date, which may be considered for reversal.

For the three and nine months ended September 30, 2019, we reversed a portion of our valuation allowance. The partial reversal of the historical valuation allowance is related to our deferred tax assets and credit carryforwards and is due to the acquired taxable temporary differences, primarily consisting of the acquired IPR&D discussed in Note 13 to condensed consolidated financial statements included elsewhere in this Report. ASC 740 allows for deferred tax assets and credit carryforwards that are both available and indefinite in nature to be used against similar deferred tax liabilities as a source of income to support the realization of those deferred tax assets and credit carryforwards. Any benefit recognized from such a reversal of the valuation allowance is recorded outside of the acquisition accounting. Accordingly, the $1.0 million and $6.6 million valuation allowance release and the corresponding tax benefit was primarily related to state research and development credits, including current year federal net operating losses generated for the three and nine months ended September 30, 2019, both of which are available and indefinite in nature.

We did not record any provision or benefit for income taxes for the three and nine months ended September 30, 2018 as we have a full valuation allowance for the periods presented.

We expect that deferred income tax expense or benefit we record each reporting period, if any, will vary depending on the change in the closing stock prices of OncoCyte and AgeX shares, from period to period and the related changes in those deferred tax liabilities and our deferred tax assets and other credits, including changes in the valuation allowance, for each period. We also expect that if we continue to generate deferred tax assets and other credits that are indefinite in nature, we may be able to release our valuation allowance with a corresponding tax benefit to the extent of our deferred tax liability which is also indefinite in nature, principally related to our acquired IPR&D.

Liquidity and Capital Resources

At September 30, 2019, we had $35.7 million of cash, cash equivalents and marketable equity securities on hand, which includes our investments in HBL, AgeX and OncoCyte. We may use our marketable equity securities for liquidity, as necessary, and as market conditions allow. The market value may not represent the amount that could be realized in a sale of investment shares due to various market and regulatory factors, including trading volume or market depth factors and volume and manner of sale restrictions under Federal securities laws, prevailing market conditions and prices at the time of any sale, and subsequent sales of securities by the entities.

Since inception, we have incurred significant operating losses and have funded our operations primarily through the issuance of equity securities, the sale of common stock of our former subsidiaries, AgeX and OncoCyte, payments from research grants, royalties from product sales and sales of research products and services. At September 30, 2019, we had an accumulated deficit of $268.9 million, working capital of $55.4 million and shareholders' equity of $115.5 million. We evaluated the projected cash flows for Lineage and our subsidiaries, and we believe that our $35.7 million in cash, cash equivalents and marketable equity securities at September 30, 2019, provide sufficient cash, cash equivalents, and liquidity to carry out our current planned operations through at least twelve months from the issuance date of our condensed consolidated interim financial statements included elsewhere in this Report. If we need near term working capital or liquidity to supplement our cash and cash equivalents for our operations, we may sell some, or all, of our investments, as necessary.

On March 8, 2019, the Asterias Merger closed and Asterias became our wholly owned subsidiary. We began consolidating Asterias' operations and results with our operations and results beginning on March 8, 2019. As we integrate Asterias' operations into our own, we have made extensive reductions in headcount and reduced non-clinical related spend, in each case, as compared to Asterias' operations before the merger.

We expect to spend approximately $6 million in the fourth quarter of 2019. We have implemented significant cost savings initiatives and anticipate that net operational spend for 2020 will be $16 million. This represents a significant reduction from 2019 forecasted spending levels of $34 million and 2018 spending levels of $43 million for Lineage and Asterias Biotherapeutics, Inc. (Asterias) combined.

Our projected cash flows are subject to various risks and uncertainties, and the unavailability or inadequacy of financing to meet future capital needs could force us to modify, curtail, delay, or suspend some or all aspects of our current planned operations. Our determination as to when we will seek new financing and the amount of financing that we will need will be based on our evaluation of the progress we make in our research and development programs, any changes to the scope and focus of those programs, any changes in grant funding for certain of those programs, and projection of future costs, revenues, and rates of expenditure. We may be required to delay, postpone, or cancel our clinical trials or limit the number of clinical trial sites, unless we are able to obtain adequate financing. In addition, we have incurred and expect to continue incurring significant costs in connection with the acquisition of Asterias and with integrating its operations. We may incur additional costs to maintain employee morale and to retain key employees. We cannot assure that adequate financing will be available on favorable terms, if at all. Sales of additional equity securities by us or our subsidiaries and affiliates could result in the dilution of the interests of our current shareholders.

