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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2019

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

For the transition period from _____ to _____

Commission File Number: 001-37627

WAVE LIFE SCIENCES LTD.

(Exact name of registrant as specified in its charter)

Singapore	**Not applicable**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7 Straits View #12-00, Marina One East Tower Singapore	**018936**
(Address of principal executive offices)	**(Zip Code)**

+65 6236 3388
(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol	Name of each exchange on which registered
$0 Par Value Ordinary Shares	WVE	The Nasdaq Global Market

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

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

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

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

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

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

The number of outstanding ordinary shares of the registrant as of August 1, 2019 was 34,280,578.

WAVE LIFE SCIENCES LTD.

QUARTERLY REPORT ON FORM 10-Q

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As used in this Quarterly Report on Form 10-Q, unless otherwise stated or the context otherwise indicates, references to “Wave,” the “Company,” “we,” “our,” “us” or similar terms refer to Wave Life Sciences Ltd. and our wholly-owned subsidiaries.

Special Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that relate to future events or to our future operations or financial performance. Any forward-looking statement involves known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statement. In some cases, forward-looking statements are identified by the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “future,” “goals,” “intend,” “likely,” “may,” “might,” “ongoing,” “objective,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “strategy,” “target,” “will” and “would” or the negative of these terms, or other comparable terminology intended to identify statements about the future, although not all forward-looking statements contain these identifying words. Forward-looking statements include statements, other than statements of historical fact, about, among other things: our ability to fund our future operations; our financial position, revenues, costs, expenses, uses of cash and capital requirements; our need for additional financing or the period for which our existing cash resources will be sufficient to meet our operating requirements; the success, progress, number, scope, cost, duration, timing or results of our research and development activities, preclinical studies and clinical trials, including the timing for initiation or completion of or availability of results from any preclinical studies and clinical trials or for submission, review or approval of any regulatory filing; the timing of, and our ability to, obtain and maintain regulatory approvals for any of our product candidates; the potential benefits that may be derived from any of our product candidates; our strategies, prospects, plans, goals, expectations, forecasts or objectives; the success of our collaborations with third parties; any payment that our collaboration partners may make to us; our ability to identify and develop new product candidates; our intellectual property position; our commercialization, marketing and manufacturing capabilities and strategy; our ability to develop sales and marketing capabilities; our estimates regarding future expenses and needs for additional financing; our ability to identify, recruit and retain key personnel; our financial performance; developments and projections relating to our competitors in the industry; our liquidity and working capital requirements; and the expected impact of new accounting standards.

Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we caution you that these statements are based on our estimates or projections of the future that are subject to known and unknown risks and uncertainties and other important factors that may cause our actual results, level of activity, performance or achievements expressed or implied by any forward-looking statement to differ. These risks, uncertainties and other factors include, among other things, our critical accounting policies and: the ability of our preclinical studies to produce data sufficient to support the filing of global clinical trial applications and the timing thereof; our ability to continue to build and maintain the company infrastructure and personnel needed to achieve our goals; the clinical results and timing of our programs, which may not support further development of our product candidates; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials; our effectiveness in managing current and future clinical trials and regulatory processes; the success of our platform in identifying viable candidates; the continued development and acceptance of nucleic acid therapeutics as a class of drugs; our ability to demonstrate the therapeutic benefits of our stereopure candidates in clinical trials, including our ability to develop candidates across multiple therapeutic modalities; our ability to obtain, maintain and protect intellectual property; our ability to enforce our patents against infringers and defend our patent portfolio against challenges from third parties; our ability to fund our operations and to raise additional capital as needed; and competition from others developing therapies for similar uses, as well as other risks and uncertainties under the caption “Risk Factors” contained in this Quarterly Report on Form 10-Q and in other filings we make with the SEC.

Each forward-looking statement contained in this report is based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain. As a result of these factors, we cannot assure you that the forward-looking statements in this report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, these statements should not be regarded as representations or warranties by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all. We caution you not to place undue reliance on any forward-looking statement.

In addition, any forward-looking statement in this report represents our views only as of the date of this report and should not be relied upon as representing our views as of any subsequent date. We anticipate that subsequent events and developments may cause our views to change. Although we may elect to update these forward-looking statements publicly at some point in the future, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

The Wave Life Sciences Ltd. and Wave Life Sciences Pte. Ltd. names, the Wave Life Sciences mark, PRISM and the other registered and pending trademarks, trade names and service marks of Wave Life Sciences Ltd. appearing in this Form 10-Q are the property of Wave Life Sciences Ltd. This Form 10-Q also contains additional trade names, trademarks and service marks belonging to Wave Life Sciences Ltd. and to other companies. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties. Solely for convenience, the trademarks and trade names in this Form 10-Q are referred to without the ® and ™ symbols, but such reference should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

WAVE LIFE SCIENCES LTD.
UNAUDITED CONSOLIDATED BALANCE SHEETS

(In thousands, except share amounts)

	June 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 252,906	$ 174,819
Current portion of accounts receivable	20,000	10,000
Prepaid expenses and other current assets	16,685	17,454
Total current assets	289,591	202,273
Long-term assets:		
Accounts receivable, net of current portion	30,000	50,000
Property and equipment, net	38,363	39,931
Operating lease right-of-use assets	18,937	—
Restricted cash	3,637	3,625
Other assets	5,019	111
Total long-term assets	95,956	93,667
Total assets	$ 385,547	$ 295,940
Liabilities, Series A preferred shares and shareholders' equity		
Current liabilities:		
Accounts payable	$ 11,464	$ 13,089
Accrued expenses and other current liabilities	11,632	14,736
Current portion of deferred rent	—	115
Current portion of deferred revenue	97,964	100,945
Current portion of lease incentive obligation	—	1,156
Current portion of operating lease liability	3,024	—
Total current liabilities	124,084	130,041
Long-term liabilities:		
Deferred rent, net of current portion	—	5,132
Deferred revenue, net of current portion	60,483	68,156
Lease incentive obligation, net of current portion	—	9,247
Operating lease liability, net of current portion	30,985	—
Other liabilities	1,897	2,142
Total long-term liabilities	93,365	84,677
Total liabilities	$ 217,449	$ 214,718
Series A preferred shares, no par value; 3,901,348 shares issued and outstanding at June 30, 2019 and December 31, 2018	$ 7,874	$ 7,874
Shareholders' equity:		
Ordinary shares, no par value; 34,266,260 and 29,472,197 shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively	$ 538,537	$ 375,148
Additional paid-in capital	47,270	37,768
Accumulated other comprehensive income	280	153
Accumulated deficit	(425,863)	(339,721)
Total shareholders' equity	$ 160,224	$ 73,348
Total liabilities, Series A preferred shares and shareholders' equity	$ 385,547	$ 295,940

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

WAVE LIFE SCIENCES LTD.
UNAUDITED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except share and per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Revenue	$ 7,628	$ 4,879	$ 10,654	$ 6,301
Operating expenses:				
Research and development	41,605	32,547	81,718	61,743
General and administrative	11,640	8,905	22,541	16,906
Total operating expenses	53,245	41,452	104,259	78,649
Loss from operations	(45,617)	(36,573)	(93,605)	(72,348)
Other income, net:				
Dividend income	1,544	934	2,968	1,290
Interest income, net	8	4	19	11
Other income (expense), net	2,123	(259)	4,476	84
Total other income, net	3,675	679	7,463	1,385
Loss before income taxes	(41,942)	(35,894)	(86,142)	(70,963)
Income tax provision	—	—	—	(172)
Net loss	$ (41,942)	$ (35,894)	$ (86,142)	$ (71,135)
Net loss per share attributable to ordinary shareholders—basic and diluted	$ (1.22)	$ (1.23)	$ (2.58)	$ (2.49)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted	34,260,298	29,144,466	33,433,322	28,535,149
Other comprehensive income (loss):				
Net loss	$ (41,942)	$ (35,894)	$ (86,142)	$ (71,135)
Foreign currency translation	30	36	127	85
Comprehensive loss	$ (41,912)	$ (35,858)	$ (86,015)	$ (71,050)

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

WAVE LIFE SCIENCES LTD.
UNAUDITED CONSOLIDATED STATEMENTS OF SERIES A PREFERRED SHARES AND SHAREHOLDERS' EQUITY

(In thousands, except share amounts)

	Series A Preferred Shares		Ordinary Shares		Additional Paid-In-Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of January 1, 2018	3,901,348	$ 7,874	27,829,079	$ 310,038	$ 22,172	$ 116	$ (192,716)	$ 139,610
Share-based compensation	—	—	—	—	4,430	—	—	4,430
Vesting of RSUs	—	—	38,594	—	—	—	—	—
Option exercises	—	—	125,664	1,553	—	—	—	1,553
Impact of 2016-16 adoption	—	—	—	—	—	—	(352)	(352)
Other comprehensive income	—	—	—	—	—	49	—	49
Net loss	—	—	—	—	—	—	(35,241)	(35,241)
Balance at March 31, 2018	3,901,348	$ 7,874	27,993,337	$ 311,591	$ 26,602	$ 165	$ (228,309)	$ 110,049
Issuance of ordinary shares	—	—	1,096,892	60,000	—	—	—	60,000
Share-based compensation	—	—	—	—	3,545	—	—	3,545
Option exercises	—	—	203,121	1,560	—	—	—	1,560
Other comprehensive income	—	—	—	—	—	36	—	36
Net loss	—	—	—	—	—	—	(35,894)	(35,894)
Balance at June 30, 2018	3,901,348	$ 7,874	29,293,350	$ 373,151	$ 30,147	$ 201	$ (264,203)	$ 139,296

	Series A Preferred Shares		Ordinary Shares		Additional Paid-In-Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of January 1, 2019	3,901,348	$ 7,874	29,472,197	$ 375,148	$ 37,768	$ 153	$ (339,721)	$ 73,348
Issuance of ordinary shares	—	—	4,542,500	161,785	—	—	—	161,785
Share-based compensation	—	—	—	—	4,345	—	—	4,345
Vesting of RSUs	—	—	110,187	—	—	—	—	—
Option exercises	—	—	130,522	1,481	—	—	—	1,481
Other comprehensive income	—	—	—	—	—	97	—	97
Net loss	—	—	—	—	—	—	(44,200)	(44,200)
Balance at March 31, 2019	3,901,348	$ 7,874	34,255,406	$ 538,414	$ 42,113	$ 250	$ (383,921)	$ 196,856
Issuance of ordinary shares	—	—	—	7	—	—	—	7
Share-based compensation	—	—	—	—	5,157	—	—	5,157
Option exercises	—	—	10,854	116	—	—	—	116
Other comprehensive income	—	—	—	—	—	30	—	30
Net loss	—	—	—	—	—	—	(41,942)	(41,942)
Balance at June 30, 2019	3,901,348	$ 7,874	34,266,260	$ 538,537	$ 47,270	$ 280	$ (425,863)	$ 160,224

