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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

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**FORM 8-K**

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**CURRENT REPORT  
Pursuant to Section 13 or 15(d) of the  
Securities Exchange Act of 1934**

**Date of report (Date of earliest event reported): August 15, 2016**

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**WAVE LIFE SCIENCES LTD.**

(Exact name of registrant as specified in its charter)

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**Singapore**  
(State or other jurisdiction  
of incorporation)

**001-37627**  
(Commission  
File Number)

**Not Applicable**  
(IRS Employer  
Identification No.)

**8 Cross Street #10-00, PWC Building**  
**Singapore 048424**  
(Address of principal executive offices)

**048424**  
(Zip Code)

**Registrant's telephone number, including area code: +65 6236 3388**

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Item 2.02 Results of Operations and Financial Condition.**

On August 15, 2016, WAVE Life Sciences Ltd. (the “Company”) announced its financial results for the quarter ended June 30, 2016 and provided a business update. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

The information in this Current Report on Form 8-K, including Exhibit 99.1 attached hereto, is intended to be furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

The following exhibit relating to Item 2.02 of this Current Report on Form 8-K shall be deemed to be furnished and not filed:

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press release issued on August 15, 2016.

**SIGNATURE**

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 hereunto duly authorized.

Date: August 15, 2016

**WAVE LIFE SCIENCES LTD.**

/s/ Kyle Moran

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Kyle Moran

Vice President, Head of Finance

**WAVE Life Sciences Reports Second Quarter 2016 Financial Results and Provides Business Update**

*On track to file two INDs for lead programs in Huntington's disease in 2016 and IND for lead program in Duchenne muscular dystrophy in 2017*

*Current financial position supports continued pipeline progression, six clinical programs by 2018 and operations into 2019*

CAMBRIDGE, Mass. – (BUSINESS WIRE) – August 15, 2016 – WAVE Life Sciences Ltd. (NASDAQ: WVE), a genetic medicines company focused on developing stereopure nucleic acid therapies for patients impacted by rare diseases, today reported financial results for the second quarter ended June 30, 2016 and provided a business update.

“We are continuing to build on the substantial progress made at the start of 2016 and have the science, portfolio of programs, talent and financial runway to achieve our previously stated goals,” said Paul Bolno, M.D., MBA, President and Chief Executive Officer of WAVE Life Sciences. “We are continuing to grow as a company, hiring talented and passionate individuals who are committed to delivering exceptional therapies for patients. In July, we appointed Dr. Michael Panzara as the Head of our Neurology Franchise to accelerate the progress of our neurology portfolio, starting with our two lead programs in Huntington's disease and Duchenne muscular dystrophy. We have presented promising data on the potential of our exon 51 candidate for DMD, and have received Orphan Drug Designation for our first lead candidate in Huntington's disease, placing us in a strong position to advance these candidates into the clinic.”

**Pipeline Update and Outlook**

- **Two Huntington's disease (HD) candidates on track for clinic; first program received Orphan Drug Designation:** WAVE remains on track to file two investigational new drug (IND) applications in 2016 for its two lead programs in HD, with clinical trials for both programs planned to begin in 2017. WVE-120101 is the company's first of two allele-specific antisense programs for HD, which received Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) in June 2016. WVE-120101 works by selectively silencing the disease causing mutant huntingtin (HTT) allele while leaving the healthy HTT allele to produce normal functioning protein, which is used in muscle production. This candidate has the potential to become the first allele-targeted therapy for HD patients.
- **Data presented showing potential of Duchenne muscular dystrophy (DMD) candidate; IND-enabling studies ongoing:** WAVE continues to advance its DMD program and has initiated IND-enabling studies for its lead DMD candidate, which is designed to skip exon 51. The company presented data on this candidate at the Parent Project Muscular Dystrophy's (PPMD) Annual Connect Conference in June 2016, demonstrating a 30-fold increase in quantitative dystrophin protein expression, which represents approximately 25% of normal skeletal muscle tissue lysates, as compared to approximately 1% by other exon-skipping therapies. These data highlight the potential for improved potency and an enhanced ability to restore the production of functional dystrophin, which is expected to lead to better outcomes for patients. The

company intends to initiate its first clinical trial for DMD in the second half of 2017, which will include ambulatory and non-ambulatory patients and explore predictive biomarkers and comprehensive endpoints. WAVE's research into additional exon targets is currently underway.