Cash flows used in operating activities

Net cash used in operating activities of $26.4 million for the nine months ended September 30, 2019 primarily reflects the loss from operations of $32.0 million less the changes in assets and liabilities of $1.3 million. These items were offset primarily by non-cash expenses of $3.0 million for stock-based compensation and $2.3 million of depreciation and amortization. The unrealized gains on equity method investments and marketable securities and deferred tax benefit are non-cash items that had no effect on cash flows.

Net cash used in operating activities of $25.1 million for the nine months ended September 30, 2018 primarily reflects the loss from operations of $31.6 million less the changes in assets and liabilities of $0.6 million. These items were offset primarily by non-cash expenses of $3.4 million for stock-based compensation and $2.5 million of depreciation and amortization. The unrealized gains on equity method investments and marketable securities are non-cash items that had no effect on cash flows.

Cash flows provided by investing activities

Cash provided by investing activities of $16.2 million for the nine months ended September 30, 2019 was associated primarily with receipts of $10.7 million from sales of a portion of our OncoCyte holdings, $1.6 million in sales of a portion of our AgeX holdings and $1.2 million in sales of a portion of our HBL holdings as well as the receipt of $3.1 million of cash that Asterias had on the closing date of the Asterias Merger, offset by $0.4 million in purchases of equipment and other assets. Cash provided by investing activities of $2.0 million for the nine months ended September 30, 2018 was associated primarily with proceeds of $3.2 million related to the sale of the equity method investment in Ascendance and proceeds of $1.1 million related to the sale and deconsolidation of AgeX, offset by $1.9 million for the purchase of in-process research and development and $0.4 million in purchases of equipment and other assets.

Cash flows provided by financing activities

Cash provided by financing activities of $0.6 million for the nine months ended September 30, 2019 was associated primarily with $0.7 million in landlord reimbursements for tenant improvements, offset by $0.1 million in common shares received and retired for employee taxes paid. Cash provided by financing activities of $5.7 million for the nine months ended September 30, 2018 was associated primarily with $5.0 million in proceeds from the sale of subsidiary stock and $1.0 million in proceeds from the sale of subsidiary warrants, offset by $0.2 million for repayment of lease liabilities.

Off-Balance Sheet Arrangements

As of September 30, 2019 and December 31, 2018, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Under SEC rules and regulations, as a smaller reporting company, we are not required to provide the information required by this item.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

It is management's responsibility to establish and maintain adequate internal control over all financial reporting pursuant to Rule 13a-15 under the Securities Exchange Act of 1934 ("Exchange Act"). Our management, including our principal executive officer and our principal financial officer, have reviewed and evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Report. Following this review and evaluation, management collectively determined that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms; and (ii) is accumulated and communicated to management, including our chief executive officer and our chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the period covered by this Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

The information required by this Item is incorporated herein by reference to Notes to Condensed Consolidated Interim Financial Statements—Note 15. "Commitments and Contingencies" under the heading "Litigation," in Part I, Item 1, of this Report.

Item 1A. Risk Factors

Our business, financial condition, results of operations and future growth prospects are subject to various risks, including those described in Item 1A "Risk Factors" of our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 14, 2019 (the "2018 Form 10-K"), which we encourage you to review. There have been no material changes from the risk factors disclosed in the 2018 Form 10-K.

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

Not applicable.

Item 3. Default Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 5. Other Information

On November 8, 2019, our board of directors established June 9, 2020 as the date of our 2020 annual meeting of shareholders (the "2020 Annual Meeting"), which is more than 30 days prior to the anniversary of our 2019 annual meeting of shareholders. In accordance with the rules of the SEC and our amended and restated bylaws, in order for shareholder proposals and director nominations to be presented at the 2020 Annual Meeting, the proposing shareholder must notify us of such intention by notice received at our principal executive offices on or prior to March 11, 2020. Shareholder proposals intended for inclusion in our proxy statement for the 2020 Annual Meeting pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), must be received at our principal executive offices on or prior to March 11, 2020. All shareholder notices related to the 2020 Annual Meeting must conform to the applicable requirements of our amended and restated bylaws, the rules and regulations promulgated under the Exchange Act and other applicable law. All such notices should be directed to: "Lineage Cell Therapeutics, Inc., 2173 Salk Avenue, Suite 200, Carlsbad, CA 92008, Attention: Corporate Secretary."