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

WAVE LIFE SCIENCES LTD.
UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Six Months Ended June 30,	
	2019	**2018**
Cash flows from operating activities		
Net loss	$ (86,142)	$ (71,135)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Amortization of lease incentive obligation	—	(269)
Amortization of right-of-use assets	776	—
Depreciation of property and equipment	3,637	2,409
Share-based compensation expense	9,502	7,975
Net loss on disposal of property and equipment	—	54
Deferred rent	—	670
Changes in operating assets and liabilities:		
Accounts receivable	10,000	(64,000)
Prepaid expenses and other current assets	142	(4,258)
Other non-current assets	(4,908)	(10)
Accounts payable	(960)	(312)
Accrued expenses and other current liabilities	(3,104)	(769)
Deferred revenue	(10,654)	168,699
Operating lease liabilities	(1,354)	—
Other non-current liabilities	(245)	(86)
Net cash (used in) provided by operating activities	(83,310)	38,968
Cash flows from investing activities		
Purchases of property and equipment	(2,107)	(3,086)
Net cash used in investing activities	(2,107)	(3,086)
Cash flows from financing activities		
Proceeds from issuance of ordinary shares, net of offering costs	161,792	60,000
Payments on capital lease obligation	—	(16)
Proceeds from the exercise of share options	1,597	3,113
Net cash provided by financing activities	163,389	63,097
Effect of foreign exchange rates on cash, cash equivalents and restricted cash	127	(45)
Net increase in cash, cash equivalents and restricted cash	78,099	98,934
Cash, cash equivalents and restricted cash, beginning of period	178,444	146,113
Cash, cash equivalents and restricted cash, end of period	$ 256,543	$ 245,047

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

1. THE COMPANY

Organization

Wave Life Sciences Ltd. (together with its subsidiaries, "Wave" or the "Company") is a clinical-stage genetic medicines company committed to delivering life-changing treatments for people battling devastating diseases. PRISM, Wave's proprietary discovery and drug development platform, enables Wave to target genetically defined diseases with stereopure oligonucleotides across multiple therapeutic modalities.

The Company was incorporated in Singapore on July 23, 2012 and has its principal U.S. office in Cambridge, Massachusetts. The Company was incorporated with the purpose of combining two commonly held companies, Wave Life Sciences USA, Inc. ("Wave USA"), a Delaware corporation (formerly Ontorii, Inc.), and Wave Life Sciences Japan, Inc. ("Wave Japan"), a company organized under the laws of Japan (formerly Chiralgen., Ltd.), which occurred on September 13, 2012. On May 31, 2016, Wave Life Sciences Ireland Limited ("Wave Ireland") was formed as a wholly-owned subsidiary of Wave Life Sciences Ltd. On April 3, 2017, Wave Life Sciences UK Limited ("Wave UK") was formed as a wholly-owned subsidiary of Wave Life Sciences Ltd.

The Company's primary activities since inception have been developing PRISM to design, develop and commercialize oligonucleotide therapeutics, advancing the Company's neurology business, building the Company's research and development activities in ophthalmology and hepatic, advancing programs into the clinic, furthering clinical development of such clinical-stage programs, building the Company's intellectual property, and assuring adequate capital to support these activities.

Risks and Uncertainties

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, developing internal manufacturing capabilities, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. The Company's therapeutic programs will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercialization of any product candidates. These efforts require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities. There can be no assurance that the Company's research and development efforts will be successful, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies.

Basis of Presentation

The Company has prepared the accompanying consolidated financial statements in conformity with generally accepted accounting principles in the United States ("U.S. GAAP") and in U.S. dollars.

2. SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies described in the Company's audited financial statements as of and for the year ended December 31, 2018, and the notes thereto, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission ("SEC") on March 1, 2019, as amended (the "2018 Annual Report on Form 10-K"), have had no material changes during the three and six months ended June 30, 2019, other than the Company's adoption of Accounting Standards Codification ("ASC") Topic 842, Leases ("ASC 842") which is discussed in detail in this note.

Unaudited Interim Financial Data

The accompanying interim consolidated balance sheet as of June 30, 2019, the related interim consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2019 and 2018, the consolidated statements of Series A preferred shares and shareholders' equity for the three months ended March 31, and June 30, 2019 and 2018, the consolidated statement of cash flows for the six months ended June 30, 2019 and 2018, and the related interim information contained within the notes to the consolidated financial statements have been prepared in accordance with the rules and regulations of the SEC for interim financial information. Accordingly, they do not include all of the information and the notes required by U.S. GAAP for complete financial

statements. The financial data and other information disclosed in these notes related to the three and six months ended June 30, 2019 and 2018 are unaudited. In the opinion of management, the unaudited interim consolidated financial statements reflect all adjustments, consisting of normal and recurring adjustments, necessary for the fair presentation of the Company's financial position and results of operations for the three and six months ended June 30, 2019 and 2018. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the year ending December 31, 2019 or any other interim period or future year or period.

Principles of Consolidation

The Company's consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Leases

Effective January 1, 2019, the Company adopted the new leases standard, ASC 842, using the required modified retrospective approach and utilizing the effective date as its date of initial application, for which prior periods are presented in accordance with the previous guidance in ASC 840, Leases ("ASC 840").

The adoption of this standard resulted in the recognition of operating lease liabilities and right-of-use assets of $35.4 million and $19.7 million, respectively, as well as the derecognition of the deferred rent and lease incentive obligation balances which reduced the right-of-use asset on the Company's balance sheet as of January 1, 2019 relating to its leases for its corporate headquarters in Cambridge, Massachusetts and for its manufacturing, laboratory and office facility in Lexington, Massachusetts. The adoption of the standard did not have a material effect on the Company's consolidated statements of operation and comprehensive loss or consolidated statements of cash flows.

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement. Most leases with a term greater than one year are recognized on the balance sheet as right-of-use assets and short-term and long-term lease liabilities, as applicable. The Company has elected not to recognize on the balance sheet leases with terms of 12 months or less. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will renew the lease. The Company monitors its plans to renew its leases on a quarterly basis.

Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected remaining lease term. Certain adjustments to the right-of-use asset may be required for items such as incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rate, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. In transition to ASC 842, the Company utilized the remaining lease term of its leases in determining the appropriate incremental borrowing rates.

In accordance with ASC 842, components of a lease should be split into three categories: lease components (e.g., land, building, etc.), non-lease components (e.g., common area maintenance, consumables, etc.), and non-components (e.g., property taxes, insurance, etc.). The fixed and in-substance fixed contract consideration (including any consideration related to non-components) must be allocated based on the respective relative fair values to the lease components and non-lease components.

Although separation of lease and non-lease components is required, certain expedients are available. Entities may elect the practical expedient to not separate lease and non-lease components by class of underlying asset. Rather, entities would account for each lease component and the related non-lease component together as a single component. For new and amended leases beginning in 2019 and after, the Company has elected to account for the lease and non-lease components for leases for classes of all underlying assets and allocate all of the contract consideration to the lease component only.

Recently Issued Accounting Pronouncements

The recently issued accounting pronouncements described in the Company's audited financial statements as of and for the year ended December 31, 2018, and the notes thereto, which are included in the 2018 Annual Report on Form 10-K, have had no material changes during the six months ended June 30, 2019.

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, Leases ("ASU 2016-02"), which was further clarified when the FASB issued ASU No. 2018-10, Codification Improvements to Topic 842, Leases ("ASU 2018-10"), ASU No. 2018-11, Leases (Topic 842)—Targeted Improvements ("ASU 2018-11"), and ASU No. 2019-01, Codification Improvements to Topic 842, Leases ("ASU 2019-01"). The adoption of ASC 842, in accordance with ASU 2016-02, ASU 2018-10, ASU 2018-11, and ASU 2019-01, requires a lessee

to recognize assets and liabilities on the balance sheet for operating leases and change many key definitions, including the definition of a lease. The update includes a short-term lease exception for leases with a term of 12 months or less, in which a lessee can make an accounting policy election not to recognize lease assets and lease liabilities. Lessees will continue to differentiate between finance leases (previously referred to as capital leases) and operating leases, using classification criteria that are substantially similar to the previous guidance. For lessees, the recognition, measurement, and presentation of expenses and cash flows arising from a lease have not significantly changed from previous U.S. GAAP. Lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The modified retrospective approach includes a number of optional practical expedients that entities may elect to apply, as well as transition guidance specific to nonstandard leasing transactions. As further described above, the Company adopted ASC 842 on January 1, 2019 using a cumulative-effect adjustment on the effective date of the standard, for which comparative periods are presented in accordance with the previous guidance in ASC 840.

In adopting ASC 842, the Company elected to utilize the available package of practical expedients permitted under the transition guidance within the new standard, which does not require the reassessment of the following: i) whether existing or expired arrangements are or contain a lease, ii) the lease classification of existing or expired leases, and iii) whether previous initial direct costs would qualify for capitalization under the new lease standard. Additionally, the Company made an accounting policy election to not recognize on the balance sheet leases with a term of 12 months or less.

In February 2018, the FASB issued ASU No. 2018-02, Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (“ASU 2018-02”), which allows companies to make a one-time reclassification of the stranded tax effects (as defined by ASU 2018-02) from accumulated other comprehensive income to retained earnings as a result of the tax legislation enacted in December 2017, commonly known as the “Tax Cuts and Jobs Act.” The Company adopted ASU 2018-02 effective as of January 1, 2019 and applied it prospectively. The adoption did not have an impact on the Company’s consolidated financial statements.

