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 August 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 August 8, 2019, Orchard Therapeutics plc (the “Company”) issued a press release announcing its second quarter 2019 financial results, 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 June 30, 2019 and December 31, 2018 and for the Three Months and Six Months Ended June 30, 2019 and 2018
99.2	Management's Discussion and Analysis for the Six Months Ended June 30, 2019 and 2018
99.3	Press release dated August 8, 2019
101	The following materials are formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at June 30, 2019 (unaudited) and December 31, 2018 (unaudited), (ii) Condensed Consolidated Statements of Operations and Comprehensive Loss for the three months and six months ended June 30, 2019 and 2018 (unaudited), (iii) Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2019 and 2018 (unaudited), (iv) Condensed Consolidated Statements of Convertible Preferred Shares and Shareholders' (Deficit) Equity for the six months ended June 30, 2019 and 2018, 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: August 8, 2019

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

ORCHARD THERAPEUTICS PLC

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

	June 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 132,783	$ 335,844
Marketable securities	286,748	—
Trade and other receivables	1,956	2,153
Prepaid expenses and other assets	5,143	6,935
Research and development tax credit receivable, current	10,594	10,585
Total current assets	437,224	355,517
Property and equipment, net	5,549	5,476
Research and development tax credit receivable	9,731	—
Restricted cash	3,843	3,837
Other long-term assets	1,770	1,212
Total assets	$ 458,117	$ 366,042
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 28,861	$ 18,125
Accrued expenses and other current liabilities	26,574	29,780
Total current liabilities	55,435	47,905
Long-term debt, net	24,501	—
Other long-term liabilities	7,024	6,799
Total liabilities	86,960	54,704
Commitments and contingencies (see Note 12)		
Shareholders' equity:		
Ordinary shares, £0.10 par value	12,234	10,924
Additional paid-in capital	725,552	587,490
Accumulated other comprehensive income	4,879	3,163
Accumulated deficit	(371,508)	(290,239)
Total shareholders' equity	371,157	311,338
Total liabilities and shareholders' equity	$ 458,117	$ 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 June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Costs and operating expenses:				
Research and development	$ 40,478	$ 150,991	$ 57,971	$ 160,162
Selling, general and administrative	13,674	7,421	24,464	11,948
Total costs and operating expenses	54,152	158,412	82,435	172,110
Loss from operations	(54,152)	(158,412)	(82,435)	(172,110)
Other income (expense):				
Interest income	1,727	—	3,350	—
Interest expense	(245)	—	(245)	—
Other income (expense), net	1,368	2,097	(2,118)	401
Total other income (expense), net	2,850	2,097	987	401
Net loss before income tax	(51,302)	(156,315)	(81,448)	(171,709)
Income tax (expense) benefit	772	82	179	165
Net loss attributable to ordinary shareholders	(50,530)	(156,233)	(81,269)	(171,544)
Other comprehensive income (loss):				
Foreign currency translation adjustment	(1,443)	(1,463)	1,608	1,970
Unrealized gain on marketable securities	108	—	108	—
Total other comprehensive income (loss):	(1,335)	(1,463)	1,716	1,970
Total comprehensive loss	$ (51,865)	$ (157,696)	$ (79,553)	$ (169,574)
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.56)	$ (15.45)	$ (0.92)	$ (16.99)
Weighted average number of ordinary shares outstanding, basic and diluted	89,712,916	10,115,335	88,369,311	10,095,863

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)

	Six Months Ended June 30,	
	2019	**2018**
Cash flows from operating activities:		
Net loss attributable to ordinary shareholders	$ (81,269)	$ (171,544)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	775	504
Non-cash share-based compensation	8,451	2,250
Non-cash interest expense	46	—
Non-cash consideration for licenses	—	93,391
Amortization of Strimvelis loss provision	(2,589)	(1,423)
Accretion of discount on marketable securities	(232)	—
Changes in operating assets and liabilities:		
Trade and other receivables	370	(122)
Research and development tax credit receivable	(9,913)	(3,367)
Prepaid expenses and other assets	1,257	(2,662)
Accounts payable, accrued expenses and other current liabilities	9,784	34,103
Other Long-term liabilities	203	7,795
Net cash used in operating activities	(73,117)	(41,075)
Cash flows from investing activities:		
Purchases of marketable securities	(286,399)	—
Purchases of property and equipment	(589)	(2,833)
Net cash used in investing activities	(286,988)	(2,833)
Cash flows from financing activities:		
Issuance of debt from credit facility, net of debt issuance costs paid	24,695	—
Issuance of convertible preferred shares	—	2,250
Proceeds from share options and ESPP shares	1,270	25
Issuance of ADSs in follow-on offering, net of offering costs paid	130,163	—
Net cash provided by financing activities	156,128	2,275
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	922	539
Net decrease in cash, cash equivalents and restricted cash	(203,055)	(41,094)
Cash, cash equivalents, and restricted cash, beginning of period	339,681	89,856
Cash, cash equivalents, and restricted cash, end of period	$ 136,626	$ 48,762
Supplemental disclosure of non-cash investing and financing activities		
Deferred offering costs and debt issuance costs in accounts payable and accrued expenses	726	—
Property and equipment included in accounts payable and accrued expenses	262	357
Convertible preferred shares issued for licenses	—	93,391
Supplemental disclosure of cash flow information:		
Cash paid for interest	199	—

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 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
Issuance of ordinary shares as part of license arrangement	—	—	349,770	45	(45)	—	—	—
Other comprehensive income	—	—	—	—	—	3,433	—	3,433
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	$ 7,560	$ (75,055)	$ 77,880
Share-based compensation expense	—	—	—	—	1,146	—	—	1,146
Issuance of convertible preferred shares	12,455,252	93,391	—	—	—	—	—	93,391
Exercise of share options	—	—	10,503	—	25	—	—	25
Issuance of ordinary shares as part of license arrangement	—	—	150,826	—	—	—	—	—
Other comprehensive income	—	—	—	—	—	(1,463)	—	(1,463)
Net loss attributable to ordinary shareholders	—	—	—	—	—	—	(156,233)	(156,233)
Balance at June 30, 2018	46,226,426	$ 229,709	9,438,220	$ 1,190	$ 9,038	$ 6,097	$ (231,288)	$ 14,746
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	—	4	—	—	4
Other comprehensive income	—	—	—	—	—	3,051	—	3,051
Net loss attributable to ordinary shareholders	—	—	—	—	—	—	(30,739)	(30,739)
Balance at March 31, 2019	—	$ —	85,867,028	$ 10,924	$ 591,315	$ 6,214	$ (320,978)	$ 287,475
Share-based compensation expense	—	—	—	—	4,630	—	—	4,630
Issuance of ordinary shares from exercise of share options	—	—	532,889	69	504	—	—	573
Issuance of ESPP shares	—	—	60,335	8	685	—	—	693
Issuance of ADSs in follow-on offering, net of issuance costs of $620	—	—	9,725,268	1,233	128,418	—	—	129,651
Other comprehensive income	—	—	—	—	—	(1,335)	—	(1,335)
Net loss attributable to ordinary shareholders	—	—	—	—	—	—	(50,530)	(50,530)
Balance at June 30, 2019	—	$ —	96,185,520	$ 12,234	$ 725,552	$ 4,879	$ (371,508)	$ 371,157

