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

FORM 6-K

REPORT OF FOREIGN ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16
OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of May 2019

(Commission File No. 001-38722)

ORCHARD THERAPEUTICS PLC

(Translation of registrant's name into English)

108 Cannon Street
London EC4N 6EU
United Kingdom
(Address of registrant's principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

On May 28, 2019, Orchard Therapeutics plc (the “Company”) issued the following press release announcing financial results for the three months ended March 31, 2019, a copy of which is attached hereto as Exhibit 99.3 and is incorporated herein by reference.

EXHIBIT INDEX

Exhibit	Description
99.1	Unaudited Condensed Consolidated Financial Statements as of March 31, 2019 and December 31, 2018 and for the Three Months Ended March 31, 2019 and 2018
99.2	Management's Discussion and Analysis for the Three Months Ended March 31, 2019 and 2018
99.3	Press Release Dated May 28, 2019
101	The following materials formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at March 31, 2019 (unaudited) and December 31, 2018 (unaudited), (ii) Condensed Consolidated Statements of Operations and Comprehensive Loss for the three months ended March 31, 2019 and 2018 (unaudited), (iii) Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2019 and 2018 (unaudited), (iv) Condensed Consolidated Statements of Convertible Preferred Shares and Shareholders' (Deficit) Equity for the three months ended March 31, 2019 and 2019, and (v) Notes to Condensed Consolidated Financial Statements (unaudited)

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.

ORCHARD THERAPEUTICS PLC

Date: May 28, 2019

By: /s/ Frank E. Thomas
Frank E. Thomas
Chief Financial Officer

EXHIBIT 99.1

ORCHARD THERAPEUTICS PLC

Condensed Consolidated Balance Sheets
(In thousands, except per share amounts)
(unaudited)

	March 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 295,407	$ 335,844
Trade and other receivables	354	2,153
Prepaid expenses and other assets	6,731	6,935
Research and development tax credit receivable	16,094	10,585
Total current assets	318,586	355,517
Non-current assets:		
Property and equipment, net	5,685	5,476
Restricted Cash	3,840	3,837
Other long-term assets	1,208	1,212
Total assets	$ 329,319	$ 366,042
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 8,384	$ 18,125
Accrued expenses and other current liabilities	26,316	29,780
Total current liabilities	34,700	47,905
Other Long-term liabilities	7,143	6,799
Total liabilities	41,843	54,704
Commitments and contingencies (see Note 10)		
Shareholders' equity:		
Ordinary shares, £0.10 par value	10,924	10,924
Additional paid-in capital	591,316	587,490
Accumulated other comprehensive income	6,214	3,163
Accumulated deficit	(320,978)	(290,239)
Total shareholders' equity	287,476	311,338
Total liabilities and shareholders' equity	$ 329,319	$ 366,042

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

ORCHARD THERAPEUTICS PLC

Condensed Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)
(unaudited)

	Three Months Ended March 31,	
	2019	2018
Costs and operating expenses:		
Research and development	$ 17,493	$ 9,171
Selling, general and administrative	10,790	4,527
Total costs and operating expenses	28,283	13,698
Loss from operations	(28,283)	(13,698)
Other income (expense):		
Interest income	1,623	—
Other (expense), net	(3,486)	(1,696)
Total other income (expense), net	(1,863)	(1,696)
Net loss before income tax	(30,146)	(15,394)
Income tax (expense) benefit	(593)	83
Net loss attributable to ordinary shareholders	(30,739)	(15,311)
Other comprehensive income:		
Foreign currency translation adjustment	3,051	3,432
Total comprehensive loss	$ (27,688)	$ (11,879)
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.35)	$ (1.53)
Weighted average number of ordinary shares outstanding, basic and diluted	87,010,596	9,983,754

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

ORCHARD THERAPEUTICS PLC

Condensed Consolidated Statements of Cash Flows
(In thousands)
(unaudited)

	Three Months Ended March 31,	
	2019	2018
Cash flows from operating activities:		
Net loss attributable to ordinary shareholders	$ (30,739)	$ (15,311)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	366	126
Non-cash share-based compensation	3,821	1,104
Amortization of Strimvelis loss provision	(1,525)	—
Changes in operating assets and liabilities:		
Other receivables	1,873	991
Research and development tax credit receivable, prepaids, and other assets	(4,871)	(2,148)
Accounts payable, accrued expenses and other current liabilities	(12,794)	990
Other Long-term liabilities	107	(97)
Net cash used in operating activities	(43,762)	(14,345)
Cash flows from investing activities:		
Purchases of property and equipment	(529)	(2,555)
Net cash used in investing activities	(529)	(2,555)
Cash flows from financing activities:		
Proceeds from issuance of convertible preferred shares	—	2,250
Proceeds from the exercise of stock options	5	—
Net cash provided by financing activities	5	2,250
Effect of exchange rate changes on cash and cash equivalents	3,852	3,191
Net decrease in cash, cash equivalents and restricted cash	(40,434)	(11,459)
Cash and restricted cash, beginning of period	339,681	89,856
Cash and restricted cash, end of period	299,247	78,397

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

ORCHARD THERAPEUTICS PLC

Condensed Consolidated Statements of Convertible Preferred Shares and Shareholders' (Deficit) Equity
(In thousands, except share and per share amounts)
(unaudited)

	Convertible preferred shares		Ordinary Shares		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount				
Balance at December 31, 2017	33,277,678	$ 134,069	8,927,121	$ 1,145	$ 6,808	$ 4,127	$ (59,744)	$ 86,405
Share-based compensation expense	—	—	—	—	1,104	—	—	1,104
Issuance of convertible preferred shares	493,496	2,249	—	—	—	—	—	2,249
Ordinary shares issued as part of license arrangement	—	—	349,770	45	(45)	—	—	—
Foreign currency translation	—	—	—	—	—	3,432	—	3,432
Net loss attributable to ordinary shareholders	—	—	—	—	—	—	(15,311)	(15,311)
Balance at March 31, 2018	33,771,174	$ 136,318	9,276,891	$ 1,190	7,867	$ 7,559	$ (75,055)	$ 77,879
Balance at December 31, 2018	—	$ —	85,865,557	$ 10,924	$ 587,490	$ 3,163	$ (290,239)	$ 311,338
Share-based compensation expense	—	—	—	—	3,821	—	—	3,821
Exercise of share options	—	—	1,471	—	5	—	—	5
Foreign currency translation	—	—	—	—	—	3,051	—	3,051
Net loss attributable to ordinary shareholders	—	—	—	—	—	—	(30,739)	(30,739)
Balance at March 31, 2019	—	$ —	85,867,028	$ 10,924	$ 591,316	$ 6,214	$ (320,978)	$ 287,476

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

1. Nature of the Business

Orchard Therapeutics plc and subsidiaries (the "Company") is a commercial-stage fully-integrated biopharmaceutical company dedicated to transforming the lives of patients with serious and life- threatening rare diseases through *ex vivo*, autologous, hematopoietic stem cell (HSC) based gene therapies. The Company's gene therapy approach seeks to transform a patient's own, or autologous, HSCs into a gene-modified drug product to treat the patient's disease through a single administration. The Company has acquired and developed a portfolio of *ex vivo*, autologous, HSC based gene therapies focused on three franchises in which it accumulates expertise, including primary immune deficiencies, neurometabolic disorders and hemoglobinopathies. The Company's portfolio of *ex vivo*, autologous, HSC based gene therapies includes Strimvelis®, a gammaretroviral vector-based gene therapy and the first such treatment approved by the European Medicines Agency ("EMA") for adenosine deaminase severe combined immunodeficiency ("ADA-SCID"), three clinical programs in advanced registrational studies in metachromatic leukodystrophy ("MLD"), Wiskott–Aldrich syndrome ("WAS") and ADA-SCID, other clinical programs in X-linked chronic granulomatous disease ("X-CGD") and transfusion-dependent beta-thalassemia ("TDT"), as well as an extensive preclinical pipeline.

The Company is a public limited company incorporated pursuant to the laws of England and Wales. On November 2, 2018, the Company closed its initial public offering ("IPO") of American Depositary Shares ("ADS") in which the Company sold an aggregate of 16,103,572 ADSs representing the same number of ordinary shares at a public offering price of $14.00 per ADS. Net proceeds were $205.5 million, after deducting underwriting discounts and commissions of $15.8 million and offering expenses of $4.2 million paid by the Company.

Orchard Therapeutics plc (formerly Orchard Rx Limited) was originally incorporated under the laws of England and Wales in August 2018 to become a holding company for Orchard Therapeutics Limited. Orchard Therapeutics Limited was originally incorporated under the laws of England and Wales in September 2015 as Newincco 1387 Limited and subsequently changed its name to Orchard Therapeutics Limited in November 2015. As part of a corporate reorganization in October 2018, all the interests in Orchard Therapeutics Limited were exchanged for the same number and class of newly issued shares of Orchard Rx Limited and, as a result, Orchard Therapeutics Limited became a wholly owned subsidiary of Orchard Rx Limited. On October 29, 2018, Orchard Rx Limited re-registered as a public limited company and changed its name to Orchard Therapeutics plc, and Orchard Therapeutics Limited changed its name to Orchard Therapeutics (Europe) Limited. Upon completion of the reorganization, the historical consolidated financial statements of Orchard Therapeutics (Europe) Limited became the historical consolidated financial statements of Orchard Therapeutics plc because the reorganization was accounted for as a reorganization of entities under common control.

On November 1, 2018, the Company's different classes of preferred shares and our ordinary shares were consolidated on a one-for-0.8003 basis. Following the share consolidation, each share was re-designated as an ordinary share on a one-for-one basis. Accordingly, all share and per share amounts for all periods presented in the consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect the reverse stock split.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's technology will be obtained, that any products developed will obtain necessary government or regulatory approval, or that any products, if approved, will be commercially viable. The Company operates in an environment of rapid technological innovation and substantial competition from pharmaceutical and biotechnological companies. In addition, the Company is dependent upon the services of its employees, consultants and service providers. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

Through March 31, 2019, the Company funded its operations primarily with proceeds from the sale of convertible preferred shares and ADSs in the IPO. The Company has incurred recurring losses since its inception, including net losses of $30.7 million and $15.3 million for the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, and December 31, 2018, the Company had an accumulated deficit of $321.0 million and $290.2 million, respectively. The Company expects to continue to generate operating losses for the foreseeable future. The viability of the Company is dependent on its ability to raise additional capital to finance its operations. If the Company is unable to obtain funding, the Company may be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or the Company may be unable to continue operations. Although management continues to pursue these plans of raising additional capital to finance operations, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all. The Company expects that its cash on hand as of March 31, 2019 of $295.4 million, will be sufficient to fund its operations and capital expenditure requirements through at least twelve months from the issuance date of these condensed consolidated financial statements on May 28, 2019.

2. Summary of Significant Accounting Policies

Basis of presentation

The condensed consolidated interim financial statements of the Company and its subsidiaries are unaudited and have been prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP") for interim financial reporting and in accordance with Regulation S-X, Rule 10-01. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification, or ASC, and Accounting Standards Update, or ASU, of the Financial Accounting Standards Board, or FASB. All significant intercompany accounts and transactions between the Company and its subsidiaries have been eliminated upon consolidation.

The accompanying unaudited condensed consolidated interim financial statements should be read in conjunction with the audited consolidated financial statements and accompanying notes included in the Company's Annual Report on Form 20-F filed with the SEC on March 22, 2019 (the "Annual Report"). The balance sheet as of December 31, 2018 was derived from audited consolidated financial statements included in the Company's Annual Report but does not include all disclosures required by U.S. GAAP.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted from these interim financial statements. However, these interim financial statements include all adjustments, consisting only of normal recurring adjustments, which are, in the opinion of the Company's management, necessary to fairly state the results of the interim period. The interim results are not necessarily indicative of results to be expected for the full year.

Use of estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting periods. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, the accrual for research and development expenses, the research and development tax credit receivable, the Strimvelis loss provision, the fair values of ordinary and convertible preferred shares, share-based compensation and income taxes. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ materially from those estimates.