3. JANUARY 2019 FOLLOW-ON UNDERWRITTEN PUBLIC OFFERING

On January 28, 2019, the Company closed a follow-on underwritten public offering of 3,950,000 ordinary shares for gross proceeds of $150.1 million, and on February 26, 2019, the Company closed on the sale of an additional 592,500 ordinary shares pursuant to the underwriters’ option (on the same terms and conditions as the initial closing) for gross proceeds of an additional $22.5 million (collectively, the “January 2019 Offering”). The net proceeds to the Company from the January 2019 Offering were $161.8 million, after deducting underwriting discounts and commissions and offering expenses.

4. SHARE-BASED COMPENSATION

The Wave Life Sciences Ltd. 2014 Equity Incentive Plan, as amended (the “2014 Plan”), authorizes the board of directors or a committee of the board of directors to, among other things, grant non-qualified share options, restricted awards, which includes restricted shares and time-based and performance-based restricted share units (“RSUs”) to eligible employees and directors of the Company. Options generally vest over periods of one to four years, and any options that are forfeited or cancelled are available to be granted again. The contractual life of options is generally five or ten years from the grant date. RSUs are either time-based or performance-based. Time-based RSUs generally vest over a period of one or four years. Performance-based RSUs vest upon the achievement of certain milestones. Any RSUs that are forfeited are available to be granted again.

During the six months ended June 30, 2019, the Company granted 12,200 options and 1,438,580 RSUs to employees. Of the RSUs granted, 464,640 were time-based RSUs and 973,940 were performance-based RSUs. Vesting of these performance-based RSUs is contingent on the occurrence of certain regulatory and commercial milestones.

As of June 30, 2019, 250,332 ordinary shares remained available for future grant under the 2014 Plan.

5. COLLABORATION AGREEMENTS

Pfizer Collaboration and Equity Agreements

In May 2016, the Company entered into a Research, License and Option Agreement (as amended in November 2017, the “Pfizer Collaboration Agreement”) with Pfizer Inc. (“Pfizer”). Pursuant to the terms of the Pfizer Collaboration Agreement, the Company and Pfizer agreed to collaborate on the discovery, development and commercialization of stereopure oligonucleotide therapeutics for up to five programs (the “Pfizer Programs”), each directed at a genetically-defined hepatic target selected by Pfizer (the “Pfizer Collaboration”). The Company received $10.0 million as an upfront license fee under the Pfizer Collaboration Agreement. Subject to option exercises by Pfizer, the Company may earn potential research, development and commercial milestone payments, plus royalties, tiered up to low double-digits, on sales of any products that may result from the Pfizer Collaboration. None of the payments under the Pfizer Collaboration Agreement are refundable.

Simultaneously with the entry into the Pfizer Collaboration Agreement, the Company entered into a Share Purchase Agreement (the "Pfizer Equity Agreement," and together with the Pfizer Collaboration Agreement, the "Pfizer Agreements") with C.P. Pharmaceuticals International C.V., an affiliate of Pfizer (the "Pfizer Affiliate"). Pursuant to the terms of the Pfizer Equity Agreement, the Pfizer Affiliate purchased 1,875,000 of the Company's ordinary shares (the "Shares") at a purchase price of $16.00 per share, for an aggregate purchase price of $30.0 million. The Company did not incur any material costs in connection with the issuance of the Shares.

Under the Pfizer Collaboration Agreement, the parties agreed to collaborate during a four-year research term. During the research term, the Company is responsible to use its commercially reasonable efforts to advance up to five programs through to the selection of clinical candidates. At that stage, Pfizer may elect to license any of these Pfizer Programs exclusively and obtain exclusive rights to undertake the clinical development of the resulting clinical candidates into products and the potential commercialization of any such products thereafter. In addition, the Company received a non-exclusive, royalty-bearing sublicensable license to use Pfizer's hepatic targeting technology in any of the Company's own hepatic programs that are outside the scope of the Pfizer Collaboration (the "Wave Programs"). If the Company uses this technology on the Wave Programs, Pfizer is eligible to receive potential development and commercial milestone payments from the Company. Pfizer is also eligible to receive tiered royalties on sales of any products that include Pfizer's hepatic targeting technology.

The stated term of the Pfizer Collaboration Agreement commenced on May 5, 2016 and terminates on the date of the last to expire payment obligation with respect to each Pfizer Program and, with respect to each Wave Program, expires on a program-by-program basis accordingly. Pfizer may terminate its rights related to a Pfizer Program under the Pfizer Collaboration Agreement at its own convenience upon 90 days' notice to the Company. The Company may also terminate its rights related to a Wave Program at its own convenience upon 90 days' notice to Pfizer. The Pfizer Collaboration Agreement may also be terminated by either party in the event of an uncured material breach of the Pfizer Collaboration Agreement by the other party.

Pfizer nominated two hepatic targets upon entry into the Pfizer Collaboration in May 2016. The Pfizer Collaboration Agreement provides Pfizer with options to nominate up to three additional programs by making nomination milestone payments. Pfizer nominated the third, fourth and fifth hepatic targets in August 2016, March 2018 and April 2018, respectively.

The Pfizer Collaboration is managed by a joint steering committee in which both parties are represented equally, which will oversee the scientific progression of each Pfizer Program up to the clinical candidate stage. During the four-year research term and for a period of two years thereafter, the Company has agreed to work exclusively with Pfizer with respect to using any of the Company's stereopure oligonucleotide technology that is specific for the applicable hepatic target which is the basis of any Pfizer Program. Within a specified period after receiving a data package for a candidate under each nominated program, Pfizer may exercise an option to obtain a license to develop, manufacture and commercialize the program candidate by paying an exercise price per program.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, Pfizer, is a customer. The Company identified the following promises under the arrangement: (1) the non-exclusive, royalty-free research and development license; (2) the research and development services for Programs 1 and 2; (3) the program nomination options for Programs 3, 4 and 5; (4) the research and development services associated with Programs 3, 4 and 5; (5) the options to obtain a license to develop, manufacture and commercialize Programs 1 and 2; and (6) the options to obtain a license to develop, manufacture and commercialize Programs 3, 4 and 5. The research and development services for each of Programs 1 and 2 were determined to not be distinct from the research and development license and should be combined into a single performance obligation for each program. The promises under the Pfizer Collaboration Agreement relate primarily to the research and development required by the Company for each of the programs nominated by Pfizer.

Additionally, the Company determined that the program nomination options for Programs 3, 4 and 5 were priced at a discount and, as such, provide material rights to Pfizer, representing three separate performance obligations. The research and development services associated with Programs 3, 4 and 5 and the options to obtain a license to develop, manufacture and commercialize Programs 3, 4 and 5 are subject to Pfizer's exercise of the program nomination options for such programs and therefore do not represent performance obligations at the outset of the arrangement. The options to obtain a license to develop, manufacture and commercialize Programs 1 and 2 do not represent material rights; as such, they are not representative of performance obligations at the outset of the arrangement. Based on these assessments, the Company identified five performance obligations in the Pfizer Collaboration Agreement: (1) research and development services and license for Program 1; (2) research and development services and license for Program 2; (3) material right provided for the option to nominate Program 3; (4) material right provided for the option to nominate Program 4; and (5) material right provided for the option to nominate Program 5.

At the outset of the arrangement, the transaction price included only the $10.0 million up-front consideration received. The Company determined that the Pfizer Collaboration Agreement did not contain a significant financing component. The program nomination option exercise fees for research and development services associated with Programs 3, 4 and 5 that may be received are excluded from the transaction price until each customer option is exercised. The potential milestone payments were excluded from the transaction price, as all milestone amounts were fully constrained at the inception of the Pfizer Collaboration Agreement. The exercise fees for the options to obtain a license to develop, manufacture and commercialize Programs 3, 4 and 5 that may be received are excluded from the transaction price until each customer option is exercised. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and, if necessary, will adjust its estimate of the transaction price.

During the year ended December 31, 2017, it became probable that a significant reversal of cumulative revenue would not occur for a developmental milestone under the Pfizer Collaboration Agreement. At such time, the associated consideration was added to the estimated transaction price and allocated to the existing performance obligations, and the Company recognized a cumulative catch-up to revenue for this developmental milestone, representing the amount that would have been recognized had the milestone payment been included in the transaction price from the outset of the arrangement. The remainder will be recognized in the same manner as the remaining, unrecognized transaction price over the remaining period until each performance obligation is satisfied.

Revenue associated with the performance obligations relating to Programs 1 and 2 is being recognized as revenue as the research and development services are provided using an input method, according to the full-time employee ("FTE") hours incurred on each program and the FTE hours expected to be incurred in the future to satisfy the performance obligation. The transfer of control occurs over time and, in management's judgment, this input method is the best measure of progress towards satisfying the performance obligation. The amount allocated to the three material rights will be recognized as the underlying research and development services are provided commencing from the date that Pfizer exercises each respective option, or immediately as each option expires unexercised. The amounts received that have not yet been recognized as revenue are recorded in deferred revenue on the Company's consolidated balance sheet.

Pfizer nominated the third, fourth and fifth hepatic targets in August 2016, March 2018 and April 2018, respectively. Upon each exercise, the Company allocated the transaction price amount allocated to the material right at inception of the arrangement plus the program nomination option exercise fee paid by Pfizer at the time of exercising the option to a new performance obligation, which will be recognized as revenue as the research and development services are provided using the same method as the performance obligations relating to Programs 1 and 2.

Through June 30, 2019, the Company had recognized revenue of $14.5 million as collaboration revenue in the Company's consolidated statements of operations and comprehensive loss under the Pfizer Collaboration Agreement. During the three and six months ended June 30, 2019, the Company recognized revenue of $4.1 million and $4.6 million, respectively, under the Pfizer Collaboration Agreement. During the three and six months ended June 30, 2018, the Company recognized revenue of $1.4 million and $2.8 million, respectively, under the Pfizer Collaboration Agreement. The aggregate amount of the transaction price allocated to the Company's partially unsatisfied performance obligations and recorded in deferred revenue at June 30, 2019 is $4.0 million, all of which is included in current liabilities. The Company expects to recognize this amount according to FTE hours incurred, over the remaining research term, which is 10 months as of June 30, 2019.