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

1. Nature of the Business

Orchard Therapeutics plc and its 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 including primary immune deficiencies, neurometabolic disorders and hemoglobinopathies. The Company's portfolio 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"), transfusion-dependent beta-thalassemia ("TDT"), and mucopolysaccharidosis type I ("MPS-I"), as well as an extensive preclinical pipeline.

The Company is a public limited company incorporated pursuant to the laws of England and Wales. In November 2018, the Company completed 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. In June 2019, the Company completed a follow-on public offering of ADSs in which the Company sold an aggregate of 9,725,268 ADSs representing the same number of ordinary shares at a public offering price of $14.25 per ADS. Net proceeds were $129.7 million, after deducting underwriting discounts and commissions of $8.3 million and offering expenses of $0.6 million paid or accrued 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 ordinary shares and different classes of preferred 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 condensed 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 June 30, 2019, the Company funded its operations primarily with proceeds from the sale of convertible preferred shares and ADSs in the IPO and follow-on public offering. The Company has incurred recurring losses since inception. As of June 30, 2019, the Company had an accumulated deficit of $371.5 million. 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, cash equivalents, marketable securities, and restricted cash on hand as of June 30, 2019 of $423.4 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 August 8, 2019.

2. Summary of Significant Accounting Policies

Basis of presentation

The condensed consolidated interim financial statements of the Company 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 ("ASC"), and Accounting Standards Update ("ASU"), of the Financial Accounting Standards Board ("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.

Amortization of the Stimvelis loss provision in the condensed consolidated statement of cash flows for the six months ended June 30, 2018 previously included in changes in accrued expenses and other liabilities has been presented as a separate line item within operating cash flows in the condensed consolidated statement of cash flows to conform to current period presentation.

Use of estimates

The preparation of condensed 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 condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting periods. Significant estimates and assumptions reflected in these condensed 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, 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 finances 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 gain of $1.6 million and $2.1 million for the three months ended June 30, 2019 and 2018, respectively, which is included in other income (expense) in the condensed consolidated statements of operations and comprehensive loss. The Company recorded an unrealized foreign currency transaction loss of $1.9 million and gain of $0.4 million for the six months ended June 30, 2019 and 2018, respectively, which is included in other income (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.

Marketable securities

Marketable securities consist of investments with original maturities greater than ninety days. The Company has classified its investments with maturities beyond one year as short term, based on their highly liquid nature and because such marketable securities represent the investment of cash that is available for current operations. The Company considers its investment portfolio of investments as available-for-sale. Accordingly, these investments are recorded at fair value, which is based on quoted market prices. Unrealized gains and losses are recorded as a component of other comprehensive income (loss). Realized gains and losses are determined on a specific identification basis and are included in other income (loss). Amortization and accretion of discounts and premiums is recorded in other income.

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 the Company’s condensed consolidated balance sheet. The Company has an outstanding letter of credit for $3.0 million associated with a lease, and is required to hold this amount in a standalone bank account, as of June 30, 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 June 30, 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 condensed consolidated balance sheet that sum to the total of the amounts reported in the unaudited condensed consolidated statement of cash flows:.

	June 30, 2019	December 31, 2018
	(in thousands)	
Cash and cash equivalents	$ 132,783	$ 335,844
Restricted cash	3,843	3,837
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 136,626	$ 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 June 30, 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 June 30, 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'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 $2.0 million and $3.6 million located in the United Kingdom and United States, respectively, as of June 30, 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 the Company's research grants will be accrued when they become probable.

Research agreement costs and accruals

The Company has entered into various research and development-related agreements. 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. The components of accumulated other comprehensive loss are detailed as follows (in thousands):

	Currency Translation	Unrealized Gain (Loss) on Investments	Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2018	$ 3,163	$ —	$ 3,163
Other comprehensive (loss) income, net of tax	1,608	108	1,716
Balance at June 30, 2019	$ 4,771	$ 108	$ 4,879

Strimvelis loss provision

As part of the GSK transaction completed in April 2018 (see Note 9), 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 the Company's OTL-101 product candidate, is commercially available for patients in the European Union, 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 June 30, 2019, the total Strimvelis loss provision liability was $7.8 million. During the three and six months ended June 30, 2019 the Company amortized $1.1 million and $2.6 million as a credit to research and development expense, respectively. The effects of foreign currency translation for the three months and six months ended June 30, 2019 decreased the liability by $0.2 million and increased the liability by $0.1 million, respectively. During the three months and six months ended June 30, 2018 the Company amortized $1.4 million as a credit to research and development expense. The effects of foreign currency translation for the three months and six months ended June 30, 2018 decreased the liability by $1.2 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 research and development tax credit ("SME") program and the Research and Development Expenditure ("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.

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. The Company has assessed its research and development activities and expenditures to determine which activities and expenditures are likely to be eligible under the research and development incentive program described above. At each period end, the Company estimates the reimbursement available to the Company based on available information at the time.

The Company recognizes credits from the research and development incentives when the relevant expenditure has been incurred and there is reasonable assurance that the reimbursement will be received. Such credits are accounted for as reductions in research and development expense.

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 $4.7 million and $2.2 million for the three months ended June 30, 2019 and 2018, respectively, and $9.9 million and $3.6 million for the six months ended June 30, 2019 and 2018,

respectively. As of June 30, 2019, and December 31, 2018, the Company's tax incentive receivable from the United Kingdom government was $20.3 million, of which $10.6 million was classified as current and $9.7 million was classified as long-term, and $10.6 million, respectively. The effects of foreign currency translation for the three months and six months ended June 30, 2019 decreased the receivable by $0.5 million and $0.2 million, respectively. As of June 30, 2019, these amounts have not yet been paid to the Company by HMRC.