Concentration of credit risk

The Company has no significant off-balance sheet risk, such as foreign currency contracts, options contracts, or other foreign hedging arrangements. Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and other receivables. Periodically, the Company maintains deposits in accredited financial institutions in excess of federally insured limits. The Company deposits its cash in financial institutions that it believes have high credit quality and has not experienced any losses on such accounts and does not believe it is exposed to any unusual credit risk beyond the normal credit risk associated with commercial banking relationships or entities for which it has a receivable.

Foreign currency translation

The reporting currency of the Company is the U.S. dollar. The Company has determined the functional currency of the parent company, Orchard Therapeutics plc, is U.S. dollars because it predominantly raises finance and expends cash in U.S. dollars. The

functional currency of our subsidiary operations is the applicable local currency. Transactions in foreign currencies are translated into the functional currency of the subsidiary in which they occur at the foreign exchange rate in effect on at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated into the functional currency of the relevant subsidiary at the foreign exchange rate in effect on the balance sheet date. Non-monetary assets and liabilities denominated in foreign currencies that differ from the functional currency are translated into the functional currency at the exchange rates prevailing at the date of the transaction. The Company recorded an unrealized foreign currency transaction loss of $3.5 million and $1.7 million for the three months ended March 31, 2019 and 2018, respectively, which is included in other (expense) in the condensed consolidated statements of operations and comprehensive loss.

The results of operations for subsidiaries, the functional currency of which is not the U.S. dollar, are translated at an average rate for the period where this rate approximates to the foreign exchange rates ruling at the dates of the transactions and the balance sheet of these subsidiaries are translated at foreign exchange rates prevailing at the balance sheet date. Exchange differences arising from this translation of foreign operations are reported as an item of other comprehensive loss.

Cash and cash equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. At March 31, 2019 and 2018, the Company did not have any cash equivalents.

Restricted cash

Cash and cash equivalents that are restricted as to withdrawal or use under the terms of certain contractual agreements are recorded as Restricted Cash on our condensed consolidated balance sheet. The Company has an outstanding a letter of credit for $3.0 million associated with a lease , which is included in the condensed consolidated financial statements as of March 31, 2019 and December 31, 2018. The Company is also contractually required to maintain a cash collateral account associated with corporate credit card accounts in the amount of $0.9 million at March 31, 2019 and December 31, 2018. The Company includes the restricted cash balance in cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the condensed consolidated statements of cash flows. The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported in the consolidated balance sheet that sum to the total of the amounts reported in the unaudited condensed consolidated statement of cash flows:

	March 31, 2019	December 31, 2018
	(in thousands)	
Cash and cash equivalents	$ 295,407	$ 335,844
Restricted cash	3,840	3,837
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 299,247	$ 339,681

Property and equipment

Property and equipment are recorded at cost and depreciated or amortized using the straight-line method over the following estimated useful lives. Construction-in-process assets are not depreciated until they are placed into service.

Property and equipment:	Estimated useful life
Lab equipment	5-10 years
Leasehold improvements	Shorter of lease term or estimated useful life
Furniture and fixtures	4 years
Office and computer equipment	3-5 years

As of March 31, 2019, the Company’s property and equipment consisted of furniture and fixtures, office and computer equipment, lab equipment, leasehold improvements, and construction-in-process. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts, and any resulting gain or loss is included in the statement of operations and other comprehensive loss. Repairs and maintenance expenditures, which are not considered improvements and do not extend the useful life of property and equipment, are expensed as incurred.

The Company evaluates assets for potential impairment when events or changes in circumstances indicate the carrying value of the assets may not be recoverable. Recoverability is measured by comparing the book values of the assets to the expected future net undiscounted cash flows that the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the book values of the assets exceed their fair value. The Company has not recognized any impairment losses from inception through March 31, 2019.

Segment information

Operating segments are defined as components of an enterprise for which separate discrete information is available for evaluation by the chief operating decision maker in deciding how to allocate resources and assess performance. The Company and the Company's chief operating decision maker, the Company's Chief Executive Officer, views the Company's operations and manages its business as a single operating segment, which is focused on discovering, acquiring, developing and commercializing gene therapies for patients with rare disorders. The Company had fixed assets of $1.9 million and $3.8 million located in the United Kingdom and United States, respectively, as of March 31, 2019, and $1.7 million and $3.8 million located in the United Kingdom and United States, respectively, as of December 31, 2018.

Research and development costs

Research and development costs are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities, including salaries, share-based compensation and benefits, facilities costs, depreciation, third-party license fees, and external costs of outside vendors engaged to conduct clinical development activities and clinical trials, as well as to manufacture clinical trial materials. Non-refundable prepayments for goods or services that will be used or rendered for future research and development activities are recorded as prepaid expenses. Such amounts are recognized as an expense as the goods are delivered or the related services are performed, or until it is no longer expected that the goods will be delivered, or the services rendered. In addition, funding from research grants is recognized as an offset to research and development expense on the basis of costs incurred on the research program, to the extent that reimbursement of the costs is deemed probable. Royalties associated with our research grants will be accrued when they become probable.

Research contract costs and accruals

The Company has entered into various research and development-related contracts. These agreements are cancelable, and related costs are recorded as research and development expenses as incurred. The Company records accruals for estimated ongoing research costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies or clinical trials, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates. The Company's historical accrual estimates have not been materially different from the actual costs.

Share-based compensation

The Company measures share-based awards granted to employees and directors based on the fair value on the date of the grant and recognizes compensation expense for those awards over the requisite service period, which is the vesting period of the respective award. Forfeitures are accounted for as they occur.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in shareholders' equity (deficit) that result from transactions and economic events other than those with shareholders. For the three months ended March 31, 2019 and 2018, other comprehensive income included a gain of $3.1 million and $3.4 million, respectively, related to foreign currency translation adjustments.

Strimvelis loss provision

As part of the GSK transaction completed in April 2018, the Company is required to use its best endeavors to make Strimvelis commercially available in the European Union until such time that an alternative gene therapy, such as our OTL-101 product candidate, is commercially available for patients in Italy, and at all times at the San Raffaele Hospital in Milan, provided that a minimum number of patients continue to be treated at this site. Strimvelis is not currently expected to generate sufficient cash flows to overcome the costs of maintaining the product and certain regulatory commitments; therefore, the Company initially recorded a liability associated with the loss contract of $18.4 million. The Company recognizes the amortization of the loss provision on a diminishing balance basis based on the actual net loss incurred associated with Strimvelis and the expected future net losses to be generated until such time as Strimvelis is no longer commercially available. The amortization of the provision is recorded as a credit to research and development expense. We have made an estimate of the expected future losses associated with Strimvelis and adjust this estimate as facts and circumstances change regarding the commercial availability and costs of maintaining and selling Strimvelis. As of March 31, 2019, the total Strimvelis loss provision liability was $9.1 million. During the three months ended March 31, 2019 the Company amortized $1.5 million as a credit to research and development expense. The effects of foreign currency translation for the three months ended March 31, 2019 increased the liability by $0.3 million.

Research and development income tax credit

As a company that carries out extensive research and development activities, the Company seeks to benefit from one of two U.K. research and development tax relief programs, the Small and Medium-sized Enterprises R&D Tax Credit Program (“SME Program”) and the Research and Development Expenditure program (“RDEC Program”). Qualifying expenditures largely comprise employment costs for research staff, consumables and certain internal overhead costs incurred as part of research projects for which the Company does not receive income. Such credits are accounted for as reductions in research and development expense in the period in which the expenditures were incurred.

Based on criteria established by HM Revenue and Customs (“HMRC”), management of the Company expects a proportion of expenditures being incurred in relation to its pipeline research, clinical trials management and manufacturing development activities to be eligible for research and development tax credits for the 2019 fiscal year. The Company has qualified under the more favorable SME regime for the year ended December 31, 2018 and expects to qualify under the SME regime for the year ending December 31, 2019.

The RDEC and SME credits are not dependent on the Company generating future taxable income or on the ongoing tax status or tax position of the Company. As such the Company has recorded a United Kingdom research and development tax credit as an offset to research and development expense in the condensed consolidated statements of operations and comprehensive loss of $5.2 million and $1.4 million for the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, and December 31, 2018, the Company’s tax incentive receivable from the United Kingdom government was $16.1 million and $10.6 million, respectively. The effects of foreign currency translation for the three months ended March 31, 2019 increased the receivable by $0.3 million. As of March 31, 2019, these amounts have not yet been paid to the Company by HMRC.

Income taxes

The Company is subject to corporate taxation in the United Kingdom and the United States. Due to the nature of its business, the Company has generated losses since inception and has therefore not paid United Kingdom corporation tax. The Company’s income tax (expense) benefit represents only income taxes in the United States. The Company’s income tax credit recognized represents the sum of the research and development tax credits recoverable in the United Kingdom and income tax payable in the United States.

The research and development tax credit received in the United Kingdom is recorded as a credit against R&D expenses. The U.K. research and development tax credit, as described below, is fully refundable to the Company and is not dependent on current or future taxable income. As a result, the Company has recorded the entire benefit from the UK research and development tax credit as a reduction to R&D expenses and has not reflected it as part of the income tax provision. If, in the future, any UK research and development tax credits generated are needed to offset a corporate income tax liability in the UK, that portion would be recorded as a benefit within the income tax provision and any refundable portion not dependent on taxable income would continue to be recorded as a reduction to research and development expenses.

Unsurrendered United Kingdom losses may be carried forward indefinitely to be offset against future taxable profits, subject to numerous utilization criteria and restrictions. The amount that can be offset each year is limited to £5.0 million plus an incremental 50% of United Kingdom taxable profits.

Value Added Tax (“VAT”), is broadly charged on all taxable supplies of goods and services by VAT-registered businesses, and is generally applicable to our operations in the United Kingdom and European Union. Under current rates, an amount of 20% of the

value, as determined for VAT purposes, of the goods or services supplied is added to all sales invoices and is payable to HMRC. Similarly, VAT paid on purchase invoices associated with our U.K. subsidiary is generally reclaimable from HMRC.

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the condensed consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined on the basis of the differences between the condensed consolidated financial statements and tax basis of assets and liabilities using substantively enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered in the future and, to the extent the Company believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes in the condensed consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed as the amount of benefit to recognize in the consolidated financial statements. The amount of benefit that may be used is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate, as well as the related net interest and penalties.

Net income (loss) per share

The Company follows the two-class method when computing net income (loss) per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net income (loss) per share for each class of ordinary and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to ordinary shareholders for the period to be allocated between ordinary and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net income (loss) per share attributable to ordinary shareholders is computed by dividing the net income (loss) attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding for the period. Diluted net income (loss) attributable to ordinary shareholders is computed by adjusting net income (loss) attributable to ordinary shareholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net income (loss) per share attributable to ordinary shareholders is computed by dividing the diluted net income (loss) attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding for the period, including potential dilutive ordinary shares. For purpose of this calculation, outstanding options and convertible preferred shares are considered potential dilutive ordinary shares.

The Company's convertible preferred shares contractually entitled the holders of such shares to participate in dividends but did not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which there were convertible shares outstanding and the Company reported a net loss attributable to ordinary shareholders, such losses were not allocated to such participating securities. In periods in which the Company reports a net loss attributable to ordinary shareholders, diluted net loss per share attributable to ordinary shareholders is the same as basic net loss per share attributable to ordinary shareholders, since dilutive ordinary shares are not assumed to have been issued if their effect is anti-dilutive.

The Company reported a net loss attributable to ordinary shareholders for the three months ended March 31, 2019 and 2018.

Recent Accounting Pronouncements

Recently adopted accounting pronouncements

In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-15 ("ASU 2018-15), *Intangibles – Goodwill and Other – Internal Use Software (Subtopic 350-40)*, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract* requiring a customer in a cloud computing arrangement that is a service contract to follow the internal use software guidance in ASC 350-402 to determine which implementation costs to capitalize as assets. The guidance is effective for the Company in annual periods beginning after December 15, 2019, and interim periods within those annual periods. The Company has the option to apply the guidance prospectively to all implementation costs incurred after the date of adoption or retrospectively. The new guidance requires certain disclosures in the interim and annual period of adoption. The Company adopted this standard as of January 1, 2019. The adoption of this guidance did not have a material impact on the condensed consolidated financial statements due to limited use in its operations of cloud computing arrangements that are service contracts.