Takeda Collaboration and Equity Agreements

In February 2018, Wave USA and Wave UK entered into a global strategic collaboration (the "Takeda Collaboration") with Takeda Pharmaceutical Company Limited ("Takeda"), pursuant to which Wave USA, Wave UK and Takeda agreed to collaborate on the research, development and commercialization of oligonucleotide therapeutics for disorders of the Central Nervous System ("CNS"). The Takeda Collaboration provides Wave with at least $230.0 million in committed cash and Takeda with the option to co-develop and co-commercialize Wave's CNS development programs in (1) Huntington's disease ("HD"); (2) amyotrophic lateral sclerosis ("ALS") and frontotemporal dementia ("FTD"); and (3) Wave's discovery-stage program targeting *ATXN3* for the treatment of spinocerebellar ataxia 3 ("SCA3") (collectively, "Category 1 Programs"). In addition, Takeda will have the right to exclusively license multiple preclinical programs for CNS disorders, including Alzheimer's disease and Parkinson's disease (collectively, "Category 2 Programs"). In April 2018, the Takeda Collaboration became effective and Takeda paid Wave $110.0 million as an upfront payment. Takeda also agreed to fund Wave's research and preclinical activities in the amount of $60.0 million during the four-year research term and to reimburse Wave for any collaboration-budgeted research and preclinical expenses incurred by Wave that exceed that amount.

Simultaneously with Wave USA and Wave UK's entry into the collaboration and license agreement with Takeda (the "Takeda Collaboration Agreement"), the Company entered into a share purchase agreement with Takeda (the "Takeda Equity Agreement," and together with the Takeda Collaboration Agreement, the "Takeda Agreements") pursuant to which it agreed to sell to Takeda 1,096,892 of its ordinary shares at a purchase price of $54.70 per share. In April 2018, the Company closed the Takeda Equity Agreement and received aggregate cash proceeds of $60.0 million. The Company did not incur any material costs in connection with the issuance of shares.

With respect to Category 1 Programs, Wave will be responsible for researching and developing products and companion diagnostics for Category 1 Programs through completion of the first proof of mechanism study for such products. Takeda will have an exclusive option for each target and all associated products and companion diagnostics for such target, which it may exercise at any time through completion of the proof of mechanism study. If Takeda exercises this option, Wave will receive an opt-in payment and will lead manufacturing and joint clinical co-development activities and Takeda will lead joint co-commercial activities in the United States and all commercial activities outside of the United States. Global costs and potential profits will be shared 50:50 and Wave will be eligible to receive development and commercial milestone payments. In addition to its 50% profit share, Wave is eligible to receive option exercise fees and development and commercial milestone payments for each of the Category 1 Programs.

With respect to Category 2 Programs, Wave has granted Takeda the right to exclusively license multiple preclinical programs during a four-year research term (subject to limited extension for programs that were initiated prior to the expiration of the research term, in accordance with the Takeda Collaboration Agreement) ("Category 2 Research Term"). During that term, the parties may collaborate on preclinical programs for up to six targets at any one time. Wave will be responsible for researching and preclinically developing products and companion diagnostics directed to the agreed upon targets through completion of IND-enabling studies in the first major market country. Thereafter, Takeda will have an exclusive worldwide license to develop and commercialize products and companion diagnostics directed to such targets, subject to Wave's retained rights to lead manufacturing activities for products directed to such targets. Takeda will fund Wave's research and preclinical activities in the amount of $60.0 million during the research term and will reimburse Wave for any collaboration-budgeted research and preclinical expenses incurred by Wave that exceed that amount. Wave is also eligible to receive tiered high single-digit to mid-teen royalties on Takeda's global commercial sales of products from each Category 2 Program.

Under the Takeda Collaboration Agreement, each party grants to the other party specific intellectual property licenses to enable the other party to perform its obligations and exercise its rights under the Takeda Collaboration Agreement, including license grants to enable each party to conduct research, development and commercialization activities pursuant to the terms of the Takeda Collaboration Agreement.

The term of the Takeda Collaboration Agreement commenced on April 2, 2018 and, unless terminated earlier, will continue until the date on which: (i) with respect to each Category 1 Program target for which Takeda does not exercise its option, the expiration or termination of the development program with respect to such target; (ii) with respect to each Category 1 Program target for which Takeda exercises its option, the date on which neither party is researching, developing or manufacturing any products or companion diagnostics directed to such target; or (iii) with respect to each Category 2 Program target, the date on which royalties are no longer payable with respect to products directed to such target.

Takeda may terminate the Takeda Collaboration Agreement for convenience on 180 days' notice, in its entirety or on a target-by-target basis. Subject to certain exceptions, each party has the right to terminate the Takeda Collaboration Agreement on a target-by-target basis if the other party, or a third party related to such party, challenges the patentability, enforceability or validity of any patents within the licensed technology that cover any product or companion diagnostic that is subject to the Takeda Collaboration Agreement. In the event of any material breach of the Takeda Collaboration Agreement by a party, subject to cure rights, the other party may terminate the Takeda Collaboration Agreement in its entirety if the breach relates to all targets or on a target-by-target basis if the breach relates to a specific target. In the event that Takeda and its affiliates cease development, manufacturing and commercialization activities with respect to compounds or products subject to the Takeda Collaboration Agreement and directed to a particular target, Wave may terminate the Takeda Collaboration Agreement with respect to such target. Either party may terminate the Takeda Collaboration Agreement for the other party's insolvency. In certain termination circumstances, Wave would receive a license from Takeda to continue researching, developing and manufacturing certain products, and companion diagnostics.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, Takeda, is a customer for Category 1 Programs prior to Takeda exercising its option, and for Category 2 Programs during the Category 2 Research Term. The Company identified the following material promises under the arrangement: (1) the non-exclusive, royalty-free research and development license for each Category 1 Program; (2) the research and development services for each Category 1 Program through completion of the first proof of mechanism study; (3) the exclusive option to license, co-develop and co-commercialize each Category 1 Program; (4) the right to exclusively license the Category 2 Programs; and (5) the research and preclinical development services of the Category 2 Programs through completion of IND-enabling studies. The research and development services for each Category 1 Program were determined to not be distinct from the research and development license and should therefore be combined into a single performance obligation for each Category 1 Program. The research and preclinical development services for the Category 2 Programs were determined to not be distinct from the exclusive licenses for the Category 2 Programs and should therefore be combined into a single performance obligation.

Additionally, the Company determined that the exclusive option for each Category 1 Program was priced at a discount, and, as such, provide material rights to Takeda, representing three separate performance obligations. Based on these assessments, the Company identified seven performance obligations in the Takeda Collaboration Agreement: (1) research and development services through completion of the first proof of mechanism and non-exclusive research and development license for HD; (2) research and development services through completion of the first proof of mechanism and non-exclusive research and development license for ALS and FTD; (3) research and development services through completion of the first proof of mechanism and non-exclusive research and development license for SCA3; (4) the material right provided for the exclusive option to license, co-develop and co-commercialize HD; (5) the material right provided for the exclusive option to license, co-develop and co-commercialize ALS and FTD; (6) the material right provided for the exclusive option to license, co-develop and co-commercialize SCA3; and (7) the research and preclinical development services and right to exclusively license the Category 2 Programs.

At the outset of the arrangement, the transaction price included the $110.0 million upfront consideration received and the $60.0 million of committed research and preclinical funding for the Category 2 Programs. The Company determined that the Takeda Collaboration Agreement did not contain a significant financing component. The option exercise fees to license, co-develop and co-commercialize each Category 1 Program that may be received are excluded from the transaction price until each customer option is

exercised. The potential milestone payments were excluded from the transaction price, as all milestone amounts were fully constrained at the inception of the Takeda Collaboration Agreement. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, if necessary, will adjust its estimate of the transaction price.

Revenue associated with the research and development services for each Category 1 Program performance obligation is being recognized as the research and development services are provided using an input method, according to the costs incurred on each Category 1 Program and the total costs expected to be incurred to satisfy each Category 1 Program performance obligation. Revenue associated with the research and preclinical development services for the Category 2 Programs performance obligation is being recognized as the research and preclinical development services are provided using an input method, according to the costs incurred on Category 2 Programs and the total costs expected to be incurred to satisfy the performance obligation. The transfer of control for these performance obligations occurs over time and, in management's judgment, this input method is the best measure of progress towards satisfying the performance obligations. The amount allocated to the material right for each Category 1 Program option will be recognized on the date that Takeda exercises each respective option, or immediately as each option expires unexercised. The amounts received that have not yet been recognized as revenue are recorded in deferred revenue on the Company's consolidated balance sheet.

Through June 30, 2019, the Company had recognized revenue of $15.6 million as collaboration revenue in the Company's consolidated statements of operations and comprehensive loss under the Takeda Collaboration Agreement. During the three and six months ended June 30, 2019, the Company recognized revenue of $3.6 million and $6.0 million, respectively, in the Company's consolidated statements of operations and comprehensive loss under the Takeda Collaboration Agreement. During the three and six months ended June 30, 2018, the Company recognized revenue of $3.5 million in the Company's consolidated statements of operations and comprehensive loss under the Takeda Collaboration Agreement. The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and recorded in deferred revenue at June 30, 2019 is $154.4 million, of which $93.9 million is included in current liabilities. The Company expects to recognize revenue for the portion of the deferred revenue that relates to the research and development services for each Category 1 Program and the Category 2 Programs as costs are incurred, over the remaining research term. The Company expects to recognize revenue for the portion of the deferred revenue that relates to the material right for each Category 1 Program option upon Takeda's exercise of such option, or immediately as each option expires unexercised. The aggregate amount of the transaction price included in accounts receivable at June 30, 2019 is $50.0 million, of which $20.0 million is included in current assets.

6. NET LOSS PER ORDINARY SHARE

The Company applies the two-class method to calculate its basic and diluted net loss per share attributable to ordinary shareholders, as its Series A preferred shares are participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to ordinary shareholders.

Basic loss per share is computed by dividing net loss attributable to ordinary shareholders by the weighted-average number of ordinary shares.

The Company's potentially dilutive shares, which include outstanding share options to purchase ordinary shares, RSUs and Series A preferred shares, are considered to be ordinary share equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

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

	As of June 30,	
	2019	2018
Options to purchase ordinary shares	3,794,682	3,959,402
RSUs	1,673,696	420,517
Series A preferred shares	3,901,348	3,901,348

Additionally, for the periods presented, the two-class method does not impact the net loss per ordinary share as the Company was in a net loss position for each of the periods presented and holders of Series A preferred shares do not participate in losses.

7. INCOME TAXES

During the three months ended June 30, 2019 and 2018, the Company recorded no income tax provision. During the six months ended June 30, 2019 and 2018, the Company recorded no income tax provision and an income tax provision of $0.2 million, respectively. The income tax provision recorded during the six months ended June 30, 2018 was due to return-to-provision adjustments related to the filing of Wave Japan's 2017 tax return.