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 that were outstanding in 2018 prior to conversion in the IPO 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 and six months ended June 30, 2019 and 2018.

Recent Accounting Pronouncements

Under the Jumpstart our Business Startups Act, or the JOBS Act, we qualify as an emerging growth company ("EGC"). However, we will no longer qualify as an EGC after December 31, 2019. While we maintain EGC status, we have elected to use the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

Recently adopted accounting pronouncements

In August 2018, the FASB issued 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* ("ASU 2018-15") 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 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.

Recently issued accounting pronouncements not yet adopted

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which removes disclosures that are no longer considered

cost beneficial, clarifies the specific requirements of disclosure and add disclosure requirements identified as relevant. This guidance is effective for annual and interim periods beginning after December 15, 2019 and early adoption is permitted. The Company does not expect that the adoption of this standard will have a material impact on the Company's financial position, results of operations and cash flows.

In February 2016 and January 2018, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02") and ASU 2018-01, *Leases (Topic 842)*, ("ASU 2018-01"), which requires that all lessees recognize the assets and liabilities that arise from leases on the condensed consolidated balance sheet and disclose qualitative and quantitative information about its leasing arrangements. When we no longer qualify as an EGC, this guidance will be effective for the Company for annual reporting periods beginning after December 15, 2018, including interim periods within those annual periods, and is required to be applied using a modified retrospective approach with an option to recognize the cumulative effect of applying the new standard as an adjustment to the opening balance of retained earnings on the date of adoption. Early adoption is permitted. The company expects that adoption of this standard will result in the recognition of material right-of-use assets and lease liabilities on the Company's condensed consolidated balance sheets. While the Company is continuing to assess all potential impacts of this standard on its condensed consolidated financial statements and related disclosures, upon adoption the Company expects that the most significant impact of this standard on its condensed consolidated balance sheets will relate to the accounting for its lease agreements for laboratory, manufacturing, and office space, particularly with respect to the Company's lease for office and manufacturing space in Fremont, California.

3. Fair Value Measurements and Marketable Securities

The following tables present information about the Company's financial assets that have been measured at fair value as of June 30, 2019 and indicate the fair value of the hierarchy of the valuation inputs utilized to determine such fair value. In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair value determined by Level 2 inputs utilize observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted market prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. During the three months and six months ended June 30, 2019, there were no transfers between Level 1 and Level 2 financial assets.

The following table summarizes the Company's cash equivalents and marketable securities as of June 30, 2019, in thousands:

	Fair Value Measurements at June 30, 2019 Using:			
	Level 1	Level 2	Level 3	Total
Cash Equivalents				
Money market funds	$ 575	$ —	$ —	$ —
U.S. government securities	—	22,587	—	—
Corporate bonds	—	5,806	—	—
Commercial paper		37,433		
Total cash equivalents	$ 575	$ 65,826	$ —	$ —
Marketable securities				
Corporate bonds		79,765		
Commercial paper		206,983		
Total marketable securities	—	286,748	—	—
Total	$ 575	$ 352,574	$ —	$ —

The Company had no cash equivalents and marketable securities at December 31, 2018.

The carrying amount reflected in the condensed consolidated balance sheets for research and development tax incentive receivable, trade and other receivables, accounts payable, and accrued expenses approximate fair value due to their short-term maturities. The carrying value of the Company's outstanding notes payable approximates fair value (a Level 2 fair value measurement), reflecting interest rates currently available to the Company.

Marketable Securities

The following table summarizes the Company's marketable securities as of June 30, 2019, in thousands:

	At June 30, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government securities	$ 22,587	$ —	$ —	$ 22,587
Corporate bonds	212,708	171	(90)	212,789
Commercial paper	117,171	60	(33)	117,198
Total	$ 352,466	$ 231	$ (123)	$ 352,574

The Company had no marketable securities at December 31, 2018.

The following table summarizes the Company's available-for-sale debt securities by contractual maturity, as of June 30, 2019, in thousands:

	At June 30, 2019
	Amortized Cost
Due in one year	$ 295,232
Due after one year through three years	57,342
Total	$ 352,574

4. Property and Equipment, Net

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

	June 30, 2019	December 31, 2018
Property and equipment:		
Lab equipment	$ 5,090	$ 4,689
Leasehold improvements	1,759	1,487
Furniture and fixtures	505	403
Office and computer equipment	153	152
Construction-in-process	272	241
Property and equipment	$ 7,779	$ 6,972
Less: accumulated depreciation	(2,230)	(1,496)
Property and equipment, net	$ 5,549	$ 5,476

Depreciation expense was $0.4 million and $0.4 million for the three months ended June 30, 2019 and 2018, respectively. Depreciation expense was $0.8 million and $0.5 million for the six months ended June 30, 2019 and 2018, respectively.

5. Accrued Expenses and Other Liabilities

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

	June 30, 2019	December 31, 2018
Accrued external research and development expenses	$ 11,893	$ 12,738
Accrued payroll and related expenses	7,352	7,372
Accrued professional fees	1,316	1,186
Accrued other	1,814	2,762
Strimvelis liability - current portion	2,647	4,170
Due to UCLA	1,552	1,552
Total accrued expenses and other liabilities	$ 26,574	$ 29,780

6. Notes Payable

On May 24, 2019, the Company entered into a senior term facilities agreement (the “Credit Facility”) with MidCap Financial (Ireland) Limited (“MidCap Financial”), as agent, and additional lenders from time to time (together with MidCap Financial, the “Lenders”), to borrow up to $75.0 million in term loans. The Company concurrently borrowed $25.0 million under an initial term loan. The remaining $50.0 million under the Credit Facility may be drawn down in the form of a second and third term loan, the second term loan being a $25.0 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 the Company having $100 million in cash and cash equivalent investments; and the third term loan being a $25.0 million term loan available no earlier than July 1, 2020 and no later than September 30, 2021 upon certain regulatory approvals and evidence of the Company having $125 million in cash and cash equivalent investments.