In June 2018, the FASB issued ASU No. 2018-07 (“ASU 2018-07”). ASU 2018-07 expands the scope of Topic 718, *Compensation—Stock Compensation*, to include share-based payments issued to nonemployees for goods or services. Consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. ASU 2018-07 supersedes Subtopic 505-50, *Equity—Equity-Based Payments to Non-Employees*. The amendments are effective for public companies for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. For all other companies, the amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted, but no earlier than a company’s adoption date of Topic 606. ASU 2018-07 was adopted as of January 1, 2017 and did not have a material impact on the Company’s financial position, results of operations or cash flows.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting* (“ASU 2017-09”), which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. ASU 2017-09 is effective for all entities for annual periods, and interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period, for 1) public business entities for reporting periods for which financial statements have not yet been issued and 2) all other entities for reporting periods for which financial statements have not yet been made available for issuance. The Company adopted ASU 2017-09 as of January 1, 2018. The adoption of ASU 2017-09 did not have a material impact on the Company’s financial position, results of operations or cash flows.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805) Clarifying the Definition of a Business* (“ASU 2017-01”). ASU 2017-01 clarifies the definition of a business by adding guidance to assist entities in evaluating whether transactions should be accounted for as acquisitions of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The ASU is effective for public entities for fiscal years beginning after December 15, 2017. For all other entities, the guidance is effective for annual periods beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019. Early application is permitted for transactions for which the acquisition date occurs before the effective date when the transaction has not been reported in financial statements that have been issued or made available for issuance. As such, the Company adopted this standard effective as of January 1, 2016 and applied the guidance to our analysis of arrangements entered into during the years ended during the year ended December 31, 2016 and subsequent reporting periods.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* (“ASU 2016-18”), which requires companies to include amounts generally described as restricted cash and restricted cash equivalents in cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The Company adopted ASU 2016-18 for annual period beginning after December 15, 2017. Prior to the adoption of ASU 2016-18, the Company did not have material balances meeting the definition of restricted cash or restricted cash equivalents.

In August 2016, the FASB issued Accounting Standards Update No 2016-15, *Statement of Cash Flows (Topic 230)*: *Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”) to clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows. The Company adopted this guidance as of January 1, 2018. The adoption of ASU 2016-15 did not have a material impact on the Company’s financial statements.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740)*: *Intra-Entity Transfer of Assets Other than Inventory* (“ASU 2016-16”), which requires the recognition of the income tax consequences of an intra-entity transfer (sales) of an asset, other than inventory, when the transfer occurs. The standard is effective for the Company beginning January 1, 2018. The Company does not currently engage in sale transactions with its wholly owned subsidiaries. Adoption of this standard did not have a material impact on the Company’s consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* (“ASU 2016-09”). ASU 2016-09 addresses several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross share compensation expense with actual forfeitures recognized as they occur, and classification on the statement of cash flows. Certain of these changes are required to be applied retrospectively, while other changes are required to be applied prospectively. ASU 2016-09 is effective for public entities for annual periods beginning after December 15, 2016, and interim periods within those annual periods. For all other entities, the guidance is effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for any entity in any interim or annual period and an entity that elects early adoption must adopt all of the amendments in the same period. The Company early adopted ASU 2016-09 effective as of January 1, 2016. The adoption of ASU 2016-09 did not have a material impact on the Company’s financial position, results of operations or cash flows.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"), which amended the guidance on the recognition and measurement of financial assets and financial liabilities. The new guidance requires that equity investments (except those accounted for under the equity method of accounting, or those that result in consolidation of the investee) are measured at fair value with changes in fair value recognized in net income. The guidance also requires the use of an exit price when measuring the fair value of financial instruments for disclosure purposes, eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost and requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset. The Company adopted this standard beginning
January 1, 2018. Adoption of ASU 2016-01 did not have a material impact on the Company's consolidated financial statements as the Company does not hold any equity securities.

In November 2015, the FASB issued ASU No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"), which requires deferred tax liabilities and assets to be classified as non-current in the consolidated balance sheet. ASU 2015-17 is effective for public entities for annual periods beginning after December 15, 2016, and interim periods within those annual periods. For all other entities, the guidance is effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted and the Company elected to early adopt the standard on January 1, 2016. The adoption of ASU 2015-17 had no material impact on the Company's financial position, results of operations or cash flows as the company has recorded a full valuation allowance on deferred tax assets for the period ended December 31, 2016 and subsequent reporting periods.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"), which supersedes existing revenue recognition guidance under U.S. GAAP. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The standard defines a five-step process to achieve this principle and will require companies to use more judgment and make more estimates than under the current guidance. The Company expects that these judgments and estimates will include identifying performance obligations in the customer contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which delays the effective date of ASU 2014-09 such that the standard is effective for public entities for annual period beginning after December 15, 2017, including interim periods within those fiscal years. For all other entities, the guidance is effective beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019. Early adoption of the standard is permitted for annual periods beginning after December 15, 2016, including interim periods within those fiscal years. The Company adopted these revenue standards on January 1, 2017. Prior to 2018, the Company had no sources of revenue. In 2018, the Company had its first sales of Strimvelis and have applied this guidance to our revenue recognition, and as such there was no impact from the adoption of ASC 606 in prior periods.

Recently issued accounting pronouncements not yet adopted

In August 2018, the FASB issued ASU 2018-13 ("ASU 2018-13"), *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement*, removing the requirements to disclose:

- The amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy;
- The policy for timing of transfers between levels; and
- The valuation processes for Level 3 fair value measurements;

The standard also clarifies certain aspects of disclosures regarding uncertainty in measurement of the reporting date. The guidance is effective for the Company in annual periods beginning after December 15, 2019, and interim periods within those annual periods. The Company does not expect the adoption of this guidance to have a material impact on the condensed consolidated financial statements as the Company does not currently have and does not anticipate, based on its investment policy and nature of operations, to have assets or liabilities falling within Level 3 of the fair value hierarchy.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815) (Part I) Accounting for Certain Financial Instruments with Down Round Features, (Part II) Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* ("ASU 2017-11"). Part I applies to entities that issue financial instruments such as warrants, convertible debt or convertible preferred stock that contain down-round features. Part II replaces the indefinite deferral for certain mandatorily redeemable noncontrolling interests and mandatorily redeemable financial instruments of nonpublic entities contained within ASC Topic 480 with a scope exception and does not impact the accounting for these mandatorily redeemable instruments. ASU 2017-11 is required to be adopted for public entities for fiscal years, and interim

periods within those fiscal years, beginning after December 15, 2018. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted for all entities. The Company does not expect ASU 2017-11 to have a material impact on the Company's financial position.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. In January 2018, the FASB issued ASU 2018-01, *Leases (Topic 842)*, ("ASU 2018-01"), which adds two practical expedients to the new lease guidance. Topic 842 is effective for the Company in its annual periods beginning after December 15, 2019. The Company is currently evaluating the impact that the adoption of ASU 2016-02 will have on its condensed consolidated financial statements.

The Company has considered other recent accounting pronouncements and concluded that they are either not applicable to the business, or that the effect is not expected to be material to the financial statements as a result of future adoption.

3. Property and Equipment, Net

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

	March 31, 2019	December 31, 2018
Property and equipment:		
Lab equipment	$ 4,979	$ 4,689
Leasehold improvements	1,574	1,487
Furniture and fixtures	458	403
Office and computer equipment	154	152
Construction-in-process	392	241
Property and equipment	$ 7,557	$ 6,972
Less: accumulated depreciation	(1,872)	(1,496)
Property and equipment, net	$ 5,685	$ 5,476

Depreciation expense was $0.4 million and $0.1 million for the three months ended March 31, 2019 and 2018, respectively.

4. Accrued Expenses and Other Liabilities

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

	March 31, 2019	December 31, 2018
Accrued external research and development expenses	$ 13,327	$ 12,738
Accrued payroll and related expenses	4,208	7,372
Accrued professional fees	946	1,186
Accrued other	2,971	2,762
Strimvelis liability - current portion	3,312	4,170
Due to UCLA	1,552	1,552
Total accrued expenses and other liabilities	$ 26,316	$ 29,780

5. Shareholders' Equity

Initial Public Offering and Corporate Reorganization

On November 2, 2018, the Company closed its IPO of ADSs. In the IPO, the Company sold an aggregate of 16,103,572 ADSs representing the same number of ordinary shares at a public offering price of $14.00 per ADS, including a partial exercise by the underwriters of their option to purchase additional ADSs. Net proceeds were $205.5 million, after deducting underwriting discounts of $15.8 million, and commissions and offering expenses paid by the Company of $4.2 million.

Immediately prior to the completion of the IPO, all outstanding Convertible Preferred Shares of the Company were converted into their respective class of preferred shares on a one-for-0.8003 basis. All ordinary shares were consolidated on a one-for-0.8003 basis. Following completion of these steps, and immediately prior to the completion of the IPO, each share outstanding was re-designated as an ordinary share on a one-for-one basis. Accordingly, all share and per share amounts for all periods presented in the accompanying condensed consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect this reverse split. In addition, all share options for all periods presented have been adjusted retroactively to reflect this reverse split.

Additionally, as part of the corporate reorganization associated with our IPO, each ordinary share with a nominal value of £0.00001 was redenominated as an ordinary share with a nominal value of £0.10. Accordingly, equity accounts for all periods presented in the condensed consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect the effects of the redenomination of our ordinary shares.

Ordinary Shares

Each holder of ordinary shares is entitled to one vote per ordinary share and to receive dividends when and if such dividends are recommended by the board of directors and declared by the shareholders. The Company has not declared any dividends since its inception. The Company has authority to allot ordinary shares up to a maximum nominal value of £13,023,851.50 with a nominal value of £0.10 per share.

6. Share-Based Compensation

The Company maintains three equity compensation plans; the Orchard Therapeutics Limited Employee Share Option Plan with Non-Employee Sub-Plan and U.S. Sub-Plan (the "2016 Plan"), the Orchard Therapeutics plc 2018 Share Option and Incentive Plan (the "2018 Plan"), and the 2018 Employee Share Purchase Plan (the "ESPP"). The board of directors has determined not to make any further awards under the 2016 plan following the Company's IPO. On March 22, 2019, pursuant to the evergreen provisions in the 2018 Plan and the ESPP, the Company increased (i) the number of ordinary shares available for issuance under the 2018 Plan by 4,293,278, and (ii) the number of ordinary shares available for issuance under the ESPP by 858,656. As of March 31, 2019, 5,518,538 shares remained available for grant under the 2018 Plan, and 1,709,604 shares remained available for grant under the ESPP.

Prior to the Company's IPO, the Company granted options to United States employees and non-employees at exercise prices deemed by the board of directors to be equal to the fair value of the ordinary share at the time of grant, and granted options to United Kingdom and European Union employees and non-employees at an exercise price equal to the par value of the ordinary shares of £0.00001. After the IPO, options are now granted at exercise prices equal to the fair value of the Company's ordinary shares on the grant date for all employees. The vesting period is determined by the board of directors, which is generally four years. An option's maximum term is ten years.

Share Options

The following table summarizes option activity under the plans for three months ended March 31, 2019 (in thousands except share and per share amounts):

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2018	10,203,432	$ 3.04	8.97	$ 129,551
Granted	2,983,207	13.06		
Exercised	(1,471)	3.43		
Forfeited	(608,491)	6.88		
Outstanding at March 31, 2019	12,576,677	5.15	8.82	$ 160,093
Vested as of March 31, 2019	3,114,960	1.67	7.69	$ 50,491

The aggregate intrinsic value of share options is calculated as the difference between the exercise price of the share options and the fair value of the Company's ordinary shares for those share options that had exercise prices lower than the fair value of the Company's ordinary shares at the reporting date. During the three months ended March 31, 2019, the intrinsic value of share options exercised was not material. There were no share option exercises in the three months ended March 31, 2018.

The weighted-average grant date fair value of share options granted during the three-month period ended March 31, 2019 was $8.37 per share. All share options granted have a term of 10 years.

Restricted Share Units

The Company has issued performance-based restricted share units ("RSUs") to certain executives and members of its senior management, with vesting linked to the achievement of three specific regulatory and research and development milestones and one market condition based upon the volume weighted-average price ("VWAP") of the Company's ADSs for a certain period. Upon achievement of any of the aforementioned milestones, one third of the RSU's will vest, and the award will become fully vested upon achievement of three of the four performance conditions.