The Company maintained a full valuation allowance for the three and six months ended June 30, 2019 and 2018 in all jurisdictions due to uncertainty regarding future taxable income.

The Company's reserves related to taxes and its accounting for uncertain tax positions are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more-likely-than-not to be realized following resolution of any potential contingencies present related to the tax benefit.

8. LEASES

The Company enters into lease arrangements for its facilities. A summary of the arrangements are as follows:

Operating Leases

On September 26, 2016, and as amended on December 31, 2016, the Company entered into a 10 year and 9 month lease, which includes two successive five year renewal options, for its facility in Lexington, Massachusetts, which the Company uses primarily for its cGMP manufacturing, as well as for additional laboratory and office space. Throughout the term of the lease, the Company is responsible for paying certain costs and expenses, in addition to the rent, as specified in the lease, including a proportionate share of applicable taxes, operating expenses and utilities. As required under the terms of the lease agreement, the Company has placed restricted cash of $2.6 million in a separate bank account at June 30, 2019 and December 31, 2018.

As of December 31, 2018, the Company has received the $11.4 million of tenant improvement allowances to which it was entitled under the lease for the Lexington, Massachusetts facility. In applying the ASC 842 transition guidance, the Company utilized the operating classification and recorded a lease liability and a right-of-use asset on the ASC 842 effective date, with the lease incentive obligation being de-recognized and serving to reduce the right-of-use asset.

In April 2015, the Company entered into a lease agreement for an office and laboratory facility in Cambridge, Massachusetts, which commenced in October 2015 with a term of 7.5 years and a five-year renewal option to extend the lease. As required under the terms of the lease agreement, the Company has placed restricted cash of $1.0 million in a separate bank account at June 30, 2019 and December 31, 2018. In applying the ASC 842 transition guidance, the Company classified this lease as an operating lease and recorded a right-of-use asset and lease liability on the effective date.

The following table contains a summary of the lease costs recognized under ASC 842 and other information pertaining to the Company's operating leases for the six months ended June 30, 2019:

	For the Six Months Ended June 30, 2019
	(in thousands)
Lease cost	
Operating lease cost	$ 2,236
Total lease cost	$ 2,236
Other information	
Operating cash flows used for operating leases	$ 2,813
Operating lease liabilities arising from obtaining right-of-use assets	$ —
Weighted average remaining lease term	7.8 years
Weighted average discount rate	8.5%

Future minimum lease payments under the Company's non-cancelable operating leases as of June 30, 2019, are as follows:

	As of June 30, 2019
	(in thousands)
2019	$ 2,862
2020	5,846
2021	6,021
2022	6,201
2023	5,236
Thereafter	20,927
Total lease payments	$ 47,093
Less: imputed interest	(13,084)
Total operating lease liabilities	$ 34,009

9. GEOGRAPHIC DATA

Substantially all of the Company's long-lived assets were located in the United States as of June 30, 2019 and December 31, 2018.

10. RELATED PARTIES

The Company had the following related party transaction for the periods presented in the accompanying consolidated financial statements, which has not otherwise been discussed in these notes to the consolidated financial statements:

- In 2012, the Company entered into a consulting agreement for scientific advisory services with Dr. Gregory L. Verdine, one of the Company's founders and a member of the Company's board of directors. The consulting agreement does not have a specific term and may be terminated by either party upon 14 days' prior written notice. Pursuant to the consulting agreement, the Company pays Dr. Verdine approximately $13 thousand per month, plus reimbursement for certain expenses.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission ("SEC") on March 1, 2019, as amended (the "2018 Annual Report on Form 10-K"). Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report on Form 10-Q, our actual results could differ materially from the results described in, or implied by, these forward-looking statements.

Overview

We are a clinical-stage genetic medicines company committed to delivering life-changing treatments for people battling devastating diseases. Using PRISM, our proprietary discovery and drug development platform that enables the precise design, optimization and production of novel stereopure oligonucleotides, we aspire to develop best in class medicines across multiple therapeutic modalities.

Nucleic acid therapeutics, including oligonucleotides, are a growing and innovative class of drugs comprised of a sequence of nucleotides that are linked together by a backbone of chemical bonds. We are initially developing oligonucleotides that target the ribonucleic acid ("RNA") to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins. RNA is a critical molecule that can adopt complex three-dimensional structures and affect various cellular functions. By intervening at the RNA level, we have the potential to address diseases that have historically been difficult to treat with small molecules or biologics. Oligonucleotides have additional advantages as a therapeutic class including the ability to target multiple tissue types, often without the need for a delivery vehicle, and the ability to modulate the frequency of dosing to ensure broad distribution within tissues and account for cell turnover. Oligonucleotides also have well-established manufacturing processes and validated test methods based on decades of improvements.

The oligonucleotides we are developing with PRISM are stereopure. A stereopure oligonucleotide is comprised of molecules with atoms precisely arranged in three-dimensional orientations at each linkage. We believe that controlling the position of the sulfur atom following phosphorothioate ("PS") modification will optimize the pharmacological profile of our oligonucleotides by maximizing the potential therapeutic benefit while minimizing the potential for side effects and safety risks. The stereopure oligonucleotides we are developing differ from the mixture-based oligonucleotides currently on the market or in development by others. Our preclinical studies have demonstrated that our stereopure oligonucleotides may achieve superior pharmacological properties compared with mixture-based oligonucleotides. Through our work in developing stereopure oligonucleotides, we have created and continue to evolve PRISM, our proprietary discovery and drug development platform.

PRISM enables us to target genetically defined diseases with stereopure oligonucleotides across multiple therapeutic modalities. PRISM combines our unique ability to construct stereopure oligonucleotides with a deep understanding of how the interplay among oligonucleotide sequence, chemistry and backbone stereochemistry impacts key pharmacological properties. By exploring these interactions through iterative analysis of *in vitro* and *in vivo* outcomes and artificial intelligence-driven predictive modeling, we continue to define design principles that we deploy across programs to rapidly develop and manufacture clinical candidates that meet pre-defined product profiles.

Our goal is to develop and commercialize disease-modifying medicines for genetically defined diseases with a high degree of unmet medical need, and to become a fully integrated genetic medicines company. Our initial focus for our clinical development programs is in neurology, which we broadly define as genetic diseases within the neuromuscular system and central nervous system. We are conducting clinical trials of suvodirsen, our lead program in Duchenne muscular dystrophy ("DMD") targeting exon 51, and our two lead programs in Huntington's disease ("HD"). We are also advancing additional development programs in DMD, amyotrophic lateral sclerosis, frontotemporal dementia and spinocerebellar ataxia 3. In addition to neurology, we are advancing discovery research in ophthalmologic disorders, specifically inherited retinal diseases, and in hepatic diseases, and we expect to make continued investments in expanding the breadth of our portfolio. In further support of our pipeline, we continue to make substantial investments in, and leverage, PRISM to potentially develop the next generation of stereopure oligonucleotides. We have also established and continue to enhance our internal current good manufacturing practices ("cGMP") manufacturing capabilities to increase control and visibility of our drug substance supply chain. These investments further improve our ability to secure drug substance for current and future development activities and may provide commercial-scale manufacturing capabilities.

Our Current Programs

*Estimates of U.S. prevalence and addressable population by target based on publicly available data and are approximate; for Huntington's disease, numbers approximate manifest and pre-manifest populations, respectively.
†During a four-year term, Wave and Takeda may collaborate on up to six preclinical targets at any one time.
A.A.: Accelerated approval; ALS: Amyotrophic lateral sclerosis; FTD: Frontotemporal dementia; CNS: Central nervous system

Additional details regarding our programs are set forth below.

Neurology: Muscle

- *Duchenne muscular dystrophy (DMD) exon 51*: DMD is a genetic disorder caused by mutations in the *DMD* gene that result in dysfunctional dystrophin protein. DMD impacts approximately one in every 5,000 newborn boys each year, resulting in approximately 20,000 new cases worldwide annually. In DMD, we are advancing suvodirsen (WVE-210201), which targets exon 51, a region within the precursor messenger RNA ("pre-mRNA") that is transcribed from the dystrophin gene (also referred to as the "*DMD*" gene).

  Phase 1 Clinical Trial: In April 2019, we announced the results from our global, multicenter, double-blind, randomized, placebo-controlled, single-ascending dose Phase 1 clinical trial of suvodirsen administered intravenously and presented the results at the 2019 Muscular Dystrophy Association Clinical and Scientific Conference. The primary endpoint of the Phase 1 trial was safety and tolerability and the inclusion criteria allowed for participation by patients who are amenable to exon 51 skipping, ages 5-18, ambulatory and non-ambulatory, as well as those previously treated with eteplirsen or ataluren following an appropriate washout period. Thirty-six patients received a dose of 0.5 mg/kg, 1 mg/kg, 2 mg/kg, 5 mg/kg, 7 mg/kg or 10 mg/kg of suvodirsen (n=26) or placebo (n=10) in five ascending dose cohorts and were followed for 85 days. No serious adverse events, deaths or discontinuations due to adverse events were reported in any study patients treated with suvodirsen. Key findings from the patients treated with suvodirsen (n=24) in the first four cohorts (0.5 mg/kg – 5 mg/kg) and all placebo patients (n=10) include that: suvodirsen was generally safe and well tolerated; 67% of patients who received suvodirsen (16/24) and 80% of patients who received placebo (8/10) experienced one or more adverse events; the most common adverse events occurring in two or more patients who received suvodirsen were pyrexia, headache, vomiting and tachycardia, consistent with infusion associated reactions; adverse events in patients receiving suvodirsen were mild to moderate in intensity and resolved spontaneously or with symptomatic treatment; no clinically relevant changes were observed in renal or hepatic parameters or platelet levels; in patients receiving 5 mg/kg of suvodirsen, the adverse events that occurred within 24 hours of infusion were associated with transient increases in high-sensitivity C-reactive protein and complement Bb levels, both of which were resolved within a week; and no changes were observed in complement C3 levels.