Each term loan under the Credit Facility bears interest at an annual rate equal to 6% plus LIBOR. The Borrower is required to make interest-only payments on the term loan for all payment dates prior to 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 begin amortizing on either the 24-month or the 36-month anniversary of the Credit Facility (as applicable), with equal monthly payments of principal plus interest to be made by the Borrower to the Lenders in consecutive monthly installments until the Loan Maturity Date. In addition, a final payment of 4.5% is due on the Loan Maturity Date. The Company accrues the final payment amount of $1.1 million associated with the first term loan, to outstanding debt by charges to interest expense using the effective-interest method from the date of issuance through the maturity date.

The Credit Facility includes affirmative and negative covenants. The affirmative covenants include, among others, covenants requiring the Company to maintain their legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage, maintain property, pay taxes, satisfy certain requirements regarding accounts and comply with laws and regulations. The negative covenants include, among others, restrictions on the Company transferring collateral, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, making investments, creating liens, amending material agreements and organizational documents, selling assets, changing the nature of the business and undergoing a change in control, in some cases subject to certain exceptions. The Company is also subject to an ongoing minimum cash financial covenant in which the Company must maintain unrestricted cash in an amount not less than $20.0 million following the utilization of the second term loan and not less than $35.0 million following the utilization of the third term loan.

As of June 30, 2019, notes payable consist of the following (in thousands):

	June 30, 2019	December 31, 2018
Notes payable	$ 24,477	$ —
Accretion related to final payment	24	—
Notes payable, long term	$ 24,501	$ —

As of June 30, 2019, the estimated future principal payments due are as follows (in thousands):

	Aggregate Minimum Payments
2019	$ —
2020	—
2021	4,861
2022	8,333
2023	8,334
Thereafter	4,597
Total	26,125
Less unamortized portion of final payment	(1,101)
Less unamortized debt issuance costs	(523)
Notes payable, long term	$ 24,501

During the three months and six months ended June 30, 2019, the Company recognized $0.2 million of interest expense related to the initial Term Loan. The effective annual interest rate as of June 30, 2019 on the outstanding debt under the Term Loan was approximately 12.0%.

7. Shareholders' Equity

Initial Public Offering, Follow-on Public Offering and Corporate Reorganization

In November 2018, the Company completed 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.

In June 2019, the Company completed its follow-on public offering of ADSs. The Company sold an aggregate of 9,725,268 ADSs representing the same number of ordinary shares at a public offering price of $14.25 per ADS, including partial exercise by the underwriters of their option to purchase additional ADSs. Net proceeds were $129.7 million, after deducting underwriting discounts of $8.3 million, and commissions and offering expenses paid or accrued by the Company of $0.6 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.

8. 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 June 30, 2019, 4,893,743 shares remained available for grant under the 2018 Plan, and 1,645,629 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 six months ended June 30, 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	3,619,587	13.82		
Exercised	(534,360)	1.08		
Forfeited	(641,826)	7.20		
Outstanding at June 30, 2019	12,646,833	$ 5.92	8.79	$ 105,528
Vested and expected to vest, as of June 30, 2019	3,569,306	$ 2.56	8.23	$ 40,781

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.

The weighted-average grant date fair value of share options granted during the six month period ended June 30, 2019 was $8.85 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 $11.0 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 June 30, 2019, none of the regulatory and research and development milestones were deemed probable.

The following table summarizes award activity for the six months ended June 30, 2019:

	Shares	Weighted Average Grant Date Fair Value
Unvested and outstanding at December 31, 2018	219,922	$ 15.48
Granted	394,250	12.30
Vested	—	—
Forfeited	(18,750)	11.17
Unvested and outstanding at June 30, 2019	595,422	$ 13.51

The amount of compensation cost recognized for the six months ended June 30, 2019 and 2018 for the market condition associated with the performance-based RSUs was $0.6 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):

	June 30, 2019	June 30, 2018
Research and development	$ 2,970	$ 674
General and administrative	5,481	1,576
Total share-based compensation	$ 8,451	$ 2,250

The Company had 9,077,527 unvested options outstanding as of June 30, 2019. As of June 30, 2019, total unrecognized compensation cost related to unvested stock option grants was approximately $53.6 million. This amount is expected to be recognized over a weighted average period of approximately 2.9 years. As of June 30, 2019, the total unrecognized compensation cost related to performance-based RSUs is a maximum of $10.3 million, dependent upon achievement of the milestones.

9. 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 consisted 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 option rights have all 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 Priority Review Voucher ("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 June 30, 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. As of June 30,

2019, the total Strimvelis loss provision liability was $7.8 million. During the three and six months ended June 30, 2019 the Company amortized $1.1 million and $2.6 million as a credit to research and development expense, respectively. The effects of foreign currency translation for the three months and six months ended June 30, 2019 decreased the liability by $0.2 million and increased the liability by $0.1 million, respectively

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 agreements

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.

In May 2019, the Company entered into a license agreement with Telethon-OSR, under which Telethon-OSR granted to the Company an exclusive worldwide license for the research, development, manufacture and commercialization of Telethon-OSR's ex vivo autologous HSC lentiviral based gene therapy for the treatment of mucopolysaccharidosis type I ("MPS-I"), including the Hurler variant. Under the terms of the agreement, Telethon-OSR is entitled to receive €15.0 million in upfront and milestone payments from the Company. The Company is also required to make milestone payments contingent upon certain development, regulatory and commercial milestones are achieved. Additionally, the Company will be required to pay Telethon a tiered mid-single to low-double digit royalty percentage on annual net sales of licensed products. For the three and six months ended June 30, 2019, the Company has recorded $17.2 million as in-process research and development expense associated with the upfront and milestone payments.

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 $0.1 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 six months ended June 30, 2019 and 2018, respectively.

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 and six months ended June 30, 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 and six months ended June 30, 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 a low single digit percentage royalties 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 six months ended June 30, 2019 and 2018, the Company recorded nil and $2.4 million as a reduction of research and development expenses related to the UCLA Research Agreements. As of June 30, 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.

10. Income Taxes

Deferred tax assets and deferred tax liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company does not recognize a tax benefit for uncertain tax positions unless it is more likely than not that the position will be sustained upon examination by tax authorities, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The tax benefit that is recorded for these positions is measured at the largest amount of cumulative benefit that has greater than a 50 percent likelihood of being realized upon ultimate settlement. Deferred tax assets that do not meet these recognition criteria are not recorded and the Company recognizes a liability for uncertain tax positions that may result in tax payments. If such unrecognized tax benefits were realized and not subject to valuation allowances, the entire amount would impact the tax provision. The Company has not recorded any amounts for unrecognized tax positions as of June 30, 2019 or December 31, 2018.