The maximum aggregate total fair value of the performance-based RSUs is $10.6 million. The fair value associated with the shares that could vest based on the market-based condition is being recognized as expense over an average derived service period of 1.4 years. The fair value associated with the performance-based conditions will be recognized when achievement of the milestones becomes probable, if at all. The Company determined that, as of March 31, 2019, none of the regulatory and research and development milestones were deemed probable.

The following table summarizes award activity for the three months ended March 31, 2019:

	Shares	Weighted Average Grant Date Fair Value
Unvested and outstanding at December 31, 2018	219,922	$ 15.48
Granted	372,500	12.15
Vested	—	—
Forfeited	(18,750)	11.17
Unvested and outstanding at March 31, 2019	573,672	$ 13.46

The amount of compensation cost recognized for the three months ended March 31, 2019 and 2018 for the market condition associated with the performance-based RSUs was $0.3 million and nil, respectively.

Share-based compensation

Share-based compensation expense recorded as research and development and general and administrative expenses is as follows (in thousands):

	March 31, 2019	March 31, 2018
Research and development	$ 1,317	$ 501
General and administrative	2,504	603
Total share-based compensation	$ 3,821	$ 1,104

The Company had 9,461,717 unvested options outstanding as of March 31, 2019. As of March 31, 2019, total unrecognized compensation cost related to unvested stock option grants was approximately $54.3 million. This amount is expected to be recognized over a weighted average period of approximately 3.01 years. As of March 31, 2019, the total unrecognized compensation cost related to performance-based RSUs is a maximum of $10.3 million, depending upon achievement of the milestones.

7. License Agreements

GSK asset purchase and license agreement

In April 2018, the Company completed an asset purchase and license agreement (the "GSK Agreement") with subsidiaries of GSK to acquire a portfolio of autologous *ex vivo* gene therapy assets and licenses, for rare diseases and option rights on three additional programs in preclinical development from Telethon Foundation and San Raffaele Hospital ("Telethon-OSR").

The portfolio of programs and options acquired consists of:

- Two late-stage clinical gene therapy programs in ongoing registrational trials for MLD and WAS;
- One earlier stage clinical gene therapy program for TDT;
- Strimvelis, the first autologous *ex vivo* gene therapy for ADA-SCID which was approved for marketing by the European Medicines Agency in 2016; and
- Option rights exercisable upon completion of clinical proof of concept studies for three additional earlier-stage development programs, which such option rights have subsequently lapsed.

The Company accounted for the GSK Agreement as an asset acquisition, since the asset purchase and licensing arrangement did not meet the definition of a business pursuant to ASC 805, Business Combinations. Total consideration of £94.2 million ($133.6 million as of date of acquisition), which includes an upfront payment of £10.0 million ($14.2 million at the acquisition date) and 12,455,252 Series B-2 convertible preferred shares of the Company issued to GSK at £65.8 million ($93.4 million at the acquisition date), a loss contract on the Strimvelis program valued at £12.9 million ($18.4 million), an inventory purchase liability valued at £4.9 million ($6.9 million) and transaction costs of £0.6 million ($0.8 million). The Company allocated £94.2 million ($133.6 million) to in-process research and development expense (based on the fair value of the underlying programs in development). The Series B-2 convertible preferred shares were converted to ordinary shares as part of our IPO in November 2018.

The Company is required to use commercially reasonable efforts to obtain a PRV from the United States Food and Drug Administration for each of the programs for MLD, WAS and TDT, the first of which GSK retained beneficial ownership over. GSK also has an option to acquire, at a price pursuant to an agreed upon formula, any PRV granted to the Company thereafter for MLD, WAS and TDT. If GSK does not exercise this option to purchase any PRV, the Company may sell the PRV to a third party and must share any proceeds in excess of a specified sale price equally with GSK. For accounting purposes, as of March 31, 2019, the Company does not consider the attainment of a PRV from the United States Food and Drug Administration to be probable.

As part of the GSK Agreement the Company is required to use its best endeavors to make Strimvelis commercially available in the European Union until such time as an alternative gene therapy, such as our OTL-101 product candidate, is commercially available for patients in Italy, and at all times at the San Raffaele Hospital in Milan, provided that a minimum number of patients continue to be treated at this site. Strimvelis is not currently expected to generate sufficient cash flows to overcome the costs of maintaining the product and certain regulatory commitments; therefore, the Company recorded a liability associated with the loss contract of £12.9 million ($18.4 million at the acquisition date) associated with the loss expected due to this obligation. This liability is being amortized over the remaining period of expected sales of Strimvelis as a credit to research and development expenses. During the period ended March 31, 2019, the Company amortized $1.5 million as a credit to research and development expenses associated with the loss provision. The effects of foreign currency translation for the three months ended March 31, 2019 increased the liability by $0.3 million. The balance of the liability as of March 31, 2019 and December 31, 2018 was $9.1 million and $10.3 million, respectively.

The consideration transferred in the asset acquisition was measured at cost, including transaction costs, assets and equity interests transferred by the acquirer, and liabilities incurred by the acquirer as noted below:

	Consideration (in thousands)
Upfront cash paid for GSK Agreement	$ 14,186
Series B-2 convertible preferred shares issued to GSK	93,391
Transaction costs	780
Liabilities:	
Strimvelis liability	18,351
Inventory purchase liability	6,893
Total consideration transferred:	$ 133,601

The Company will pay GSK non-refundable royalties and milestone payments in relation to the gene therapy programs acquired and OTL-101. The Company will pay a flat mid-single digit percentage royalty on the combined annual net sales of ADA-SCID products, which includes Strimvelis and the Company-developed product candidate, OTL-101. The Company will also pay tiered royalty rates at a percentage beginning in the mid-teens up to twenty percent for the MLD and WAS products, upon marketing approval, calculated as percentages of aggregate cumulative net sales of the MLD and WAS products, respectively. The Company will pay a tiered royalty at a percentage from the high single-digits to low double-digit for the TDT product, upon marketing approval, calculated as percentages of aggregate annual net sales of the TDT product. These royalties owed to GSK are in addition to any royalties owed to other third parties under various license agreements for the GSK programs. In aggregate, the Company may pay up to £90.0 million in milestone payments upon achievement of certain sales milestones applicable to GSK. The Company's royalty obligations with respect to MLD and WAS may be deferred for a certain period in the interest of prioritizing available capital to develop each product. The Company's royalty obligations are subject to reduction on a product-by-product basis in the event of market control by biosimilars and will expire in April 2048. Other than Strimvelis, these royalty and milestone payments were not determined to be probable and estimable at the date of the acquisition and are not included as part of consideration.

The Company and GSK also separately executed a Transition Services Agreement ("TSA") as well as an Inventory Sale Agreement, both effective April 11, 2018. The TSA outlined several activities that the Company had requested GSK to assist with during the transition period, including but not limited to utilizing GSK to sell, market and distribute Strimvelis, and assist with regulatory, clinical and non-clinical activities for the other non-commercialized products which were ongoing at the date of the GSK Agreement. The TSA expired in December 2018.

In connection with the Company's entering into the GSK Agreement, GSK assigned rights and obligations to certain contracts, which include among others, the original license agreement with Telethon/Ospedale San Raffaele and an ongoing manufacturing agreement.

Telethon-OSR research and development collaboration and license agreement

In connection with the Company's entering into the GSK Agreement, the Company also acquired and assumed agreements with Telethon Foundation and San Raffaele Hospital, together referred to as Telethon-OSR, for the research, development and commercialization of autologous *ex vivo* gene therapies for ADA-SCID, WAS, MLD, TDT, as well as options over three additional earlier-stage development programs. The Company's options under the agreement with Telethon-OSR with respect to the earlier-stage programs have lapsed.

As consideration for the licenses, the Company will be required to make payments to Telethon-OSR upon achievement of certain product development milestones. Additionally, the Company will be required to pay to Telethon-OSR a tiered mid-single to low-double digit royalty percentage on annual sales of licensed products covered by patent rights on a country-by-country basis, as well as a low double-digit percentage of sublicense income received from any certain third-party sublicenses of the collaboration programs. These royalties are in addition to those payable to GSK under the GSK Agreement. The Company may pay up to and aggregate of approximately €31.0 million in milestone payments upon achievement of certain product development milestones.

UCLB/UCLA License Agreement

In February 2016, and amended in July 2017, the Company completed the UCLB/UCLA License Agreement, under which the Company has been granted exclusive and non-exclusive, sublicensable licenses under certain intellectual property rights controlled by UCLB and UCLA to develop and commercialize gene therapy products in certain fields and territories.

In exchange for these rights, in 2016, the Company made upfront cash payments consisting of $0.8 million for the license to the joint UCLB/UCLA technology and $1.1 million for the license to the UCLB technology and manufacturing technology. The Company also issued an aggregate of 4,665,384 ordinary shares to UCLB, of which 1,224,094, and 3,441,290 ordinary shares were issued in 2017 and 2016, respectively. The Company recorded research and development expense based on the fair value of the ordinary shares as of the time the agreement was executed or modified. The Company was also obligated to make an additional cash payment for clinical data. In 2017, the Company paid $0.8 million in relation to clinical data acquired. The Company recorded the payments to research and development expense.

Under the UCLB/UCLA License Agreement, the Company is also obligated to pay an annual administration fee of $0.1 million on the first, second and third anniversary of the agreement date. Additionally, the Company is obligated to make payments to the parties of up to an aggregate of $38.9 million upon the achievement of specified regulatory milestones as well as royalties ranging from low to mid-single-digit percentage on net sales of the applicable gene therapy product.

The Company recorded nil and $0.2 million of research and development costs in respect of the UCLB/UCLA License Agreement, which comprise the upfront payments, issuance of ordinary shares and payments for clinical data, for the three months ended March 31, 2019 and 2018, respectively. The Company has $0.1 million of prepayments recorded associated with the annual administration fee associated with the license agreement as of March 31, 2019 and 2018.

Unless terminated earlier by either party, the UCLB/UCLA License Agreement will expire on the 25th anniversary of the agreement.

Oxford BioMedica license, development and supply agreement

In November 2016, and amended in September 2018, the Company entered into an arrangement with Oxford BioMedica whereby Oxford BioMedica granted an exclusive intellectual property license to the Company for the purposes of research, development, and commercialization of collaboration products, and will provide process development services, and manufacture clinical and commercial GMP-grade lentiviral vectors for the Company ("Oxford BioMedica Agreement"). As part of the consideration to rights and licenses granted under the Oxford BioMedica Agreement, the Company issued 588,220 ordinary shares to Oxford BioMedica. The Company is also obligated to make certain development milestone payments in the form of issuance of additional ordinary shares if the milestones are achieved. In November 2017, the first milestone was achieved, and the Company was committed to issue 150,826 ordinary shares, and issued these shares in 2018. In September 2018, the second and third milestones were achieved, and the Company issued 150,826 ordinary shares. If future milestones are met, the Company may become obligated to issue more ordinary shares. No milestones were met during the three months ended March 31, 2019 and 2018.

The Company recorded $0.5 million to research and development expense upon execution of the Oxford BioMedica Agreement in 2016 and $0.1 million upon achievement of the first development milestone in 2017. The Company recorded $1.4 million upon achievement of the second and third development milestones in 2018. The expense recognized in 2016 and 2017 was determined based on the ordinary shares' fair value as of the time the agreement was executed. The expense recognized in 2018 was determined based on the ordinary shares' fair value as of the time the agreement was modified in September 2018. There was no expense recorded in the three months ended March 31, 2019 as no milestones were met during the period.

The Company may also pay low single-digit percentage royalties on net sales of collaborated product generated under the Oxford BioMedica Agreement.