  Open-label Extension of Phase 1 Clinical Trial: Suvodirsen is currently being studied in an ongoing, multi-dose, open-label extension (OLE) study initiated in August 2018 with patients from the Phase 1 clinical trial. Patients in the OLE are undergoing quarterly clinical assessments using validated clinical outcome measures and are having muscle biopsies taken so that an interim analysis may be conducted by measuring dystrophin expression using a standardized Western blot. We expect to deliver data from this interim analysis in the fourth quarter of 2019, which will include dystrophin expression

from muscle biopsies taken 22 weeks after patients enrolled in the OLE were transitioned to one of the Phase 2/3 doses of suvodirsen, as well as a safety summary. Data from this interim analysis are intended to be an important component of a submission to the U.S. Food and Drug Administration ("FDA") for accelerated approval of suvodirsen in the United States. Subject to receipt of positive data, we would expect to file such accelerated approval submission in the second half of 2020.

Phase 2/3 Clinical Trial: In June 2019, we announced the initiation of DYSTANCE 51, our global Phase 2/3, multicenter, randomized, double-blind, placebo-controlled clinical trial that will evaluate the efficacy and safety of suvodirsen in boys who are between 5 and 12 years of age (inclusive) with a genetically confirmed diagnosis of DMD amenable to exon 51 skipping therapy. The DYSTANCE 51 primary efficacy endpoints will measure change in dystrophin protein level and change in the North Star Ambulatory Assessment score. In addition, the trial will include multiple functional outcome measures as secondary efficacy endpoints. We intend to use the results of this trial to seek regulatory approvals globally. On January 3, 2019, we announced that the Phase 2/3 trial of suvodirsen had been selected for the FDA pilot program for complex innovative trial designs ("CID pilot program"). In evaluating submissions for the CID pilot program, the FDA considered two key criteria: the innovative features of the Phase 2/3 trial design and the therapeutic need (i.e., therapeutics being developed for use in disease areas where there are limited or no treatment options). Through the CID pilot program, we intend to reduce the number of patients required to deliver conclusive clinical efficacy results, thereby minimizing the number of patients required in the placebo treatment arm and potentially accelerating completion of the trial. This marks the first time that the FDA has selected clinical protocols for its CID pilot program that was announced in August 2018.

- *DMD exon 53*: Our second development program in DMD, WVE-N531, targets exon 53. Subject to our submission of clinical trial applications and approval to proceed, we would expect to deliver topline clinical data for WVE-N531 in the second half of 2020.
- *DMD additional exons*: Also in DMD, we are exploring programs targeting DMD exons 44, 45, 52, 54 and 55 and investigating alternative forms of delivery, including subcutaneous administration, for our existing and future DMD programs.
- *Other neuromuscular diseases*: In addition to DMD, we are conducting research to identify potential targets for other neuromuscular diseases where PRISM, our proprietary discovery and drug development platform, may be most effective.

Neurology: Central Nervous System ("CNS")

- *Huntington's Disease (HD)*: In HD, we are advancing two programs, WVE-120101 and WVE-120102, where each is a distinct stereopure antisense oligonucleotide designed to selectively target the mutant huntingtin (mHTT) mRNA transcript of a disease-associated single nucleotide polymorphism ("SNP") within the *huntingtin* gene ("*HTT*"): rs362307 ("HTT SNP1") and rs362331 ("HTT SNP2"), respectively. Approximately 50% of the HD population carries SNP1 or SNP2 and, with overlap, up to 70% of the HD population carries either SNP1, SNP2 or both. Targeting mRNA transcript with these SNPs allows us to lower the mutant allele transcript, while leaving the healthy transcript relatively intact. The healthy transcript is required to produce healthy HTT protein which is important for neuronal function. We commonly refer to this method (or approach) as "allele selective targeting." SNPs are naturally occurring variations within a given genetic sequence and in certain instances can be used to distinguish between two related copies of a gene where only one is associated with the expression of a disease-causing protein. Our allele selective approach may also enable us to address the pre-manifest, or asymptomatic, HD patient population in the future. We have shown that by targeting HTT SNP1 and HTT SNP2 in preclinical *in vitro* studies, the production of disease-causing proteins associated with HD can be reduced. As part of ongoing, required and routine toxicology support of our clinical programs, we continue to conduct *in vivo* nonclinical toxicology studies for WVE-120101 and WVE-120102. A recent *in vivo* micronucleus assay yielded results that require additional nonclinical studies that we are conducting.

  Phase 1b/2a Clinical Trials: In July 2017, we initiated PRECISION-HD, a global clinical program consisting of the PRECISION-HD1 and PRECISION-HD2 clinical trials. PRECISION-HD1 and PRECISION-HD2 are two parallel, multicenter, double-blind, randomized, placebo-controlled Phase 1b/2a clinical trials evaluating WVE-120101 and WVE-120102, respectively, administered intrathecally, consisting of single-ascending dose and multiple-ascending dose portions. The primary objective of these two trials is to assess the safety and tolerability of intrathecal doses of WVE-120101 and WVE-120102, respectively, in early manifest HD patients. Additional objectives include measurement of total HTT protein and mutant HTT protein, and exploratory pharmacokinetic, pharmacodynamic, clinical and MRI endpoints. Each trial is expected to enroll approximately 50 Stage I or Stage II HD patients, ages 25-65, who have screened positively for the presence of SNP1 or SNP2. Outside of the United States, we are conducting both the single-ascending dose and multiple-ascending dose portions of the PRECISION-HD1 and PRECISION-HD2 trials. In the United States, we received approvals to proceed with the single-dose portions of both trials. However, the FDA indicated to us that we cannot progress to the multiple-ascending dose portions of these trials in the United States unless we conduct an additional

preclinical study and present the resulting data to the FDA for its review. For the single-dose portion of the PRECISION-HD1 trial in the United States, escalation to our highest proposed doses is subject to the FDA's review and approval of additional monitoring plans.

For the PRECISION-HD2 trial, we expect to deliver topline clinical data from the four multi-dose cohorts by the end of 2019. For the PRECISION-HD1 trial, the first two multi-dose cohorts are expected to be complete by the end of 2019. Topline clinical data from the four multi-dose cohorts of the PRECISION-HD1 trial are expected in early 2020. We expect the topline clinical data from both PRECISION-HD trials to include a summary of clinical safety results, the degree of mutant huntingtin protein lowering in cerebrospinal fluid (CSF) at 20 weeks, and the ratio of total huntingtin versus mutant huntingtin protein in CSF at 20 weeks to assess wild-type huntingtin protein.

- *ALS and FTD*: In amyotrophic lateral sclerosis ("ALS") and frontotemporal dementia ("FTD"), we are advancing a new lead candidate (WVE-C092), which preferentially targets the transcript containing the GGGGCC ("G4C2") expansion in the *C9ORF72* gene. Based on preliminary preclinical data, we believe that this candidate may offer an improved profile over WVE-3972-01, our prior lead candidate. WVE-C092 is designed to minimize the impact on normal C9ORF72 protein in patients, thereby reducing potential on-target risk. The G4C2 expansion in the *C9ORF72* gene is the most common cause of familial ALS and FTD and is a strong genetic risk factor for non-inherited (sporadic) forms of ALS and FTD. Subject to our submission of clinical trial applications and approval to proceed, we would expect to initiate clinical development of WVE-C092 in the second half of 2020.
- *SCA3*: In spinocerebellar ataxia 3 ("SCA3"), we are advancing a lead candidate targeting *ATXN3*. SCA3 is a rare, hereditary (autosomal dominant), progressive, neurodegenerative disorder that is caused by a CAG-repeat expansion in the *ATXN3* gene.
- *Additional CNS Disorders*: We are collaborating with Takeda Pharmaceutical Company Limited ("Takeda") to advance genetically defined targets for the treatment of other CNS disorders, including Alzheimer's disease and Parkinson's disease. Under the terms of the agreement, we may collaborate with Takeda on up to six preclinical programs at any one time, during a four-year term. Takeda is entitled to exclusively license multiple preclinical programs from us during the term.

Ophthalmology

- We are designing and advancing stereopure oligonucleotides for the potential treatment of rare, inherited eye diseases. Our research is assessing four inherited retinal diseases, which typically begin in childhood or adolescence and commonly lead to progressive vision loss: retinitis pigmentosa due to a P23H mutation in the RHO gene, Stargardt disease, Usher syndrome type 2A and Leber congenital amaurosis 10. Our preclinical data demonstrate that a single intravitreal injection of stereopure oligonucleotide in the eye of non-human primates resulted in greater than 95% knockdown of a target RNA in the retina for at least four months. Based on these data, we are working to design candidates that could achieve a therapeutic effect with only two doses per year. We expect to announce our first ophthalmology candidate in the second half of 2019.

Hepatic

- We are collaborating with Pfizer to advance genetically defined targets for the treatment of metabolic diseases, bringing together our proprietary drug development platform across antisense and single-stranded RNAi modalities, along with GalNAc and Pfizer's hepatic targeting technology for delivery to the liver. We are advancing targets from discovery through the selection of clinical candidates, at which point Pfizer may elect to exclusively license programs and undertake further development and potential commercialization.

Financial Operations Overview

We have never been profitable, and since our inception, we have incurred significant operating losses. Our net loss was $86.1 million and $71.1 million in 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 $425.9 million and $339.7 million, respectively. We expect to incur significant expenses and increasing operating losses for the foreseeable future.

Revenue

We have not generated any product revenue since our inception and do not expect to generate any revenue from the sale of products for the foreseeable future. Our revenue during the three and six months ended June 30, 2019 and 2018 represents revenue earned under our two revenue-generating collaboration agreements: the Pfizer Collaboration Agreement (as defined in Note 5 in the notes to the unaudited consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q ("Note 5")), which was entered into in May 2016, and the Takeda Collaboration Agreement (as defined in Note 5), which became effective in April 2018.

Operating Expenses

Our operating expenses since inception have consisted primarily of research and development costs and general and administrative costs.

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, which include:

- compensation-related expenses, including employee salaries, bonuses, share-based compensation expense and other related benefits expenses for personnel in our research and development organization;
- expenses incurred under agreements with third parties, including contract research organizations ("CROs") that conduct research, preclinical and clinical activities on our behalf, as well as contract manufacturing organizations ("CMOs") that manufacture drug product for use in our preclinical studies and clinical trials;
- expenses incurred related to our internal manufacturing of drug substance for use in our preclinical studies and clinical trials;
- expenses related to compliance with regulatory requirements;
- expenses related to third-party consultants, including fees and share-based compensation;
- research and development supplies and services expenses; and
- facility-related expenses, including rent, maintenance and other general operating expenses.