The Company recognized an income tax benefit of $0.8 million and $0.2 million for the three months and six months ended June 30, 2019, respectively. The Company recognized an income tax benefit of $0.1 million and $0.2 million for the three months and six months ended June 30, 2018, respectively. The benefit for income taxes consists of current and deferred tax expenses, which relates primarily to the Company's subsidiary operations in the U.S.

11. Net loss per share

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

	Six Months Ended June 30,		Three Months Ended June 30,	
	2019	2018	2019	2018
Net loss	$ (81,269)	$ (171,544)	$ (50,530)	$ (156,233)
Net loss attributable to ordinary shareholders	$ (81,269)	$ (171,544)	$ (50,530)	$ (156,233)
Weighted average ordinary shares outstanding, basic and diluted	88,369,311	10,095,863	89,712,916	10,115,335
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.92)	$ (16.99)	$ (0.56)	$ (15.45)

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:

	Six Months Ended June 30,	
	2019	2018
Convertible preferred shares	—	46,226,426
Share options	10,972,582	7,258,870
Unvested performance-based restricted share units	595,422	—
	11,568,004	53,485,296

12. 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 had a term of 5 years and originally terminated in October 2021. The annual rental expense approximated $0.2 million. The Company was provided with one month of free rent upon inception of the lease. In June 2019, the Company assigned the lease to a third-party and were relieved of future payment obligations under the lease. Costs associated with the termination of the lease were not material.

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, which 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, which terminates in December 2020. The annual rental expense approximates $0.1 million.

The Company recorded rent expense totaling $1.3 million and $2.5million for the three months and six months ended June 30, 2019, respectively. The Company recorded rent expense totaling $0.7 million and $1.2 million for the three months and six months ended June 30, 2018, respectively.

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 June 30, 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 June 30, 2019, the Company has no funds deposited in the escrow account.

Other funding commitments

The Company has entered into several license agreements (Note 9). The Company’s obligations in connection with these agreements include requirements to pay royalties on future sales of specified products, make annual license maintenance payments and make payments upon the achievement of certain milestones not met as of June 30, 2019 and December 31, 2018. As of June 30, 2019, the Company had $16.9 million in accounts payable for upfront and milestone payments associated with our licensing agreements.

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 June 30, 2019, and December 31, 2018, there was nil and $0.8 million included within prepayments related to prepaid instalments against these minimum commitments. The Company is committed to make further payments totaling $7.8 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.

13. Employee Benefit Plans

The Company makes contributions to private defined contribution employee benefit 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 $0.3 million and $0.6 million in matching contributions for the three and six months ended June 30, 2019, respectively. The Company paid $0.1 million and $0.2 million in matching contributions for the three and six months ended June 30, 2018, respectively.

14. 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 agreement the Company paid an upfront fee of $14.2 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 agreement, 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 six months ended June 30, 2019, the Company made $7.2 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, during the six months ended June 30, 2019, the Company made a $1.7 million payment associated with the inventory purchase liability incurred upon entering into the agreement. As of June 30, 2019, and December 31, 2018, the Company had inventory purchase liability in accrued research and development expenses of $3.2 million and $6.2 million, respectively. During the three months and six months ended June 30, 2019 there were no sales of Strimvelis and incurred no royalties due to GSK.

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 and six months ended June 30, 2019 and 2018 have been translated from pounds sterling into U.S. dollars at the rate of $1.2698 to £1.00, and $1.3197 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 and six months ended June 30, 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 *ex vivo* autologous hematopoietic stem cell ("HSC") based gene therapies. Our 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's portfolio 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"), transfusion-dependent beta-thalassemia ("TDT"), and mucopolysaccharidosis type I ("MPS-I"), as well as an extensive preclinical pipeline.

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 June 30, 2019, we had received net proceeds of $283.4 million from sales of our convertible preferred shares, and $335.1 million from sales of ADSs in our initial public offering and follow-on 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 $81.3 million and $171.5 million for the six months ended June 30, 2019 and 2018, respectively. As of June 30, 2019, and December 31, 2018, we had an accumulated deficit of $371.5 million and $290.2 million, respectively. As of June 30, 2019, we had cash, cash equivalents, marketable securities and restricted cash of $423.4 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 June 30, 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 and six months ended June 30, 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 and marketable securities.

Interest expense

Interest expense consists of interest associated with our Credit Facility with MidCap Financial. The Credit Facility bears a variable interest rate at a rate of 6.0% above LIBOR, plus a final payment equal to 4.5% of the principal borrowed under the Credit Facility.

Other income (expense)

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

Comparison of the Six Months Ended June 30, 2019 and 2018

The following table summarizes our results of operations for the six months ended June 30, 2019 and 2018:

	Six Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Costs and operating expenses			
Research and development	$ 57,971	$ 160,162	$ (102,191)
Selling, general and administrative	24,464	11,948	12,516
Total costs and operating expenses	82,435	172,110	(89,675)
Loss from operations	(82,435)	(172,110)	89,675
Other income (expense):			
Interest income	3,350	—	3,350
Interest expense	(245)	—	(245)
Other income (expense):	(2,118)	401	(2,519)
Total other income (expense), net	987	401	586
Loss before provision for income taxes	(81,448)	(171,709)	90,261
Income tax (expense) benefit	179	165	14
Net loss attributable to ordinary shareholders	$ (81,269)	$ (171,544)	$ 90,275

Research and Development Expenses

The table below summarizes our research and development expenses by product candidate or development program for the six months ended June 30, 2019 and 2018:

	Six Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Direct research and development expenses by program:			
OTL-200 for MLD	$ 4,089	$ 72,747	$ (68,658)
OTL-103 for WAS	4,774	67,024	(62,250)
OTL-101 for ADA-SCID	8,771	10,913	(2,142)
OTL-102 for X-CGD	1,192	940	252
OTL-201 for MPS-IIIA	2,123	1,062	1,061
Strimvelis	1,113	2,339	(1,226)
Other programs	19,491	747	18,744
Research and discovery and unallocated costs			
Personnel related (including share-based compensation)	16,626	6,240	10,386
Research and development tax credit	(9,939)	(3,367)	(6,572)
Accretion of Strimvelis loss provision	(2,588)	(1,423)	(1,165)
Facility and other	12,319	2,940	9,379
Total research and development expenses	$ 57,971	$ 160,162	$ (102,191)

The decline of $102.2 million in research and development expense for the six months ended June 30, 2019 compared to the six months ended June 30, 2018 is the result of the completion of the GSK transaction in April 2018, in which the Company acquired certain gene therapy assets, licenses and option rights, including Strimvelis, OTL-200 and OTL-103. During the six months ended June 30, 2018, the company took $133.6 million of in-process research and development charges related to the GSK transaction.