Item 6. Exhibits

Exhibit Numbers	Description
3.1	Restated Articles of Incorporation, as amended (1)
3.2	Certificate of Ownership (2)
3.3	Amended and Restated Bylaws (2)
10.1*+	Amendment to 2012 Equity Incentive Plan
10.2*+	Form of Stock Option Agreement under 2012 Equity Incentive Plan
31.1*	Certification of Chief Executive Officer pursuant to Form of Rule 13a-14(a), as Adopted Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002, dated May 9, 2019
31.2*	Certification of Chief Financial Officer pursuant to Form of Rule 13a-14(a), as Adopted Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002, dated May 9, 2019
32.1*	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated May 9, 2019
101	Interactive Data Files
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase*
101.DEF	XBRL Taxonomy Extension Definition Document*
101.LAB	XBRL Taxonomy Extension Label Linkbase*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase*

(1) Incorporated by reference to Lineage's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 10, 2018.
(2) Incorporated by reference to Lineage's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 12, 2019.

* Filed herewith
+ Indicates management contract or compensatory plan.

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.

LINEAGE CELL THERAPEUTICS, INC.

Date: November 12, 2019

/s/ Brian M. Culley

Brian M. Culley
Chief Executive Officer

Date: November 12, 2019

/s/ Brandi L. Roberts

Brandi L. Roberts
Chief Financial Officer

AMENDMENT TO
BIOTIME, INC. 2012 EQUITY INCENTIVE PLAN

Background

A. On August 9, 2019 (the "***Effective Date***"), BioTime, Inc. amended Article I of its Restated Articles of Incorporation to change its name from "BioTime, Inc." to "Lineage Cell Therapeutics, Inc."

B. Section 13.1 of the BioTime, Inc. 2012 Equity Incentive Plan (as amended, the "***Plan***") provides, in pertinent part, that the Board of Directors (the "***Board***") of Lineage Cell Therapeutics, Inc. (the "***Company***") at any time, and from time to time, may amend the Plan; provided that, subject to certain limited exceptions, no amendment shall be effective unless approved by the shareholders of the Company to the extent shareholder approval is necessary to satisfy any Applicable Laws (as defined in the Plan), and at the time of such amendment, the Board shall determine, upon advice from counsel, whether such amendment will be contingent on shareholder approval.

C. Pursuant to Section 13.1 of the Plan the Board desires to amend the Plan as of the Effective Date to reflect the change in name.

D. The Board, upon advice from counsel, has determined that shareholder approval of the amendment is not necessary to satisfy any Applicable Laws.

Amendment

1. As of the Effective Date, the title of the Plan shall be the "Lineage Cell Therapeutics, Inc. 2012 Equity Incentive Plan."

2. All references to "BioTime, Inc.," "BioTime" and similar references in the Plan, in any outstanding Award Agreements (as defined in the Plan) and in any other documents and materials related to the Plan shall be deemed to be references to "Lineage Cell Therapeutics, Inc." and "Lineage."

LINEAGE CELL THERAPEUTICS, INC.
STOCK OPTION GRANT NOTICE
2012 EQUITY INCENTIVE PLAN

Lineage Cell Therapeutics, Inc., a California corporation (F/K/A the BioTime, Inc.) (the "***Company***"), has granted to the participant listed below ("***Participant***") the stock option (the "***Option***") to purchase common shares, no par value, of the Company ("***Shares***") described in this Stock Option Grant Notice (this "***Notice***"), subject to the terms of the Lineage Cell Therapeutics, Inc. 2012 Equity Incentive Plan (as amended from time to time, the "***Plan***") and the Stock Option Agreement attached as Exhibit A hereto (the "***Agreement***," and, together with this Notice and the Plan, the "***Option Documents***"), both of which are incorporated into this Notice by reference. Capitalized terms not defined in this Notice or the Agreement have the meanings given to them in the Plan.