UCLA/CIRM research agreement

In January 2017, the Company and UCLA executed a subcontract agreement ("UCLA Research Agreement"), whereby the Company would provide UCLA certain research and development services related to autologous lentiviral gene therapy in ADA-SCID as part of UCLA's existing ADA-SCID research program that is being funded by the California Institute for Regenerative Medicine ("CIRM"). The original amount of total reimbursement the Company could have received under the UCLA Research Agreement was $10.4 million. Through June 30, 2018, the Company received and recognized $7.3 million from this agreement. In July 2018, a transfer of the sponsorship took place and the Company became the awardee under the program funded by CIRM, and the Company received an award that superseded the previous award noted above. The total reimbursement the Company may receive under the new award is $8.5 million, of which we may be obligated to reimburse UCLA for up to $5.5 million for research activities upon achievement of certain milestones. Reimbursement may be received from CIRM during the period from January 2017 to December 2021. Under the terms of the CIRM grants, the Company is obligated to pay royalties based on a low single digit royalty percentage on net sales of CIRM-funded product candidates or CIRM-funded technology. The Company has the option to decline any and all amounts awarded by CIRM. As an alternative to revenue sharing, the Company has the option to elect to convert the award to a loan, payable within 10 days of election. No such election has been made as of the date of this interim report. The reimbursements are recognized as a reduction in research and development expense for research activities that have taken place. In the event the reimbursement is received in advance of research activities, it is recognized within other liabilities. The Company accrues the sales-based royalties associated with CIRM-funded products when payment becomes probable. To date, no royalties have been accrued.

For the three months ended March 31, 2019 and 2018, the Company recorded nil and $5.0 million as a reduction of research and development expenses related to the UCLA Research Agreements. As of March 31, 2019, and December 31, 2018, the Company recorded $1.6 million in accrued expenses for amounts which it is obligated to reimburse to UCLA under the July 2018 grant.

8. Income Taxes

The Company has evaluated the positive and negative evidence bearing on the Company's ability to realize the deferred tax assets which primarily comprise net operating loss carryforwards and research and development credits. Management has considered the Company's history of cumulative net losses incurred since inception in the United Kingdom and has concluded that it is more likely than not that the Company will not realize the benefits of the United Kingdom deferred tax assets. Accordingly, a full valuation allowance has been established against these net deferred tax assets as of March 31, 2019 and December 31, 2018. Management reevaluates the positive and negative evidence at each reporting period.

The Company recognized an income tax provision of $0.6 million for the three months ended March 31, 2019 and an income tax benefit of $0.1 million for the three months ended March 31, 2018. As of March 31, 2019, the Company had an accrued income tax

provision of $1.4 million related to this tax payable included within accrued expenses and other liabilities in the condensed consolidated balance sheet.

The Company has not recorded any amounts for unrecognized tax benefits as of March 31, 2019 or December 31, 2018. The Company files income tax returns in the United Kingdom, United States and certain state and local jurisdictions. The income tax returns are generally subject to tax examinations for the tax years ended December 31, 2014 through December 31, 2018. There are currently no pending income tax return examinations.

9. Net loss per share

The following table sets forth the computation of basic and diluted net loss per share:

	Three Months Ended March 31,	
	2019	2018
	(In thousands, except per share and share amounts)	
Net loss	$ (30,739)	$ (15,311)
Net loss attributable to ordinary shareholders	$ (30,739)	$ (15,311)
Weighted average ordinary shares outstanding, basic and diluted	87,010,596	9,983,754
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.35)	$ (1.53)

Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all shares convertible into ordinary shares outstanding would have been anti-dilutive.

The following securities, presented based on amounts outstanding at each period end, are considered to be ordinary share equivalents, but were not included in the computation of diluted net loss per ordinary share because to do so would have been anti-dilutive:

	Three Months Ended March 31,	
	2019	2018
Convertible preferred shares	—	33,771,172
Share options	11,148,997	6,065,263
Unvested performance-based restricted share units	573,672	—
	11,722,669	39,836,435

10. Commitments and Contingencies

Operating lease agreements

In October 2016, the Company entered into a lease agreement for laboratory space in Foster City, California, United States. The lease has a term of 5 years and terminates in October 2021. The annual rental expense approximates $0.2 million. The Company was provided with one month of free rent.

In November 2017, the Company entered into a lease agreement for laboratory space in Menlo Park, California, United States. The lease terminates in November 2020. The annual rental expense approximates $0.8 million. The Company was provided with one month of free rent.

In January 2018, the Company entered into a lease agreement for office space in London, United Kingdom. The lease has a term of five years and terminates in January 2023. The annual rental expense approximates $0.8 million.

In March 2018, the Company entered into a lease agreement for office space in Boston, Massachusetts, United States, which terminates in September 2022. The annual rental expense approximates $0.3 million.

In December 2018, the Company leased additional office space in London, United Kingdom, which terminates in January 2023. The annual rental expense approximates $0.1 million.

In January 2019, the Company leased additional office and laboratory space in Menlo Park, California, United States. The lease terminates in December 2020. The annual rental expense approximates $0.1 million.

Fremont lease agreement

In December 2018, the Company leased manufacturing and office space in Fremont, California, which terminates in May 2030. The annual rent expense approximates $2.4 million. The Company was provided with 8 months of free rent. Subject to the terms of the lease agreement, the Company executed a $3.0 million letter of credit upon signing the lease, which may be reduced by 25% subject to reduction requirements specified therein. This amount is classified as restricted cash on the condensed consolidated balance sheet.

The Company intends to perform non-normal tenant improvements to the property to customize the facility to suit the Company's unique manufacturing needs. The Company is responsible for paying directly the costs associated with the construction project and as such the Company will be deemed for accounting purposes only to be the owner of the construction project, even though it is not the legal owner. As of March 31, 2019, the Company has not broken ground or incurred significant soft costs associated with the construction. The lease provides for approximately $5.0 million in tenant improvement allowances to be reimbursed to the Company by the landlord, which will be amortized into rental expense over the term of the lease.

Upon the start of construction, the Company is required to deposit $10.0 million in an escrow account. Subject to the terms of the lease and reduction provisions, this amount may be decreased to nil over time. As of March 31, 2019, the Company has no funds deposited in the escrow account.

Future minimum lease payments

The following table summarizes the future minimum lease payments due under all operating leases as of March 31, 2019:

	(In thousands)
2019	3,955
2020	6,497
2021	4,700
2022	4,448
2023	3,314
Thereafter	23,400
Total contractual obligations	46,314

The Company recorded rent expense totaling $1.2 million and $0.5 million for the three months ended March 31, 2019 and March 31, 2018, respectively.

Other funding commitments

The Company has entered into several license agreements (Note 7). In connection with these agreements the Company is required to make milestone payments and annual license maintenance payments not met at March 31, 2019 and December 31, 2018 or royalties on future sales of specified products. The Company determined that no milestone payments that have not already been accrued were probable as of March 31, 2019.

Commitment with contract manufacturing organization

The Company has entered into agreements with contract manufacturing organizations relating to the provision of manufacturing services and purchase of clinical material to be used in clinical trials that include minimum purchase commitments. As of March 31, 2019, and December 31, 2018, there was $2.3 million and $0.8 million included within prepayments related to prepaid instalments against these minimum commitments. The Company is committed to make further payments totaling $8.0 million between April 2019 and March 2021.

Legal proceedings

The Company is not a party to any material litigation and does not have contingency reserves established for any litigation liabilities.

11. Employee Benefit Plans

The Company makes contributions to private defined contribution pension plans on behalf of its employees. The Company provides employee contributions up to six percent of each employee's annual salary based on the jurisdiction the employees are located. The Company paid $0.4 million and $0.1 million in matching contributions for the three months ended March 31, 2019 and 2018, respectively.

12. Related Party Transactions

GSK

In April 2018, the Company completed the GSK Agreement with subsidiaries of GSK to acquire a portfolio of autologous ex vivo gene therapy assets and licenses, for rare diseases and option rights on three additional programs in preclinical development from Telethon-OSR (See Note 7). As consideration for the license the Company paid an upfront fee of $14.1 million, incurred an inventory purchase liability of $6.9 million, paid $0.8 million in transaction costs, and issued 12,455,252 Series B convertible preferred shares valued at $93.4 million. Additionally, as part of the GSK agreement, the Company obtained, and is responsible for maintaining the commercial availability of Strimvelis. The Company recorded a loss provision of $18.4 million associated with the contract, as the costs to maintain Strimvelis are expected to significantly exceed revenues. The issuance of the convertible preferred shares made GSK a principal shareholder in the Company.

During the three months ended March 31, 2019, the Company made $6.3 million in payments to settle accounts payable due to GSK associated with the TSA and royalties associated with sales of Strimvelis incurred during 2018. Additionally, the Company made a $1.7 million payment associated with the inventory purchase liability incurred upon entering into the agreement. During the three months ended March 31, 2019 there were no sales of Strimvelis and we incurred no royalties due to GSK. As of March 31, 2019, and December 31, 2018, the company had $0.8 million and $6.0 million in accrued expenses and accounts payable to GSK.

13. Subsequent Events

Credit Facility

On May 24, 2019, the Company entered into a senior term facilities agreement (the "Credit Facility") agented by MidCap Financial (Ireland) Limited ("MidCap") and the additional lenders party thereto from time to time (together with MidCap, the "Lenders"). The Lenders agreed to make term loans available to the Company up to $75 million comprised of separate term loans to be issued in three tranches: (1) the first tranche being a $25 million term loan to be funded on or around May 28, 2019; (2) the second tranche being a $25 million term loan available no earlier than September 30, 2019 and no later than December 31, 2020 upon submission of certain regulatory filings and evidence of $100 million in cash and cash equivalent investments; and (3) the third tranche being a $25 million term loan available no earlier than July 1, 2020 and no later than September 30, 2021 upon certain regulatory approvals being granted and evidence of $125 million in cash and cash equivalent investments.

Upon entering into the Credit Facility, the Company was required to pay an arrangement fee of $0.4 million. The term loan matures on May 24, 2024. Each term loan under the Credit Facility requires interest-only payments for 24 months following the date of the Credit Facility, unless the third tranche is drawn, in which case for all payment dates prior to 36 months following the date of the Credit Facility. The term loans under the Credit Facility will be amortizing on either the 24-month or 36-month anniversary of the Credit Facility (as applicable) in equal monthly installments until the loan maturity date. Each term loan under the Credit Facility bears interest at an annual rate equal to LIBOR plus 6%.

At the Company's option, the Company may prepay the outstanding principal balance of the term loan in whole or in part, subject to a prepayment fee of 3.0% of any amount prepaid if the prepayment occurs on or prior to the first anniversary of the closing date, 2.0% of the amount prepaid if the prepayment occurs after the first anniversary of the closing date but on or prior to the second anniversary of the closing date, and 1.0% of any amount prepaid after the second anniversary of the closing date but on or prior to the third anniversary of the closing date. In addition, a final payment equal to 4.5% is due on the loan maturity date. The Credit Facility includes an ongoing minimum cash financial covenant the requires the Company maintain not less than $20 million following utilization of the second tranche and not less than $35 million following utilization of the third tranche.

Fondazione Telethon and Ospedale San Raffaele S.r.l. License Agreement

On May 24, 2019 (the "Effective Date"), the Company entered into a license agreement (the "Agreement") with Fondazione Telethon and Ospedale San Raffaele S.r.l. (together, "TIGET"), under which TIGET granted to the Company an exclusive worldwide license for the research, development, manufacture and commercialization of an ex vivo autologous hematopoietic stem cell lentiviral based gene therapy for the treatment of Mucopolysaccharidosis type I ("MPS-I"). Under the terms of the Agreement, TIGET is entitled to receive an upfront payment and the Company may be required to make milestone payments to TIGET if certain development,

regulatory and commercial milestones are achieved. Additionally, the Company will be required to pay TIGET a tiered mid-single to low-double digit royalty percentage on annual net sales of licensed products.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Although we are a UK company, the functional currency of our reporting entity is the U.S. Dollar and we prepare our condensed consolidated financial statements in accordance with generally accepted accounting principles in the United States, or U.S. GAAP, as issued by the Financial Accounting Standards Board, or FASB. All references in the unaudited condensed consolidated financial statements to "$" are to U.S. dollars and all references to "£" are to pounds sterling. Our condensed consolidated financial statements as of and for the three months ended March 31, 2019 and 2018 have been translated from pounds sterling into U.S. dollars at the rate of $1.3048 to £1.00, and $1.4015 to £1.00, which was the noon buying rate of the Federal Reserve Bank of New York on the last business day of the three months ended March 31, 2019 and 2018, respectively. These translations should not be considered representations that any such amounts have been, could have been or could be converted into U.S. dollars at that or any other exchange rate as of that or any other date.