Direct research and development expenses declined by $68.7 million relating the OTL-200 for the six months ended June 30, 2019. The decline in direct costs is attributable to $69.3 million of in-process research and development charges related to the GSK transaction that were taken in the six months ended June 30, 2018. This was offset by increases in manufacturing and clinical trial costs associated with our registrational trial.

Direct research and development expenses declined by $62.3 million relating the OTL-103 for the six months ended June 30, 2019. The decline in direct costs is attributable to $64.3 million of in-process research and development charges related to the GSK transaction that were taken in the six months ended June 30, 2018.

Direct research and development expenses declined by $2.1 million relating to OTL-101 for the six months ended June 30, 2019 primarily due to a decline of $3.8 million in manufacturing costs associated with the preparation of our viral vector and cell manufacturing processes in preparation for our registrational trial. Further, there were no offsets to research and development expense associated with our grant from the California Institute of Regenerative Medicine (“CIRM”) for the six months ended June 30, 2019, as compared to an offset of $1.4 million for the six months ended June 30, 2018.

Direct research and development expenses increased by $1.1 million relating to OTL-201 in the six months ended June 30, 2019. The increase relates primarily to an increase in $0.9 million in manufacturing and process development costs associated with our viral vector and cell manufacturing processes and a $0.2 million increase in clinical development activities.

Direct research and development expenses decreased by $1.2 million relating to Strimvelis in the six months ended June 30, 2019. The decrease relates generally to a decline in manufacturing costs. Direct research and development expenses increased by $18.7 million relating to Other programs for the six months ended June 30, 2019, which is attributable to $17.2 million in combined upfront and clinical milestones payments associated with our license arrangement with Telethon Foundation and San Raffaele Hospital (“Telethon-OSR”) for OTL-203 for MPS-I. Additionally, there was $1.9 million in direct research and development expenses associated with OTL-300 for TDT for the six months ended June 30, 2019, compared with $0.7 million for the six-months ended June 30, 2018.

The increase in unallocated research and development expenses for the six months ended June 30, 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 increased by $10.4 million. This is primarily attributable to an increase of $7.0 million

in costs associated with salaries and wages, bonuses, benefits, and payroll taxes associated with our research and development employees. Additionally, there was a $2.3 million increase in share-based compensation expense for the six months ended June 30, 2019 as compared to the six months ended June 30, 2019. Further, personnel costs for the six months ended June 30, 2018 were reduced by $1.1 million or reimbursements received as part of the Company's subcontract with UCLA. There were no such offsets to research and development expense in the six months ended June 30, 2019.

The increase in costs of unallocated expenses for the six months ended June 30, 2019 was offset by the $9.9 million in offsets to research and development expense associated with our research and development tax credit, as compared to $3.4 million for the six months ended June 30, 2018. Additionally, amortization of the Strimvelis loss provision as an offset to research and development expense was $2.6 million for the six months ended June 30, 2019, compared to $1.4 million for the six months ended June 30, 2018.

Facility and other costs increased by $9.4 million due to a $2.7 million increase in occupancy and depreciation costs associated with 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. Travel costs increased by $0.7 million due to our increased research and development headcount and growing global footprint. Further, other research and development costs such as lab supplies and consumables, external manufacturing and process development, and other unallocated costs not yet attributable to a specific developmental program increased by $5.5 million.

Selling, general and administrative expenses

Selling, general and administrative expenses were $24.5 million for the six months ended June 30, 2019, compared to $11.9 million for the six months ended June 30, 2018. Personnel-related costs, excluding share-based compensation, increased $5.1 million due to increased headcount in our general and administrative and commercial functions. Share-based compensation expense included in selling, general and administrative expenses increased by $3.9 million. Professional and consulting fees and directors' insurance costs increased by $1.5 million due to costs associated with operating as a public company. Expenses associated with marketing and commercialization of Strimvelis, and costs associated with potential future commercialization of our product candidates, if approved, increased by $2.3 million.

Other income (expense), net

Other expense, net for the six months ended June 30, 2019 and 2018 was $1.0 million and $0.4 million, respectively. During the six months ended June 30, 2019, we had realized and unrealized losses on foreign currency of $2.1 million, compared to realized and unrealized gains on foreign currency of $0.4 million for the six months ended June 30, 2018. Additionally, we had interest income of $3.4 million and nil for the six months ended June 30, 2019 and 2018, respectively. This was offset by interest expense associated with our credit facility of $0.2 million and nil for the six months ended June 30, 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 June 30, 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 June 30, 2019, we have received net proceeds of $283.4 million from sales of convertible preferred shares, net proceeds of $335.2 million from the sale of ADSs in our initial public offering and follow-on offering, and reimbursement of $7.9 million from our agreement with CIRM, which was formerly a subcontract agreement with UCLA. As of June 30, 2019, we had cash, cash equivalents, marketable securities, and restricted cash of $423.4 million. We believe our existing cash, cash equivalents, marketable securities, and restricted cash will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2021.

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, lease, and debt obligations described below.

Cash Flows

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

	Six Months Ended June 30,	
	2019	2018
	(in thousands)	
Net cash used in operating activities	$ (73,117)	$ (41,075)
Net cash used in investing activities	(286,988)	(2,833)
Net cash provided by financing activities	156,128	2,275
Effect of exchange rate changes on cash and cash equivalents	922	539
Net (decrease) in cash, cash equivalents, and restricted cash	$ (203,055)	$ (41,094)

Operating activities

During the six months ended June 30, 2019, operating activities used $73.1 million of cash, resulting from our net loss of $81.3 million and changes in our operating assets and liabilities of $1.7 million, and net non-cash charges of $6.5 million. Our net loss was primarily attributable to research and development activities related to our developmental stage programs, discovery and pre-clinical costs, a $17.2 million in-process research and development charge associated with upfront and milestone payments relating to OTL-203 program for MPS-I, and our selling, general, and administrative expenses. Changes in operating assets and liabilities during the six months ended June 30, 2019 of $1.7 million is attributable to a $9.9 million increase in our research and development tax credit receivable, offset by a $1.6 million decrease in trade and other receivables, prepaid expenses, and other current assets. This was offset by an increase in accounts payable, accrued expenses, and other long-term liabilities of $10.0 million. Included within our net loss is $6.5 million in net non-cash expenses and offsets to research and development expense, including $8.5 million in non-cash share-based compensation expense, $2.6 million in non-cash offsets to research and development expense associated with the amortization of our Strimvelis loss provision liability, and 0.8 million in non-cash depreciation expense.