Participant:
Grant Date:
Option Exercise Price:
Number of Shares Subject to the Option:
Final Expiration Date:
Vesting Schedule:
Type of Option: [ ] Incentive Stock Option [ ] Non-Qualified Stock Option

By accepting the Option, Participant agrees to be bound by the terms of the Option Documents. Participant has reviewed the Option Documents in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Notice, and fully understands all provisions of Option Documents. Participant hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Administrator (defined below) regarding any questions arising under the Option Documents. "***Administrator***" means the Board or a Committee of the Board to the extent the Board's powers or authority under the Plan have been delegated to such Committee pursuant to the Plan. This Notice and the Agreement supersede any previous documentation provided to Participant with respect to the Option, including any prior Award Agreement entered into between the Company and Participant.

Lineage Cell Therapeutics, Inc.	**Participant**
By: _____	By: _____
Name: _____	Name: _____
Title: _____	

EXHIBIT A

STOCK OPTION AGREEMENT

Capitalized terms not defined in this Stock Option Agreement (this "***Agreement***") have the meanings specified in the Stock Option Grant Notice (the "***Notice***") or, if not defined in the Notice, in the Plan.

1. **General**

(a) Grant of Option. The Company has granted to Participant the Option effective as of the grant date set forth in the Notice (the "***Grant Date***").

(b) Incorporation of Terms of Plan. The Option is subject to the terms of this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the Plan will control.

2. **Period of Exercisability**

(a) Exercisability. The Option will vest and become exercisable according to the vesting schedule in the Notice; provided that any fractional Shares will accumulate and vest and become exercisable only when a whole Share has accumulated. Notwithstanding anything in the Option Documents, except as set forth in a separate Agreement between Participant and the Company or as determined by the Administrator, the Option will immediately expire and be forfeited as to any unvested portion as of the date of termination of Participant's Continuous Service ("***Termination of Service***") for any reason. Any portion of the Option that vests and becomes exercisable will remain vested and exercisable until the Expiration Date (defined below), at which time the Option will be forfeited immediately.

(b) Expiration of Option. The Option may not be exercised after the date of the first of the following to occur (the "***Expiration Date***"):

(i) The final expiration date stated in the Notice;

(ii) Except as approved by the Administrator, the date three months following the date of Termination of Service for reasons other than Participant's death or Disability; provided that if the Participant dies prior to such date, the Expiration Date will be one year following the date of Participant's death; and

(iii) Except as approved by the Administrator, the date one year following the date of Termination of Service by reason of Participant's death or Disability.

3. **Exercise of Option**

(a) Person Eligible to Exercise. Only Participant may exercise the Option during Participant's lifetime. After Participant's death, any exercisable portion of the Option may, prior to the time the Option expires, be exercised by Participant's executor or administrator of the Participant's estate or any person who shall have acquired the option from the Participant by his or her will or the applicable law of descent and distribution as provided in the Plan.

(b) Exercise. To exercise the Option, the Participant shall deliver to the Company a "Notice of Exercise" in a form specified by the Administrator, specifying the number of Shares the Participant wishes to purchase and how the Participant's Shares should be registered. The Participant may pay the Option Exercise Price in Shares, cash, or a combination thereof, including an irrevocable commitment by a broker to pay over such amount from a sale of Shares issuable under the Option, the delivery of previously owned Shares, withholding of Shares deliverable upon exercise of the Option (but only to the extent share withholding is made available to the Participant by the Company), or in any other manner permitted by the Administrator.

(c) Partial Exercise. Any exercisable portion of the Option may be exercised, in whole or in part, according with the procedures stated in Section 3(b) at any time prior to the Expiration Date, except that the Option may be exercised only for whole Shares.

(d) Tax Withholding.

(i) The Company may, but has no obligation to, treat Participant's failure to provide timely payment in accordance with the Plan of any withholding tax arising in connection with the Option as Participant's election to satisfy all or any portion of the withholding tax by requesting the Company retain Shares otherwise issuable under the Option.