We have historically conducted our business through Orchard Therapeutics (Europe) Limited (formerly Orchard Therapeutics Limited) and our U.S. subsidiary, Orchard Therapeutics North America. Following the completion of our initial public offering in November 2018, our condensed consolidated financial statements present the consolidated results and operations of Orchard Therapeutics plc (formerly Orchard Rx Limited).

The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity and capital resources and other non-historical statements are forward-looking statements. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to, the risks and uncertainties described in "Risk Factors" and "Forward-Looking Statements" in our Annual Report for the year ended December 31, 2018, previously filed with the U.S. Securities Exchange Commission on March 22, 2019. Management reviewed the risks disclosed in the Annual Report and believe that all risks disclosed continue to be relevant to the Company as of the date of this Report on Form 6-K. Our actual results may differ materially from those contained in or implied by any forward-looking statements.

The following discussion should be read in conjunction with the unaudited condensed consolidated financial statements and accompanying notes included elsewhere in this Report on Form 6-K and the Company's consolidated financial statements and accompanying notes included within our Annual Report for the year ended December 31, 2018.

A. Operating Results

Overview

We are a commercial-stage, fully-integrated biopharmaceutical company dedicated to transforming the lives of patients with serious and life-threatening rare diseases through autologous *ex vivo* gene therapies. Our gene therapy approach seeks to transform a patient's own, or autologous hematopoietic stem cells, or HSCs, into a gene-modified drug product to treat the patient's disease through a single administration. We achieve this outcome by utilizing a lentiviral vector to introduce a functional copy of a missing or faulty gene into the patient's autologous HSCs through an *ex vivo* process, resulting in a drug product that can then be re-introduced into the patient at the bedside.

Since our inception in 2015, we have devoted substantially all of our resources to conducting research and development of our product candidates, in-licensing and acquiring rights to our product candidates, business planning, raising capital and providing general and administrative support for our operations. To date, we have financed our operations primarily with proceeds from the sale of convertible preferred shares and ADSs. Through March 31, 2019, we had received net proceeds of $283.4 million from sales of our convertible preferred shares, and $205.5 million from sales of ADSs in our initial public offering.

We have incurred significant operating losses since our inception in 2015. With the exception of our commercial product Strimvelis, which was acquired in April 2018, we will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates. Our net losses were $30.7 million and $15.3 million for the three months ended March 31, 2019 and 2018, respectively. As of March 31, 2019, and December 31, 2018, we had an accumulated deficit of $321.0 million and $290.2 million, respectively. As of March 31, 2019, we had cash, cash equivalents, and restricted cash of $299.2 million. These losses have resulted primarily from costs incurred in connection with research and development activities and general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, government contracts or other strategic transactions. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all.

Components of Our Results of Operations

Revenues

Since our acquisition of Strimvelis in April 2018 through March 31, 2019, we have generated only $2.1 million in product sales from Strimvelis. We do not expect to generate any revenue from the sale of products, with the exception of Strimvelis, in the near future. If our development efforts for our product candidates that we may develop in the future are successful and result in regulatory approval, or collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from collaboration or license agreements. During the three months ended March 31, 2019, we made no sales of Strimvelis and recognized no revenues.

Strimvelis is currently available exclusively at the San Raffaele Hospital in Milan, Italy. Strimvelis sales are currently under a buy-and-bill model where the treatment center purchases and pays for the product and submits a claim to the payer. We evaluated the variable consideration under Accounting Standards Codification (ASC) 606, Revenue from Contracts with Customers, and there is currently no variable consideration included in the transaction price for Strimvelis. We expect that net product sales of Strimvelis will fluctuate quarter over quarter, in particular as we continue to build and promote access to this product.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts and the development of our product candidates, and include:

- expenses incurred under agreements with third parties, including clinical research organizations that conduct research, preclinical activities and clinical trials on our behalf as well as contract manufacturing organizations ("CMOs") that manufacture lentiviral vectors and cell-based drug products for use in our preclinical and clinical trials;
- expenses to acquire technologies to be used in research and development;
- salaries, benefits and other related costs, including share-based compensation expense, for personnel engaged in research and development functions;
- costs of outside consultants, including their fees, share-based compensation and related travel expenses;
- the costs of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- costs related to compliance with regulatory requirements;
- facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs; and
- upfront, milestone and management fees for maintaining licenses under our third-party licensing agreements.

We expense research and development cost as incurred. We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by our service providers. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our financial statements as a prepaid expense or accrued research and development expenses. United Kingdom research and development tax credits are recorded as an offset to research and development expense.

Our direct external research and development expenses are tracked on a program-by-program basis and consist of costs, such as fees paid to consultants, contractors and CMOs in connection with our preclinical and clinical development activities. License fees and other costs incurred after a product candidate has been designated and that are directly related to the product candidate are included in direct research and development expenses for that program. License fees and other costs incurred prior to designating a product candidate are included in other program expense. We do not allocate employee costs, costs associated with our discovery efforts, laboratory supplies, and facilities, including depreciation or other indirect costs, to specific product development programs because these costs are deployed across multiple product development programs and, as such, are not separately classified.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase for the foreseeable future as a result of our expanded portfolio of product candidates and as we: (i) expedite the clinical development and obtain marketing approval for our lead product candidates, including OTL-101 for ADA-SCID, OTL-200 for MLD and OTL-103 for WAS; (ii) initiate additional clinical trials for our product candidates, including OTL-102 for X-CGD and OTL-300 for TDT, OTL-

201 for MPS-IIIA, and OTL-203 for MPS-I; (iii) improve the efficiency and scalability of our manufacturing processes and supply chain; and (iv) build our in-house process development, analytical and manufacturing capabilities and continue to discover and develop additional product candidates. We also expect to incur additional expenses related to milestone, royalty payments and maintenance fees payable to third parties with whom we have entered into license agreements to acquire the rights related to our product candidates.

The successful development of our product candidates and commercialization of our commercial product and product candidates, if approved, is highly uncertain. This is due to the numerous risks and uncertainties associated with product development and commercialization, including the following:

- completing research and preclinical development of our product candidates and identifying new gene therapy product candidates;
- conducting and fully enrolling clinical trials in the development of our product candidates;
- seeking and obtaining regulatory and marketing approvals for product candidates for which we complete registrational clinical trials that achieve their primary endpoints;
- launching and commercializing product candidates for which we obtain regulatory and marketing approval by expanding our existing sales force, marketing and distribution infrastructure or, alternatively, collaborating with a commercialization partner;
- maintaining marketing authorization and related regulatory compliance for Strimvelis in the European Union;
- qualifying for, and maintaining, adequate coverage and reimbursement by government and payors for Strimvelis and any product candidate for which we obtain marketing approval;
- establishing and maintaining supply and manufacturing processes and relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development of our product candidates and the market demand for Strimvelis and any of our product candidates for which we obtain marketing approval;
- obtaining market acceptance of Strimvelis and our product candidates, if approved, as viable treatment options with acceptable safety profiles;
- addressing any competing technological and market developments;
- implementing additional internal systems and infrastructure, as needed, including robust quality systems and compliance systems;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter and performing our obligations under such arrangements;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how; and
- attracting, hiring and retaining qualified personnel.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA, EMA or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant trial delays due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development and we may never succeed in obtaining regulatory approval for any of our product candidates.

Selling, general and administrative expenses

Selling, general and administrative expenses consist primarily of salaries and other related costs, including share-based compensation, for personnel in our executive, finance, commercial, corporate and business development, and administrative functions. Selling, general and administrative expenses also include professional fees for legal, patent, accounting, auditing, tax and consulting services, travel expenses and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expect that our selling, general and administrative expenses will increase in the future as we increase our selling, general and administrative headcount to support our continued research and development and potential commercialization of our expanded portfolio of product candidates. We also expect to incur increased expenses associated with compliance with our obligations as a

public company, including costs of accounting, audit, legal, regulatory and tax compliance services, director and officer insurance costs and investor and public relations costs.

Other income (expense), net

Interest income

Interest income consists of income earned on our cash and cash equivalents. Our interest income for the periods ended March 31, 2019 and 2018 were $1.6 million and nil, respectively.

Other income (expense)

Other income (expense), net consists primarily of realized and unrealized foreign currency transaction gains and losses.

Comparison of the Three Months Ended March 31, 2019 and 2018

The following table summarizes our results of operations for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Change
	(in thousands)		
Costs and operating expenses			
Research and development	$ 17,493	$ 9,171	$ 8,322
Selling, general and administrative	10,790	4,527	6,263
Total costs and operating expenses	28,283	13,698	14,585
Loss from operations	(28,283)	(13,698)	(14,585)
Other income (expense):			
Interest income	1,623	-	1,623
Other (expense):	(3,486)	(1,696)	(1,790)
Total other income (expense), net	(1,863)	(1,696)	(167)
Loss before provision for income taxes	(30,146)	(15,394)	(14,752)
Provision for income taxes	(593)	83	(676)
Net loss attributable to ordinary shareholders	(30,739)	(15,311)	(15,428)

Research and Development Expenses

The table below summarizes our research and development expenses by product candidate or development program:

	Three Months Ended March 31,		
	2019	2018	Change
	(in thousands)		
Direct research and development expenses by program:			
OTL-200 for MLD	$ 1,675	$ —	$ 1,675
OTL-103 for WAS	2,354	—	2,354
OTL-101 for ADA-SCID	4,374	2,493	1,881
OTL-102 for X-CGD	602	403	199
OTL-201 for MPS-IIIA	504	995	(491)
Strimvelis	786	—	786
Other programs	845	678	167
Research and discovery and unallocated costs			
Personnel related (including share-based compensation)	8,025	3,793	4,232
Research and development tax credit	(5,237)	(1,455)	(3,782)
Accretion of Strimvelis loss provision	(1,525)	—	(1,525)
Facility and other	5,090	2,264	2,826
Total research and development expenses	$ 17,493	$ 9,171	$ 8,322

The increase of $8.3 million in research and development expense for the three months ended March 31, 2019 compared to the three months ended March 31, 2018 is generally the result of the GSK agreement from April 2018, which provided the Company with its

commercial program, Strimvelis, as well as OTL-200 and OTL-103, as well as the increase in headcount associated with the programs.

Direct research and development expenses of $1.7 million relating the OTL-200 for the three months ended March 31, 2019 was primarily attributable to $1.1 million in clinical trial costs, and $0.5 million in external manufacturing costs. There were no costs associated with OTL-200 for the three months ended March 31, 2018.

Direct research and development expenses of $2.4 million relating to OTL-103 for the three months ended March 31, 2019 was primarily attributable to $1.5 million in external manufacturing costs, and $0.8 million in clinical trial costs. There were no costs associated with OTL-103 for the three months ended March 31, 2018.

Direct research and development expenses relating to OTL-101 increased by $1.9 million for the three months ended March 31, 2019 primarily due to costs associated with our registrational trial. Direct manufacturing and clinical trial costs associated with the program were increased by $1.0 million to prepare our viral vector and cell manufacturing processes, and for ongoing clinical trial costs.

Further, there were no offsets to research and development expense associated with our grant from CIRM for the three months ended March 31, 2019, as compared to an offset of $1.1 million for the three months ended March 31, 2018.

Direct research and development expenses relating to OTL-102 increased by $0.2 million for the three months ended March 31, 2019 primarily due to a $0.5 million increase in manufacturing costs associated with preparation for a registrational trial, offset by reductions in costs associated with proof-of-concept trials. Direct research and development expenses relating to OTL-201 decreased by $0.5 million for the three months ended March 31, 2019 primarily due to decreases in manufacturing costs.

Direct research and development expenses associated with Strimvelis of $0.8 million for the three months ended March 31, 2019 was primarily attributable to commercial and marketing costs associated with of Strimvelis, including $0.5 million in clinical trial costs and $0.2 million in manufacturing-related costs associated with the ongoing trial-related costs.