During the six months ended June 30, 2018, operating activities used $41.1 million of cash, resulting from our net loss of $171.5 million, changes in our operating assets and liabilities of $35.7 million, and net non-cash charges of $94.7 million. Our net loss was primarily attributable to a $133.6 million in-process research and development charge associated with the GSK Agreement, research and development activities related to our developmental stage programs, and discovery and pre-clinical costs. Changes in operating assets and liabilities during the six months ended June 30, 2018 of $41.1 million is attributable to a $3.4 million increase in our research and development tax credit receivable, and a $2.8 million increase in trade and other receivables, prepaid expenses, and other current assets. This was offset by increases in accounts payable, accrued expenses, and other long-term liabilities of $41.9 million. Included within our net loss is $94.7 million in net non-cash expenses and offsets to research and development expense, including a $93.4 million charge associated with the value of convertible preferred shares issued to GSK as part of the GSK Agreement, $2.3 million in non-cash share-based compensation expense, and $1.4 million in non-cash offsets to research and development expense associated with the amortization of our Strimvelis loss provision liability. Included within operating activities was payment of $14.2 million for the GSK Agreement upfront fee.

Investing activities

For the six months ended June 30, 2019 and 2018, we used $287.0 million and $2.8 million, respectively, of cash in investing activities. The increase in cash used for investing activities is attributable to the use of proceeds received from our IPO, follow-on offering, and term loan for the purchases of $286.4 million of highly-rated, short duration marketable securities.

Financing Activities

For the six months ended June 30, 2019 and 2018, cash provided by financing activities was $156.1 million and $2.3 million, respectively. The increase relates to proceeds from our follow-on offering of $130.2 million, net of underwriting discounts and issuance costs paid as of June 30, 2019, and proceeds from the issuance of our term loan of $24.7 million, net of debt issuance costs paid as of June 30, 2019. Additionally, we had proceeds of $1.3 million from the exercise of share options and issuance of ordinary shares as part of our ESPP in the six months ended June 30, 2019, compared to nil for the six months ended June 30, 2018.

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 investigational new drug and clinical trial application 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

During the six months ended June 30, 2019, there have been no material changes to our contractual obligations and commitments outside the ordinary course of business from those described under the heading "Item 5. Operating and Financial Review and Prospects – Tabular disclosure of contractual obligations" in our Annual Report for the year ended December 31, 2018, except as noted below:

- In May 2019, the Company entered into a license agreement with Telethon-OSR, under which Telethon-OSR granted to the Company an exclusive worldwide license for the research, development, manufacture and commercialization of Telethon-OSR's ex vivo autologous hematopoietic stem cell lentiviral based gene therapy for the treatment of mucopolysaccharidosis type I ("MPS-I"), including the Hurler variant. Under the terms of the agreement, Telethon-OSR is entitled to receive €15 million combined upfront and milestone payment from the Company. The Company is also required to make milestone payments if certain development, regulatory and commercial milestones are achieved. Additionally, the Company will be required to pay Telethon a tiered mid-single to low-double digit royalty percentage on annual net sales of licensed products.
- In May 2019, Company entered into a senior term facilities agreement (the "Credit Facility") with MidCap Financial (Ireland) Limited ("MidCap Financial"), as agent, and additional lenders from time to time (together with MidCap Financial, the "Lenders"), to borrow up to $75.0 million in term loans. The Company concurrently borrowed $25.0 million under an initial term loan. The remaining $50.0 million under the Credit Facility may be drawn down in the form of a second and third term loan, the second term loan being a $25.0 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 the Company having $100 million in cash and cash equivalent investments; and the third term loan being a $25.0 million term loan available no earlier than July 1, 2020 and no later than September 30, 2021 upon certain regulatory approvals and evidence of the Company having $125 million in cash and cash equivalent investments. Each term loan under the Credit Facility bears interest at an annual rate equal to 6% plus LIBOR. The Borrower is required to make interest-only payments on the term loan for all payment dates prior to 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 begin amortizing on either the 24-month or the 36-month anniversary of the Credit Facility (as applicable), with equal monthly payments of principal plus interest to be made by the Borrower to the Lenders in consecutive monthly installments until the Loan Maturity Date. In addition, a final payment of 4.5% is due on the Loan Maturity Date.

		Payments Due By Period			
	Total	Less Than 1 Year	1 to 3 Years	4 to 5 Years	More Than 5 Years
			(in thousands)		
Debt commitments (1)	$ 31,188	$ —	$ 12,840	$ 18,348	$ —
Total	$ 31,188	$ —	$ 12,840	$ 18,348	$ —

(1) Amounts in the table reflect contractually required principal and interest payments payable under the Credit Facility. For the purposes of this table, the interest due under the Credit Facility was calculated using an assumed interest rate of 8.4% per annum, which was the interest rate in effect as of June 30, 2019. The table also assumes repayment of the term loan beginning 24 months following the date of the Credit Facility.

Exhibit 99.3

Orchard Therapeutics Reports Second Quarter 2019 Financial Results and Builds Momentum Ahead of Regulatory Filings

Metachromatic Leukodystrophy (MLD) MAA Submission and Initiation of ADA-SCID Rolling BLA Expected in the First Half of 2020; OTL-103 Recently Granted RMAT Designation for Wiskott-Aldrich Syndrome (WAS)

MLD and Mucopolysaccharidosis Type I (MPS-I) Abstracts Accepted for Oral Presentations at SSIEM 2019 Symposium

Ended the Second Quarter of 2019 with Approximately $423M in Total Cash and Investments; Recent Equity Financing of $130M Extends Cash Runway into the Second Half of 2021

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

BOSTON and LONDON, August 8, 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 and business highlights for the quarter ended June 30, 2019, as well as upcoming 2019 data presentations and milestones.

“In the first half of 2019, we made tremendous progress advancing our three lead programs toward regulatory filings, while pursuing a broader range of clinical opportunities for the hematopoietic stem cell-based gene therapy platform,” said Mark Rothera, president and chief executive officer of Orchard. “To deliver on our mission of bringing potentially curative therapies to patients around the world, we are expanding our global presence and preparing the ground for supply and access. If approved, we believe our therapies have the potential to provide a lifetime of benefit to patients in a single administration.”