We recognize research and development costs 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 vendors. 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 prepaid or accrued expenses.

Our primary research and development focus since inception has been the development of our proprietary discovery and drug development platform, PRISM. We are using PRISM to design, develop and commercialize a broad pipeline of nucleic acid therapeutic candidates.

Our research and development expenses consist primarily of expenses related to our CROs, CMOs, consultants, other external vendors and fees paid to global regulatory agencies to conduct our clinical trials, in addition to compensation-related expenses, internal manufacturing expenses, facility-related expenses and other general operating expenses. These expenses are incurred in connection with research and development efforts and our preclinical studies and clinical trials. We track certain external expenses on a program-by-program basis. However, we do not allocate compensation-related expenses, internal manufacturing expenses, equipment repairs and maintenance expense, facility-related expenses or other operating expenses to specific programs. These expenses, which are not allocated on a program-by-program basis, are included in the "PRISM and other research and development expenses" category along with other external expenses related to our discovery and development programs, as well as platform development and identification of potential drug discovery candidates.

The table below summarizes our research and development expenses incurred for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
	(in thousands)			
DMD programs	$ 12,560	$ 4,381	$ 25,008	$ 7,441
HD programs	4,879	4,287	8,317	7,341
ALS and FTD programs	644	2,521	1,370	4,098
PRISM and other research and development expenses (1)	23,522	21,358	47,023	42,863
Total research and development expenses	$ 41,605	$ 32,547	$ 81,718	$ 61,743

(1) Includes discovery and development programs, identification of potential drug discovery candidates, compensation-related expenses, internal manufacturing expenses, equipment repairs and maintenance expense, facility-related expenses and other operating expenses, which are not allocated to specific programs.

Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase in the foreseeable future as we continue to manage our existing clinical trials, initiate additional clinical trials, pursue later stages of clinical development, further expand our manufacturing capabilities and continue to discover and develop additional product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of compensation-related expenses, including salaries, bonuses, share-based compensation and other related benefits costs for personnel in our executive, finance, corporate, legal and administrative functions, as well as compensation-related expenses for our board of directors. General and administrative expenses also include legal fees; expenses associated with being a public company; professional fees for accounting, auditing, tax and consulting services; insurance costs; travel expenses; other operating costs; and facility-related expenses.

We anticipate that our general and administrative expenses will increase in the future, primarily due to additional compensation-related expenses, as we increase our employee headcount to support the growth in our research and development activities and the potential commercialization of our product candidates.

Other Income, Net

Other income, net consists primarily of refundable tax credits from tax authorities and dividend income earned on cash and cash equivalents balances. We recognize refundable tax credits when there is reasonable assurance that we will comply with the requirements of the refundable tax credit and that the refundable tax credit will be received.

Income Taxes

We are a Singapore multi-national company subject to taxation in the United States and various other jurisdictions.

Critical Accounting Policies and Significant Judgments and Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of our financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amount of assets, liabilities, revenue, costs and expenses and related disclosures.

Our significant accounting policies, judgments and estimates are described in Note 2 in the 2018 Annual Report on Form 10-K, as well as in Note 2 in the notes to the unaudited consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q. We believe that these identified policies are critical to fully understanding and evaluating our financial condition and results of operations. Furthermore, we believe that of our significant accounting policies, the estimates and assumptions involved in our revenue recognition policy, particularly (a) assessing the number of performance obligations; (b) determining the transaction price; (c) allocating the transaction price to the performance obligations in the contract; and (d) determining the pattern over which performance obligations are satisfied, including estimates to complete performance obligations, and the assumptions and estimates used in our analysis of contracts with our CROs and CMOs to estimate contract expense; involve a greater degree of judgment, and therefore we consider them to be our critical accounting policies. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions.

Results of Operations

Comparison of the three months ended June 30, 2019 and 2018

	Three Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Revenue	$ 7,628	4,879	$ 2,749
Operating expenses:			
Research and development	41,605	32,547	9,058
General and administrative	11,640	8,905	2,735
Total operating expenses	53,245	41,452	11,793
Loss from operations	(45,617)	(36,573)	(9,044)
Other income, net:	3,675	679	2,996
Loss before income taxes	(41,942)	(35,894)	(6,048)
Income tax provision	—	—	—
Net loss	$ (41,942)	$ (35,894)	$ (6,048)

Revenue

Revenue of $7.6 million and $4.9 million was earned under the Pfizer Collaboration Agreement and the Takeda Collaboration Agreement for the three months ended June 30, 2019 and 2018, respectively. The $2.7 million increase in revenue is primarily due to the completion of certain performance obligations under the Pfizer Collaboration Agreement.

Research and Development Expenses

	Three Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
DMD programs	$ 12,560	$ 4,381	$ 8,179
HD programs	4,879	4,287	592
ALS and FTD programs	644	2,521	(1,877)
PRISM and other research and development expenses (1)	23,522	21,358	2,164
Total research and development expenses	$ 41,605	$ 32,547	$ 9,058

(1) Includes discovery and development programs, identification of potential drug discovery candidates, compensation-related expenses, internal manufacturing expenses, equipment repairs and maintenance expense, facility-related expenses and other operating expenses, which are not allocated to specific programs.

Research and development expenses were $41.6 million for the three months ended June 30, 2019, compared to $32.5 million for the three months ended June 30, 2018. The increase of $9.1 million was due to the following:

- an increase of $8.2 million in external expenses related to our DMD programs, including suvodirsen, mainly due to our continued investment in suvodirsen clinical trial activities, including our ongoing open-label extension study and costs related to our Phase 2/3 DYSTANCE 51 trial;
- an increase of $0.6 million in external expenses related to our HD programs for our Phase 1b/2a clinical trials;
- a decrease of $1.9 million in external expenses related to our ALS and FTD programs; and
- an increase of $2.2 million in internal and external research and development expenses that are not allocated on a program-by-program basis and are related to other discovery and development programs, including our continued evolution of PRISM and the identification of potential drug discovery candidates, primarily due to increases in compensation-related expenses.

General and Administrative Expenses

General and administrative expenses were $11.6 million for the three months ended June 30, 2019, as compared to $8.9 million for the three months ended June 30, 2018. The increase of $2.7 million was primarily driven by increased compensation-related expenses, which are the result of organizational growth.

Other Income, Net

Other income, net for the three months ended June 30, 2019 and 2018 was $3.7 million and $0.7 million, respectively. The increase of $3.0 million in other income, net is primarily due to our estimated refundable tax credit related to the UK research and development tax credit regime for small and medium sized companies. Additionally, there was an increase in dividend income earned on our cash equivalents during the three months ended June 30, 2019.

Income Tax Provision

During the three months ended June 30, 2019 and 2018, we recorded no income tax provision. We maintained a full valuation allowance for the three months ended June 30, 2019 and 2018 in all jurisdictions due to uncertainty regarding future taxable income.

Comparison of the six months ended June 30, 2019 and 2018

	Six Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
Revenue	$ 10,654	6,301	$ 4,353
Operating expenses:			
Research and development	81,718	61,743	19,975
General and administrative	22,541	16,906	5,635
Total operating expenses	104,259	78,649	25,610
Loss from operations	(93,605)	(72,348)	(21,257)
Other income, net:	7,463	1,385	6,078
Loss before income taxes	(86,142)	(70,963)	(15,179)
Income tax provision	—	(172)	172
Net loss	$ (86,142)	$ (71,135)	$ (15,007)

Revenue

Revenue of $10.7 million and $6.3 million was earned under the Pfizer Collaboration Agreement and the Takeda Collaboration Agreement for the six months ended June 30, 2019 and 2018, respectively. The $4.4 million increase was due to increased revenue earned under both collaboration agreements. Revenue earned under the Pfizer Collaboration Agreement increased due to the completion of certain performance obligations. In addition, revenue earned under the Takeda Collaboration Agreement increased as revenue under the Takeda Collaboration for 2019 was earned for the full six months out of the six months ended June 30, 2019, as compared to 2018 when revenue was earned only for three out of the six months ended June 30, 2018 because the agreement became effective in April 2018.

Research and Development Expenses

	Six Months Ended June 30,		
	2019	2018	Change
	(in thousands)		
DMD programs	$ 25,008	$ 7,441	$ 17,567
HD programs	8,317	7,341	976
ALS and FTD programs	1,370	4,098	(2,728)
PRISM and other research and development expenses (1)	47,023	42,863	4,160
Total research and development expenses	$ 81,718	$ 61,743	$ 19,975

(1) Includes discovery and development programs, identification of potential drug discovery candidates, compensation-related expenses, internal manufacturing expenses, equipment repairs and maintenance expense, facility-related expenses and other operating expenses, which are not allocated to specific programs.

Research and development expenses were $81.7 million for the six months ended June 30, 2019, compared to $61.7 million for the six months ended June 30, 2018. The increase of $20.0 million was due to the following:

- an increase of $17.6 million in external expenses related to our DMD programs, including suvodirsen, mainly due to our continued investment in suvodirsen clinical trial activities, including our ongoing open-label extension study and costs related to our Phase 2/3 DYSTANCE 51 trial;
- an increase of $1.0 million in external expenses related to our HD programs for our Phase 1b/2a clinical trials;
- a decrease of $2.7 million in external expenses related to our ALS and FTD programs; and
- an increase of $4.2 million in internal and external research and development expenses that are not allocated on a program-by-program basis and are related to other discovery and development programs, including our continued evolution of PRISM and the identification of potential drug discovery candidates, primarily due to increases in compensation-related expenses.

General and Administrative Expenses

General and administrative expenses were $22.5 million for the six months ended June 30, 2019, as compared to $16.9 million for the six months ended June 30, 2018. The increase of $5.6 million was primarily driven by increased compensation-related expenses, which are the result of organizational growth.

Other Income, Net

Other income, net for the six months ended June 30, 2019 and 2018 was $7.5 million and $1.4 million, respectively. The increase of $6.1 million in other income, net is primarily due to our estimated refundable tax credit related to the UK research and development tax credit regime for small and medium sized companies. Additionally, there was an increase in dividend income earned on our cash equivalents during the six months ended June 30, 2019.