(ii) Participant is liable and responsible for all taxes owed in connection with the Option, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the Option. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or exercise of the Option or the subsequent sale of Shares. Neither the Company nor any Subsidiary is under any obligation to structure the Option to reduce or eliminate Participant's tax liability.

4. **Other Provisions**

(a) Adjustments. Participant acknowledges that the Option is subject to adjustment, modification, and termination in certain events as provided in this Agreement and the Plan.

(b) Notices. Any notice to be given under this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Secretary at the Company's principal office or the Secretary's then-current email address. Any notice to be given under this Agreement to Participant must be in writing and addressed to Participant (or, if Participant is then deceased, to the person entitled to exercise the Option) at Participant's last known mailing address or email address. Either party may designate a different address or email address for notices to be given to that party by providing notice to the other party of such change pursuant to this Section 4(b). Any notice will be deemed duly given when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, or when delivered by a nationally recognized express shipping company.

(c) Titles. Titles are provided herein for convenience only and do not serve as a basis for interpretation or construction of this Agreement.

(d) Conformity to Securities Laws. Participant acknowledges that each Option Document is intended to conform to all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

(e) Successors and Assigns. The Company may assign any of its rights under this Agreement to one or more assignees, and this Agreement will inure to the benefit of the Company's successors and assigns. Subject to any transfer restrictions in this Agreement or the Plan, this Agreement will be binding on and inure to the benefit of the heirs, legatees, legal representatives, successors, and assigns of the parties hereto.

(f) Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, each Option Document will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

(g) Entire Agreement. The Option Documents constitute the entire agreement of the parties and supersede all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

(h) Agreement Severable. If any provision of the Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Notice or this Agreement.

(i) Limitation on Participant's Rights. Participation in the Plan provides no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Option, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to the Option, as and when exercised pursuant to the terms hereof.

(j) Not a Contract of Employment. Nothing in the Option Documents: (i) provides Participant any right to continued employment or service with the Company or any Subsidiary; or (ii) interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the employment or services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

(k) Counterparts. The Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

(l) Governing Law. This Agreement is governed by and construed under the laws of the state of California, without regard to conflict of law provisions.

(m) Incentive Stock Options. If the Option is designated as an Incentive Stock Option:

(i) The extent the aggregate fair market value of Common Stock (determined as of the time the option with respect to the shares is granted) with respect to which stock options to purchase Common Stock intended to qualify as Incentive Stock Options (including the Option) are exercisable for the first time by Participant during any calendar year exceeds $100,000, or if for any other reason such stock options to purchase Common Stock do not qualify or cease to qualify for treatment as Incentive Stock Options, such stock options (including the Option) will be treated as Non-qualified Stock Options. The action in the preceding sentence will be applied by taking the Option and other stock options into account in the order in which they were granted, as determined under Section 422(d) of the Code. If the Option is exercised more than three months following Termination of Service, other than by reason of death or Disability, the Option will be taxed as a Non-qualified Stock Option.

(ii) Participant shall give prompt written notice to the Company of any disposition or other transfer of any Shares acquired under this Agreement if such disposition or other transfer is made: (A) within two years following the Grant Date; or (B) within one year following the transfer of such Shares to Participant. Such notice will specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by Participant in such disposition or other transfer.

Exhibit 31.1

CERTIFICATIONS

I, Brian M. Culley, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Lineage Cell Therapeutics, Inc.

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 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 periodic report is being prepared;

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

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

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

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

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

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

Date: November 12, 2019

/s/ Brian M. Culley

Brian M. Culley
Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Brandi Roberts, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Lineage Cell Therapeutics, Inc.

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 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 periodic report is being prepared;

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

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

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

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

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

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

Date: November 12, 2019

/s/ Brandi L. Roberts

Brandi L. Roberts
Chief Financial Officer

Exhibit 32.1

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

In connection with the Quarterly Report on Form 10-Q of Lineage Cell Therapeutics, Inc. (the "Company") for the quarter ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Brian M. Culley, Chief Executive Officer of the Company, and Brandi Roberts, Chief Financial Officer of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 12, 2019

/s/ Brian M. Culley
Brian M. Culley
Chief Executive Officer

/s/ Brandi L. Roberts
Brandi L. Roberts
Chief Financial Officer