The increase in unallocated research and development expenses for the three months ended March 2019 was primarily attributable to personnel-related costs, including share-based compensation, which was primarily due to an increase in headcount in our research and development functions. Personnel-related costs for each of the three months ended March 31, 2019 and 2018 included share-based compensation expense of $1.3 million and $0.5 million, respectively. Facility and other costs increased by $2.8 million due to the lease of new laboratory and office space, the costs associated with our Fremont lease, and costs of supporting the increased headcount in our research and development functions and their research efforts. The increase in costs of unallocated expenses for the three months ended March 31, 2019 was offset by the $5.2 million in offsets to research and development expense associated with our research and development tax credit, as compared to $1.5 million for the three months ended March 31, 2018. Additionally, amortization of the Strimvelis loss provision as an offset to research and development expense was $1.5 million for the three months ended March 31, 2019, compared to nil for the three months ended March 31, 2018.

Selling, general and administrative expenses

Selling, general and administrative expenses were $10.8 million for the three months ended March 31, 2019, compared to $4.5 million for the three months ended March 31, 2018. Personnel-related costs, excluding share-based compensation, increased $3.0 million due to increased headcount. Share-based compensation expense increased by $1.9 million, and $2.5 million and $0.6 million is included in selling, general and administrative expense for the three months ended March 31, 2019 and 2018, respectively. Professional and consulting fees and directors' insurance costs increased by $0.6 million due to costs associated with operating as a public company. Additionally, included in the $10.8 million in selling, general and administrative expenses for the three months ended March 31, 2019 is $3.6 million in expenses associated with marketing and commercialization of Strimvelis, and costs associated with potential future commercialization of our product candidates, if approved. For the three months ended March 31, 2018, expenses associated with our commercial operations were $0.3 million.

Other expense, net

Other expense, net for the three months ended March 31, 2019 and 2018 was $1.9 million and $1.7 million, respectively. During the three months ended March 31, 2019, we had realized and unrealized losses on foreign currency of $3.5 million, compared to realized and unrealized losses on foreign currency of $1.7 million for the three months ended March 31, 2018. Additionally, we had interest income of $1.6 million and nil for the three months ended March 31, 2019 and 2018, respectively.

B. Liquidity and Capital Resources

We currently have only one commercial product, Strimvelis, which we acquired from GSK in April 2018 and our product candidates are in various phases of preclinical and clinical development. Since our acquisition of Strimvelis in April 2018 through March 31, 2019, we have generated only $2.1 million from product sales and incurred significant operating losses and negative cash flows from our operations. We do not expect to generate significant revenue from sales of any products for several years, if at all. To date, we have financed our operations primarily with proceeds from the sale of ADSs in our initial public offering, proceeds from the sale of convertible preferred shares, reimbursements from our research agreement with UCLA and, following transfer of the ADA-SCID research program sponsorship from UCLA to us in July 2018, a grant from CIRM.

Through March 31, 2019, we had received net proceeds of $283.4 million from sales of convertible preferred shares, net proceeds of $205.5 million from the sale of ADSs in our initial public offering, and reimbursement of $7.9 million from our agreement with CIRM, which was formerly a subcontract agreement with UCLA. As of March 31, 2019, we had cash, cash equivalents, and restricted cash of $299.2 million. We believe our existing cash, cash equivalents, and restricted cash will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2020.

We currently have no ongoing material financing commitments, such as lines of credit or guarantees, that are expected to affect our liquidity over the next five years, other than our manufacturing and lease obligations described below.

Cash Flows

The following table summarizes our cash flows for each of the periods presented:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Net cash used in operating activities	$ (43,762)	$ (14,345)
Net cash used in investing activities	(529)	(2,555)
Net cash provided by financing activities	5	2,250
Effect of exchange rate changes on cash and cash equivalents	3,852	3,191
Net (decrease) in cash, cash equivalents, and restricted cash	$ (40,434)	$ (11,459)

Operating activities

Our use of cash for the three months ended March 31, 2019 resulted primarily from our net losses, adjusted for non-cash charges and changes in components of working capital. Net cash used in operating activities of $43.8 million during the three months ended March 31, 2019 increased by $29.4 million compared to the three months ended March 31, 2018. The increase in net cash used in operating activities was primarily due to increases of $8.3 million in research and development expenses after a $3.8 million increase in the research and development tax credit receivable and $1.5 million of amortization of the Strimvelis loss provision liability which are recorded as reductions to research and development expense and a $6.3 million increase in general and administrative expenses. Additionally, net cash used in operating activities for the three months ended March 31, 2019 increased due to reductions in accounts payable and accrued expenses of $12.8 million as compared to a decrease of $1.0 million for the three months ended March 31, 2018. This is generally attributable to payout of our annual bonus of $5.6 million and payments associated with settling accounts payable associated with the GSK Transition Services Agreement totaling $6.0 million, which had been included in accounts payable at December 31, 2018. These increases were partially offset by changes in trade and other receivables of $1.9 million and a $2.7 million increase in non-cash share compensation expense.

Investing activities

For the three months ended March 31, 2019 and 2018, we used $0.5 million and $2.6 million, respectively, of cash in investing activities for purchases of property and equipment.

Financing Activities

For the three months ended March 31, 2019 and 2018, cash provided by financing activities was nil and $2.3 million, respectively.

Funding Requirements

We expect our expenses and capital expenditures to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates and as we:

- seek marketing approvals for our product candidates that successfully complete clinical trials, if any;
- continue to grow a sales, marketing and distribution infrastructure for our commercialization of Strimvelis in the European Union, and any product candidates for which we may submit for and obtain marketing approval anywhere in the world;
- continue our development of our product candidates, including continuing our ongoing advanced registrational trials and supporting studies of OTL-101 for ADA-SCID, OTL-200 for MLD and OTL-103 for WAS and our ongoing clinical trials of OTL-102 for X-CGD, OTL-300 for TDT, OTL-201 for MPS-IIIA, OTL-203 for MPS-I and any other clinical trials that may be required to obtain marketing approval for our product candidates;
- conduct IND and CTA-enabling studies for our preclinical programs;
- initiate additional clinical trials and preclinical studies for our other product candidates;
- seek to identify and develop, acquire or in-license additional product candidates;
- develop the necessary processes, controls and manufacturing data to obtain marketing approval for our product candidates and to support manufacturing of product to commercial scale;
- develop and implement plans to establish and operate our own in-house manufacturing operations and facility;
- hire and retain additional personnel, such as non-clinical, clinical, pharmacovigilance, quality assurance, regulatory affairs, manufacturing, distribution, legal, compliance, medical affairs, finance, general and administrative, commercial and scientific personnel; and
- develop, maintain, expand and protect our intellectual property portfolio; and
- comply with our obligations as a public company.

Critical Accounting Policies and Significant Judgments and Estimates

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

As described under the heading "Item 5. Operating and Financial Review and Prospects" in our Annual Report on Form 20-F for the year ended December 31, 2018, the following accounting policies involve the most judgement and complexity:

- Fair value of asset acquisitions;
- Accrued research and development expenses;
- Valuation of share-based compensation;

Accordingly, we believe the policies set forth above are critical to fully understanding and evaluating our financial condition and results of operations. If actual results or events differ materially from the estimates, judgments and assumptions used by us in applying these policies, our reported financial condition and results of operations could be materially affected. There have been no material changes to our critical accounting policies since December 31, 2018.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2, "Summary of Significant Accounting Policies," to our condensed consolidated financial statements included in Exhibit 99.1 in this Report on Form 6-K.

C. Off Balance Sheet Arrangements

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

D. Tabular Disclosure of Contractual Obligations

The following table summarizes our contractual obligations as of March 31, 2019 and the effects that such obligations are expected to have on our liquidity and cash flows in future periods:

		Payments Due By Period			
	Total	Less Than 1 Year	1 to 3 Years	4 to 5 Years	More Than 5 Years
		(in thousands)			
Manufacturing commitments(1)	$ 8,000	$ 3,440	$ 4,560	$ —	$ —
Operating lease commitments(2)	$ 46,314	$ 5,579	$ 10,685	$ 7,373	$ 22,677
Total	$ 54,314	$ 9,019	$ 15,245	$ 7,373	$ 22,677

We enter into contracts in the normal course of business with CMOs and other third parties for clinical trials and preclinical research studies and testing. Manufacturing commitments in the preceding table include agreements that are enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum or variable price provisions, and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table are limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

Excluding our agreement with GSK, we may incur potential contingent payments totaling up to approximately $68.0 million upon our achievement of clinical, regulatory and commercial milestones, as applicable, or royalty payments that we may be required to make under license agreements we have entered into with various entities pursuant to which we have in-licensed certain intellectual property. Pursuant to our agreement with Oxford BioMedica, we may incur the obligation to issue additional ordinary shares upon the achievement of a certain development milestone. Due to the uncertainty of the achievement and timing of the events requiring payment under these agreements, the amounts to be paid by us are not fixed or determinable at this time and are excluded from the table above.

In January 2018, we leased office space in London, United Kingdom, with a term through January 2023. The annual rent commitment is approximately $0.8 million. In November 2017 we leased office and laboratory space in Menlo Park, California with a term through December 2020. The annual rent commitment is approximately $0.8 million. In October 2016, we leased laboratory space in Foster City, California with a term through October 2021. The annual rent commitment is approximately $0.2 million. In March 2018, we leased office space in Boston, Massachusetts, with a term through September 2022. The annual rent commitment is approximately $0.3 million. In December 2018, we leased office and manufacturing space in Fremont, California, with a term through May 2030. The annual rent commitment is approximately $2.8 million. In December 2018, we leased additional office space in London, United Kingdom, with a term through January 2023. The annual rent commitment is approximately $0.1 million. In January 2019, we leased additional laboratory and office space in Menlo Park, California, with a term through December 2020. The annual rental commitment is approximately $0.1 million.

Under the GSK Agreement, we are also obligated to pay non-refundable royalties and milestone payments in relation to the gene therapy programs acquired by GSK and OTL-101. We will pay a mid-single-digit percentage royalty on the combined annual net sales of ADA-SCID products, which includes Strimvelis and our product candidate, OTL-101. We will also pay tiered royalty rates at percentages from the mid-teens to the low twenties for the MLD and WAS products, upon marketing approval, calculated as percentages of aggregate cumulative net sales of the MLD and WAS products, respectively. We will pay a tiered royalty at percentages from the high single-digit to the low teens for the TDT product, upon marketing approval, calculated as percentages of aggregate annual net sales of the TDT product. These royalties owed to GSK are in addition to any royalties owed to other third parties under various license agreements for the GSK programs. We may pay up to an aggregate of £90.0 million in milestone payments upon achievement of certain sales milestones. Our royalty obligations with respect to MLD and WAS may be deferred for a certain period in the interest of prioritizing available capital to develop each product. Our royalty obligations are subject to reduction on a product-by-product basis in the event of market control by biosimilars, and will expire in April 2048.

As consideration for the licenses and options in the Telethon-OSR agreements acquired and assumed in the Transaction, we are required to make payments to Telethon-OSR upon achievement of certain product development milestones. We are obligated to pay up to an aggregate of €31.0 million in connection with product development milestones with respect to those programs for which we have exercised an option under this agreement (that is, our WAS, MLD and TDT programs). Additionally, we are required to pay to Telethon-OSR a tiered mid-single to low-double digit royalty percentage on annual sales of licensed products covered by patent rights on a country-by-country basis, as well as a low double-digit percentage of sublicense income received from any certain third party sublicensees of the collaboration programs.

Exhibit 99.3

Orchard Therapeutics Announces Expansion of Neurometabolic Disease Portfolio and Reports First Quarter 2019 Financial Results

New Collaboration with Fondazione Telethon and Ospedale San Raffaele for Clinical Program in Mucopolysaccharidosis Type I (MPS-I) Using Ex Vivo Autologous Hematopoietic Stem Cell Gene Therapy

Anticipated Marketing Authorization Application (MAA) Submission for the Treatment of Metachromatic Leukodystrophy (MLD) Brought Forward to the First Half of 2020

Clinical Trial in Sanfilippo Syndrome Type A (MPS-IIIA) Now Expected to Start Later This Year

Ended the First Quarter of 2019 with Approximately $300M in Total Cash and Investments; Newly Secured $75 Million Credit Facility Extends Runway into 2021

Conference Call Scheduled for Today at 8:00 a.m. ET

BOSTON and LONDON, May 28, 2019 (GLOBE NEWSWIRE) – Orchard Therapeutics (Nasdaq: ORTX), a leading commercial-stage biopharmaceutical company dedicated to transforming the lives of patients with serious and life-threatening rare diseases through innovative gene therapies, today announced financial results for the quarter ended March 31, 2019 and provided several program updates related to its neurometabolic disease portfolio. Orchard has brought forward the timeline for key clinical and regulatory milestones for two of its neurometabolic disease programs and, as announced in a separate release this morning, has secured an exclusive worldwide license for a clinical-stage *ex vivo* autologous hematopoietic stem cell (HSC) gene therapy program in Mucopolysaccharidosis Type I (MPS-I).