Second Quarter and Recent Business Achievements

- Received regenerative medicine advanced therapy (RMAT) designation from the U.S. Food and Drug Administration (FDA) for OTL-103 for the treatment of Wiskott-Aldrich Syndrome (WAS). RMAT designation is a dedicated program designed to expedite the drug development and review processes for promising advanced therapy products, including gene therapies. The OTL-103 program is continuing to enroll patients in a clinical trial using a cryopreserved formulation to support regulatory filings in the U.S. and Europe in 2021. Link to the full RMAT release here.
- Completed an underwritten public offering of 9,725,268 American Depositary Shares in June 2019 resulting in proceeds, net of underwriting discounts and commissions, of approximately $129.7 million. Link to the full release here.

- Signed a collaboration agreement with Fondazione Telethon and Ospedale San Raffaele for a new clinical-stage gene therapy program in mucopolysaccharidosis type I (MPS-I) showing encouraging preliminary data in an ongoing proof-of-concept trial. The trial is expected to enroll up to eight patients by the first half of 2020. Link to the full release here.
- Held a positive Marketing Authorization Application (MAA) pre-submission meeting with the European Medicines Agency (EMA) in early May 2019 for OTL-200 for metachromatic leukodystrophy (MLD). The company has brought forward the timeline for the planned submission of an MAA to the first half of 2020 and also expects to submit a Biologics License Application (BLA) in the U.S. approximately one year after the MAA submission.

Upcoming Data Presentations & Remaining 2019 Milestones

Neurometabolic Disorders

- Present data from the ongoing proof-of-concept trial of OTL-203 for MPS-I at the Society for the Study of Inborn Errors of Metabolism (SSIEM) 2019 Symposium on September 4, 2019 in Rotterdam, The Netherlands.
- Present an integrated data analysis of OTL-200 for MLD at the SSIEM 2019 Symposium on September 4, 2019 in Rotterdam, The Netherlands. The integrated analysis includes the 20 patient registrational data set in addition to data from expanded access patients.
- Report engraftment data in the first three patients from the ongoing clinical trial of OTL-200 for MLD using a cryopreserved formulation.
- Support the submission of a clinical trial application for OTL-201 for mucopolysaccharidosis type IIIA (MPS-IIIA) in preparation of a clinical trial initiation.

Primary Immune Deficiencies

- Report engraftment data in 10 patients from a clinical trial of OTL-101 for severe combined immune deficiency due to adenosine deaminase deficiency (ADA-SCID) using a cryopreserved formulation.
- Report three-year follow-up data in eight patients from a registrational trial of OTL-103 for WAS.
- Design and engage regulators on a planned registrational trial for OTL-102 for patients with X-linked chronic granulomatous disease (X-CGD).

Second Quarter 2019 Financial Results and Updated Cash Runway

Cash and investments as of June 30, 2019 were $423.4 million compared to $339.7 million as of December 31, 2018. The increase was primarily driven by proceeds from the company’s public equity offering in June 2019, partially offset by the cash used to fund operations in the six months ended June 30, 2019.

Research and development expenses were $40.5 million for the three months ended June 30, 2019, compared to $151.0 million in the same period in 2018. The higher research and development expenses in 2018 resulted from a $133.6 million in-process research and development charge under the GSK agreement signed in April 2018. Excluding this one-time charge, research and development expenses would have increased $23.1 million for the three months ended June 30, 2019, compared to the same period in 2018. Research and development expenses for the three months ended June 30, 2019 include the upfront consideration for the license of the MPS-I clinical-stage program, as well as higher program and personnel-related costs from a larger portfolio compared to the corresponding period in 2018.

Selling, general and administrative expenses were $13.7 million for the three months ended June 30, 2019, compared to $7.4 million in the same period in 2018. The increase was primarily due to higher personnel costs to support public company operations as well as costs to prepare for the potential commercialization of the company's three late-stage development programs.

Net loss attributable to ordinary shareholders was $50.5 million for the three months ended June 30, 2019, compared to $156.2 million in the same period in 2018. The decrease as compared to the prior year was primarily due to the GSK agreement signed in April 2018. The company had 96.2 million ordinary shares outstanding as of June 30, 2019.

The company expects that its existing cash and investments will enable funding of its anticipated operating and capital expenditure requirements into the second half of 2021.

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 second quarter results and recent and upcoming 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 9395864. 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.

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," 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 the second half of 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 and Comprehensive Loss
(In thousands, except share and per share amounts)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Costs and operating expenses:				
Research and development	$ 40,478	$ 150,991	$ 57,971	$ 160,162
Selling, general and administrative	13,674	7,421	24,464	11,948
Total costs and operating expenses	54,152	158,412	82,435	172,110
Loss from operations	(54,152)	(158,412)	(82,435)	(172,110)
Other income (expense), net	2,850	2,097	987	401
Net loss before income tax	(51,302)	(156,315)	(81,448)	(171,709)
Income tax (expense) benefit	772	82	179	165
Net loss attributable to ordinary shareholders	(50,530)	(156,233)	(81,269)	(171,544)
Net loss per share attributable to ordinary shareholders, basic and diluted	$ (0.56)	$ (15.45)	$ (0.92)	$ (16.99)
Weighted average number of ordinary shares outstanding, basic and diluted	89,712,916	10,115,335	88,369,311	10,095,863

Condensed Consolidated Balance Sheets
(In thousands)
(unaudited)

	June 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 132,783	$ 335,844
Marketable securities	286,748	—
Trade and other receivables	1,956	2,153
Prepaid expenses and other assets	5,143	6,935
Research and development tax credit receivable, current	10,594	10,585
Total current assets	437,224	355,517
Property and equipment, net	5,549	5,476
Research and development tax credit receivable	9,731	—
Restricted cash	3,843	3,837
Other long-term assets	1,770	1,212
Total assets	$ 458,117	$ 366,042
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 28,861	$ 18,125
Accrued expenses and other current liabilities	26,574	29,780
Total current liabilities	55,435	47,905
Long-term debt, net	24,501	—
Other long-term liabilities	7,024	6,799
Total liabilities	86,960	54,704
Total shareholders' equity	371,157	311,338
Total liabilities and shareholders' equity	$ 458,117	$ 366,042

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