Income Tax Provision

During the six months ended June 30, 2019 and 2018, we recorded no income tax provision and an income tax provision of $0.2 million, respectively. The income tax provision recorded during the six months ended June 30, 2018 was the result of return-to-provision adjustments related to the filing of our Japanese subsidiary's 2017 tax return. We maintained a full valuation allowance for the six months ended June 30, 2019 and 2018 in all jurisdictions due to uncertainty regarding future taxable income.

Liquidity and Capital Resources

Since our inception, we have not generated any product revenue and have incurred recurring net losses. To date, we have primarily funded our operations through private placements of debt and equity securities, public offerings of our ordinary shares and collaborations with third parties. Through June 30, 2019, we have received an aggregate of approximately $655.0 million in net proceeds from these transactions. We received $89.3 million in net proceeds from private placements of our debt and equity securities, $100.4 million in net proceeds from our initial public offering, $40.0 million under the Pfizer Agreements (as defined in Note 5), including $10.0 million as an upfront payment under the Pfizer Collaboration Agreement and $30.0 million in the form of an equity investment, $93.5 million in net proceeds from our April 2017 follow-on underwritten public offering, $170.0 million in upfront payments under the Takeda Agreements (as defined in Note 5), including $110.0 million as an upfront payment under the Takeda Collaboration Agreement (as defined in Note 5) and $60.0 million in the form of an equity investment, and $161.8 million in net proceeds from our January 2019 follow-on underwritten public offering.

As of June 30, 2019, we had cash and cash equivalents totaling $252.9 million, an accumulated deficit of $425.9 million and restricted cash of $3.6 million related to letters of credit for our leased premises in Cambridge, Massachusetts and Lexington, Massachusetts.

We expect that our existing cash and cash equivalents will be sufficient to fund our operations for at least the next twelve months. We have based this expectation on assumptions that may prove to be incorrect, and we may use our available capital resources sooner than we currently expect. In addition, we may elect to raise additional funds before we need them if the conditions for raising capital are favorable due to market conditions or strategic considerations, even if we expect that we have sufficient funds for our current or future operating plans.

Until we can generate significant revenue from product sales, if ever, we expect to continue to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. In May 2019, we filed a shelf registration statement on Form S-3ASR with the SEC pursuant to which we registered for sale an indeterminate amount of any combination of our ordinary shares, debt securities, warrants, rights and/or units from time to time and at prices and on terms that we may determine. Our shelf registration statement on Form S-3ASR also includes a prospectus covering up

to an aggregate of $250 million in ordinary shares that we may issue and sell from time to time, through Jefferies LLC acting as our sales agent, pursuant to the open market sales agreement that we entered into with Jefferies LLC in May 2019 for our "at-the-market" equity program. If we no longer qualify as a "well-known seasoned issuer" at the time of the filing of our Annual Report on Form 10-K for the fiscal year ending December 31, 2019, then we would be required to amend the registration statement or file a new registration statement and seek effectiveness from the SEC prior to issuing any securities. Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

Cash Flows

The following table summarizes our cash flow activity:

	Six Months Ended June 30,	
	2019	**2018**
	(in thousands)	
Net cash (used in) provided by operating activities	$ (83,310)	$ 38,968
Net cash used in investing activities	(2,107)	(3,086)
Net cash provided by financing activities	163,389	63,097
Effect of foreign exchange rates on cash, cash equivalents and restricted cash	127	(45)
Net increase in cash, cash equivalents and restricted cash	$ 78,099	$ 98,934

Operating Activities

During the six months ended June 30, 2019, operating activities used approximately $83.3 million of cash, primarily due to our net loss of $86.1 million.

During the six months ended June 30, 2018, operating activities provided $39.0 million of cash, mainly driven by changes in our operating assets and liabilities of $99.3 million and our net loss of $71.1 million. The largest changes in operating assets and liabilities were an increase of $168.7 million in deferred revenue and an increase of $64.0 million in accounts receivable, both of which were mainly driven by the Takeda Collaboration Agreement becoming effective in April 2018.

Investing Activities

During the six months ended June 30, 2019, investing activities used $2.1 million of cash, related to purchases of property and equipment.

During the six months ended June 30, 2018, investing activities used $3.1 million of cash, related to purchases of property and equipment.

Financing Activities

During the six months ended June 30, 2019, net cash provided by financing activities was $163.4 million, which was due to the $161.8 million in net proceeds from our January 2019 follow-on underwritten public offering and approximately $1.6 million in proceeds from the exercise of share options.

During the six months ended June 30, 2018, net cash provided by financing activities was $63.1 million, which was due to the $60.0 million in proceeds from the issuance of ordinary shares to Takeda and $3.1 million in proceeds from the exercise of share options.

Funding Requirements

We expect our expenses will continue to increase in connection with our ongoing research and development activities and our internal cGMP manufacturing activities. Furthermore, we anticipate that our expenses will continue to increase if and as we:

- continue to conduct our clinical trials evaluating our product candidates in patients;
- conduct research and preclinical development of discovery targets and advance additional programs into clinical development;
- file clinical trial applications with global regulatory agencies and conduct clinical trials for our programs;
- expand our research and development activities to design and advance potential treatments for rare, inherited eye diseases;

- make strategic investments in PRISM and in optimizing our manufacturing processes and formulations;
- further expand our manufacturing capabilities through our internal facility and our CMOs;
- maintain our intellectual property portfolio and consider the acquisition of complementary intellectual property;
- seek and obtain regulatory approvals for our product candidates; and
- establish and build capabilities to market, distribute and sell our product candidates.

We may experience delays or encounter issues with any of the above, including but not limited to failed studies, complex results, safety issues or other regulatory challenges.

Because of the numerous risks and uncertainties associated with the development of our product candidates and because the extent to which we may enter into collaborations with third parties for development of product candidates is unknown, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development for our programs. Our future capital requirements for our programs will depend on many factors, including:

- the progress and results of conducting research and continued preclinical and clinical development within our programs and with respect to future potential pipeline candidates;
- the number and characteristics of product candidates and programs that we pursue;
- the cost of manufacturing clinical supplies of our product candidates;
- whether and to what extent milestone events are achieved under our collaborations with Pfizer or Takeda or any potential future licensee or collaborator;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to obtain marketing approval for our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- market acceptance of our product candidates, to the extent any are approved for commercial sale, and the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates.

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

Adequate additional funds may not be available to us on acceptable terms when we need them, or at all. We do not currently have any committed external source of funds, except for possible future payments from Pfizer if milestones under the Pfizer Collaboration Agreement are achieved and committed funds and possible future milestones and payments from Takeda under the Takeda Collaboration Agreement. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing shareholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our shareholders. Additional debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may require the issuance of warrants, which could potentially dilute our shareholders' ownership interests.

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

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations and commitments set forth under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Contractual Obligations and Commitments” in the 2018 Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

We had no off-balance sheet arrangements (as that term is defined in Item 303(a)(4)(ii) of Regulation S-K) as of June 30, 2019 that have, or are reasonably likely to have, a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Recently Issued Accounting Pronouncements

For detailed information regarding recently issued accounting pronouncements and the expected impact on our consolidated financial statements, see Note 2 “Significant Accounting Policies” in the notes to the unaudited consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign exchange rates, as well as, to a lesser extent, inflation and capital market risk.

Interest Rate Risk

We are exposed to interest rate risk in the ordinary course of our business. Our cash and cash equivalents are held in readily available checking and money market accounts.

Foreign Currency Risk

Due to our operations outside of the United States, we are exposed to market risk related to changes in foreign currency exchange rates. Historically, we have not hedged our foreign currency exposure. For the three and six months ended June 30, 2019 and 2018, changes in foreign currency exchange rates did not have a material impact on our business, financial condition, results of operations or cash flows.

Inflation Risk

We do not believe that inflation had a material effect on our business, financial condition, results of operations or cash flows for the three and six months ended June 30, 2019 and 2018.

Capital Market Risk

We currently have no product revenues and depend on funds raised through other sources. One possible source of funding is through further equity offerings. Our ability to raise funds in this manner depends upon capital market forces affecting our share price.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to its management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of June 30, 2019, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended June 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

We are not currently a party to any material legal proceedings.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed under the caption "Risk Factors" that appear in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the SEC on March 1, 2019 (the "2018 Annual Report on Form 10-K"). There have been no material changes from the risk factors previously disclosed in the 2018 Annual Report on Form 10-K.

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

Recent Sales of Unregistered Equity Securities

None.

Issuer Purchases of Equity Securities

We did not repurchase any of our equity securities during the three months ended June 30, 2019.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
10.1	Open Market Sale Agreement, dated as of May 10, 2019, by and between the Registrant and Jefferies LLC.		S-3ASR (Exhibit 1.2)	5/10/2019	333-231382
31.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer	X			
31.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer	X			
32*	Section 1350 Certifications of Principal Executive Officer and Principal Financial Officer	X			
101.INS	XBRL Instance Document – The instance document does not appear in the interactive data file because its Inline XBRL tags are embedded within the Inline XBRL document.	X			
101.SCH	XBRL Taxonomy Extension Schema Document	X			
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X			
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X			
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X			
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X			
104	The cover page from this Quarterly Report on Form 10-Q of the Registrant, formatted in Inline XBRL (included within the Exhibit 101 attachments).	X			

(*) The certifications attached as Exhibit 32 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Wave Life Sciences Ltd. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of such Form 10-Q), irrespective of any general incorporation language contained in such filing.

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.

Date: August 6, 2019

WAVE LIFE SCIENCES LTD.

By: /s/ Paul B. Bolno, M.D., MBA
Paul B. Bolno, M.D., MBA
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Keith C. Regnante
Keith C. Regnante
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Paul B. Bolno, M.D., MBA, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Wave Life Sciences Ltd.;

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

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

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

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

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

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

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

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

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

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

August 6, 2019

By: /s/ Paul B. Bolno, M.D., MBA
Paul B. Bolno, M.D., MBA
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Keith C. Regnante, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Wave Life Sciences Ltd.;

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

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

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

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

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

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

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

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

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

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

August 6, 2019

By: /s/ Keith C. Regnante
Keith C. Regnante
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Wave Life Sciences Ltd. (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report for the quarter ended June 30, 2019 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 6, 2019

/s/ Paul B. Bolno, M.D., MBA
Paul B. Bolno, M.D., MBA
President and Chief Executive Officer
(Principal Executive Officer)

Dated: August 6, 2019

/s/ Keith C. Regnante
Keith C. Regnante
Chief Financial Officer
(Principal Financial Officer)