“The progress we’ve made advancing *ex vivo* autologous hematopoietic stem cell-based gene therapies aimed at correcting neurometabolic diseases furthers our confidence in the potential of our technology to treat additional serious, often fatal, rare diseases that to date have been difficult or impossible to treat,” said Mark Rothera, president and chief executive officer of Orchard. “With today’s announcements, including the addition of the MPS-I program, our gene therapy portfolio now includes nine programs from late pre-clinical to commercial stage, with the goal of having three more approved therapies available to transform the lives of children affected by some of these serious rare diseases in the next three years.”

Summary of Neurometabolic Franchise Updates

- **Mucopolysaccharidosis Type I (MPS-I):** Orchard has been granted an exclusive worldwide license from Fondazione Telethon and Ospedale San Raffaele to research, develop, manufacture and commercialize an *ex vivo* autologous HSC gene therapy program for the treatment of MPS-I, which will be referred to as OTL-203. The program has currently shown encouraging preliminary data with signs of metabolic correction in

patients with the most severe subtype of MPS-I, known as Hurler syndrome, in the ongoing proof-of-concept clinical trial being conducted at San Raffaele-Telethon Institute for Gene Therapy (SR-Tiget) in Milan, Italy. As of the data presented at the American Society of Gene & Cell Therapy (ASGCT) annual meeting in April 2019, four patients have been enrolled in the trial with follow-up of up to nine months. The trial is expected to enroll up to eight patients by the first half of 2020. The terms of the license include an upfront cash payment, success-based milestones and royalties on net sales.

- **Metachromatic Leukodystrophy (MLD):** Orchard held a positive Marketing Authorization Application (MAA) pre-submission meeting with the European Medicines Agency (EMA) in early May. The company has brought forward the timeline for the planned submission of an MAA to the EMA for OTL-200 to the first half of 2020 and also expects to file a Biologics License Application (BLA) in the U.S. approximately one year after the MAA submission.
- **Sanfilippo Syndrome Type A (MPS-IIIA):** Last week, the Manchester University NHS Foundation Trust issued a statement that the Royal Manchester Children's Hospital (RMCH) is the first in the world to treat an MPS-IIIA patient with an *ex vivo* HSC gene therapy. This was conducted under a "Specials" license, granted by the UK government for the use of an unlicensed pharmaceutical product in situations of high unmet need when there is no other treatment option available. Orchard holds the license to the MPS-IIIA program (OTL-201) and will support an upcoming proof-of-concept clinical trial, which will be conducted at RMCH, utilizing the same technology and procedures that were used to treat this first MPS-IIIA patient. The trial is expected to begin enrolling patients later this year.

First Quarter Business Milestone Achievements

- Achieved clinical proof-of-concept and presented data for OTL-300 for the treatment of transfusion-dependent beta-thalassemia (TDT). Data presented at ASGCT in April 2019 demonstrated that eight of nine patients had a reduced or eliminated need for transfusions 12 months following treatment, with four of six pediatric patients achieving transfusion independence.
- Presented two- and three-year follow-up data on 20 patients from the OTL-200 registrational trial for MLD, using the fresh product formulation, at the 45th Annual Meeting of the European Society for Blood and Marrow Transplantation (EBMT). In the study, late infantile MLD patients achieved gross motor function scores of 65 and 72 percentage points higher at two and three years following gene therapy than MLD patients in a natural history patient cohort who did not receive gene therapy.
- Dosed the first patient in a clinical trial using the cryopreserved formulation of OTL-103 for patients with Wiskott-Aldrich syndrome (WAS). This program remains on track for BLA and MAA filings in 2021.

First Quarter 2019 Financial Results

Cash, cash equivalents and restricted cash as of March 31, 2019 were $299.2 million compared to $339.7 million as of December 31, 2018. The decrease was primarily driven by cash used to fund operations for the quarter, including a paydown of 2018 accrued expenses and deferred payments for inventory and transition services under the April 2018 agreement with GSK.

Research and development expenses were $17.5 million for the first quarter of 2019, compared to $9.2 million in the same period in 2018. The increase was primarily driven by costs associated with clinical-stage programs acquired from GSK in April 2018. Personnel-related costs increased $4.2 million due to an increase in headcount over the prior year to support our growth and to assist in the further development of our product candidates and pipeline.

Selling, general and administrative expenses were $10.8 million for the first quarter of 2019, compared to $4.5 million in the same period in 2018. The increase was primarily due to personnel costs to support public company operations, including a $1.9 million increase in non-cash share-based compensation expense, as well as costs to market Strimvelis® and prepare for the potential commercialization of the company's three late-stage development programs.

Net loss attributable to ordinary shareholders was $30.7 million in the first quarter of 2019, compared to $15.3 million in the same period in 2018.

Credit Facility

In May, Orchard signed a five-year senior credit facility for up to $75 million with MidCap Financial. Twenty-five million dollars of the facility is to be funded on or around May 28, 2019, with the ability to access the remaining $50 million in two tranches subject to the achievement of certain clinical and regulatory milestones and other customary conditions. The facility provides for an interest-only period of up to 36 months and bears interest at a rate of LIBOR plus 6%.

The company expects that its cash and investments as of March 31, 2019, together with the borrowing capacity from the senior credit facility with MidCap Financial, will fund its anticipated operating and capital expenditure requirements into 2021.

"The MPS-I program is a significant and important addition to our portfolio, enabling us to leverage our expertise in neurometabolic diseases and further extend the potential reach in addressing these conditions," said Frank Thomas, chief financial officer and chief business officer of Orchard. "The $75 million credit facility strengthens our cash position and supports a number of important milestones, with a particular focus on the build-out of an Orchard manufacturing site. In addition, we continue to prepare for three potential product launches and the completion of two registrational trials and three proof-of-concept trials as part of our broader mission to bring gene therapy treatments to patients who need them."

Conference Call & Webcast Information

Orchard will host a conference call and live webcast with slides today at 8:00 a.m. ET to discuss the first quarter results and recent business activities. To participate in the conference call, please dial 1-866-930-5155 (domestic) or 1-409-937-8974 (international) and refer to conference ID 2764629. A live webcast of the presentation will be available under "News & Events" in the “Investors & media” section of the company's website at orchard-tx.com and a replay will be archived on the Orchard website following the presentation.

About Orchard
Orchard Therapeutics is a fully integrated commercial-stage biopharmaceutical company dedicated to transforming the lives of patients with serious and life-threatening rare diseases through innovative gene therapies.

Orchard’s portfolio of *ex vivo*, autologous, hematopoietic stem cell (HSC) based gene therapies includes Strimvelis®, a gammaretroviral vector-based gene therapy and the first such treatment approved by the European Medicines Agency for severe combined immune deficiency due to adenosine deaminase deficiency (ADA-SCID). Additional programs for neurometabolic disorders, primary immune deficiencies and hemoglobinopathies are all based on lentiviral vector-based gene modification of autologous HSCs and include three advanced registrational studies for metachromatic leukodystrophy (MLD), ADA-SCID and Wiskott-Aldrich syndrome (WAS), clinical programs for X-linked chronic granulomatous disease (X-CGD), transfusion-dependent beta-thalassemia (TDT) and mucopolysaccharidosis Type I (MPS-I), as well as an extensive preclinical pipeline. Strimvelis, as well as the programs in MLD, WAS and TDT were acquired by Orchard from GSK in April 2018 and originated from a pioneering collaboration between GSK and the San Raffaele Telethon Institute for Gene Therapy in Milan, Italy initiated in 2010.

Orchard currently has offices in the U.K. and the U.S., including London, San Francisco and Boston.

About MidCap Financial

MidCap Financial is a middle market-focused, specialty finance firm that provides senior debt solutions to companies across all industries. MidCap is headquartered in Bethesda, MD, with offices in Chicago and Los Angeles, and provides a broad array of products intended to finance growth and manage working capital. For more information, visit www.midcapfinancial.com.

MidCap Financial refers to MidCap FinCo Designated Activity Company, a private limited company domiciled in Ireland, and its subsidiaries, including MidCap Financial Services, LLC. MidCap Financial Services, LLC employs all personnel and provides sourcing, due diligence and portfolio management services to MidCap FinCo Designated Activity Company pursuant to a services agreement. MidCap Financial is managed by Apollo Capital Management, L.P., a

subsidiary of Apollo Global Management (NYSE: APO), pursuant to an investment management agreement.

Forward-Looking Statements

This press release contains certain forward-looking statements about Orchard's strategy, future plans and prospects, which are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements may be identified by words such as "anticipates," "believes," "expects," "intends," "projects," "anticipates," and "future" or similar expressions that are intended to identify forward-looking statements. Forward-looking statements include express or implied statements relating to, among other things, Orchard's expectations regarding the timing of regulatory submissions for approval of its product candidates, the timing of interactions with regulators and regulatory submissions related to ongoing and new clinical trials for its product candidates, the timing of announcement of clinical data for its product candidates and the likelihood that such data will be positive and support further clinical development and regulatory approval of these product candidates, the likelihood of approval of such product candidates by the applicable regulatory authorities, and the Company's financial condition and cash runway into 2021. These statements are neither promises nor guarantees and are subject to a variety of risks and uncertainties, many of which are beyond Orchard's control, which could cause actual results to differ materially from those contemplated in these forward-looking statements. In particular, the risks and uncertainties include, without limitation: the delay of any of Orchard's regulatory submissions, the failure to obtain marketing approval from the applicable regulatory authorities for any of Orchard's product candidates, the receipt of restricted marketing approvals, or delays in Orchard's ability to commercialize its product candidates, if approved. Given these uncertainties, the reader is advised not to place any undue reliance on such forward-looking statements.

Other risks and uncertainties faced by Orchard include those identified under the heading "Risk Factors" in Orchard's annual report on Form 20-F for the year ended December 31, 2018 as filed with the U.S. Securities and Exchange Commission (SEC) on March 22, 2019, as well as subsequent filings and reports filed with the SEC. The forward-looking statements contained in this press release reflect Orchard's views as of the date hereof, and Orchard does not assume and specifically disclaims any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law.

Condensed Consolidated Statements of Operations Data
(in thousands, except share and per share data)
(Unaudited)

	Three Months Ended March 31,	
	2019	**2018**
Costs and operating expenses		
Research and development	$ 17,493	$ 9,171
Selling, general and administrative	10,790	4,527
Total costs and operating expenses	28,283	13,698
Loss from operations	(28,283)	(13,698)
Other income (expense), net	(1,863)	(1,696)
Net loss before income tax	(30,146)	(15,394)
Income tax (expense) benefit	(593)	83
Net loss attributable to ordinary shareholders	(30,739)	(15,311)
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.35)	$ (1.53)
Weighted average number of ordinary shares outstanding, basic and diluted	87,010,596	9,983,754

Condensed Consolidated Balance Sheet Data
(in thousands)
(Unaudited)

	March 31, 2019	**December 31, 2018**
Assets		
Current assets:		
Cash and cash equivalents	$ 295,407	$ 335,844
Trade and other receivables	354	2,153
Prepaid expenses and other assets	6,731	6,935
Research and development tax credit receivable	16,094	10,585
Total current assets	318,586	355,517
Non-current assets:		
Property and equipment, net	5,685	5,476
Restricted cash	3,840	3,837
Other long-term assets	1,208	1,212
Total non-current assets	10,733	10,525
Total assets	$ 329,319	$ 366,042
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 8,384	$ 18,125
Accrued expenses and other current liabilities	26,316	29,780
Total current liabilities	34,700	47,905
Other long-term liabilities	7,143	6,799
Total liabilities	41,843	54,704
Shareholders’ equity:	287,476	311,338
Total liabilities and shareholders’ equity	$ 329,319	$ 366,042

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