- **Appointment of Dr. Michael Panzara as Neurology Franchise Head to accelerate neurology portfolio growth:** With this key hire, WAVE reaffirms its commitment to developing a broad neurology portfolio of medicines for neuromuscular, neurodegenerative and neurosensory indications. Dr. Panzara, who has held significant leadership roles in the neurology departments of Sanofi Genzyme and Biogen, will initially focus on advancing WAVE's HD and DMD programs and will play a critical role in expanding the company's neurology portfolio. This appointment not only underscores the company's commitment to the advancement of its neurology pipeline, but also its ability to attract top industry talent.
- **Continued progress of partnered programs:** In May 2016, WAVE entered into a collaboration with Pfizer focused on the advancement of genetically defined targets for the treatment of metabolic diseases, bringing together WAVE's proprietary stereopure drug development platform, across antisense and RNAi modalities, along with GalNac and Pfizer's hepatic targeting technology for enhanced delivery to the liver. The parties continue their progress under this collaboration, and WAVE continues to evaluate other partnering arrangements as part of the company's strategic plan to forge collaborations with leaders in therapeutic areas outside of its neurology franchise to bring the potential benefits of stereopure medicines to as many patients as possible.

## Second Quarter 2016 Financial Results and Financial Guidance

WAVE reported a net loss of \$11.6 million in the second quarter of 2016 as compared to a net loss of \$3.7 million in the second quarter of 2015. The increase in net loss for the second quarter was largely due to increased research and development efforts as well as investments in the company's infrastructure as a publicly traded company.

Research and development expenses were \$8.4 million for the second quarter of 2016 as compared to \$1.9 million for the same period in 2015. The increase in research and development expenses in the quarter was primarily driven by increased spending on third-party-related costs used to advance WAVE's preclinical and drug discovery activities, as well as increased salary and related benefits costs due to the increase in employee headcount.

General and administrative expenses were \$3.7 million for the second quarter of 2016 as compared to \$1.9 million for the same period in the prior year. The increase in general and administrative expenses in the second quarter was primarily due to an increase in professional fees and outside support services due to the costs of being a public company, as well as salary and benefits increases due to an increase in headcount.

WAVE's cash as of June 30, 2016 was \$181.8 million compared to \$153.4 million as of March 31, 2016. The increase in cash was primarily related to the upfront payment received upon commencement of the collaboration with Pfizer.

Net cash used in operating activities was \$6.7 million for the six months ended June 30, 2016 as compared to \$3.0 million for the same period in the prior year. WAVE expects that the cash resources it had on hand at June 30, 2016 will fund its operating expenses and capital expenditure requirements into 2019.

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## About WAVE Life Sciences

At WAVE Life Sciences, we are driven by an unwavering passion and commitment to deliver on our mission of confronting challenging diseases by developing transformational therapies and empowering patients. We are utilizing our innovative and proprietary synthetic chemistry drug development platform to design, develop and commercialize stereopure nucleic acid therapeutics that precisely target the underlying cause of rare and other serious genetically defined diseases. Given the versatility of our chemistry platform, WAVE's deep, diverse pipeline spans multiple modalities including antisense, exon-skipping, and single-stranded RNAi. For more information, please visit [www.wavelifesciences.com](http://www.wavelifesciences.com) and follow us on Twitter at @WAVELifeSci and LinkedIn.

## Forward Looking Information

This press release contains forward-looking statements concerning our goals, beliefs, expectations, strategies, objectives and plans, and other statements that are not necessarily based on historical facts, including statements regarding the following: our filing of INDs and commencing clinical trials; the future performance and results of our programs in clinical trials; our identification of future candidates and their therapeutic potential; the anticipated therapeutic benefits of stereopure therapies compared to other therapies; our advancing of therapies across multiple modalities and the anticipated benefits of that strategy; our future growth; the potential of our stereopure approach and nucleic acid therapeutics; and our cash position supporting our anticipated business activities. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including the following: the ability of our preclinical programs to produce data sufficient to support the filing of INDs 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 of our programs, which may not support further development of product candidates; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials; our effectiveness in managing 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 raise additional capital as needed; and competition from others developing therapies for similar uses, as well as the information under the caption "Risk Factors" contained in our Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on March 30, 2016 and in other filings we make with the SEC. We undertake no obligation to update the information contained in this press release to reflect subsequently occurring events or circumstances.

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**WAVE LIFE SCIENCES LTD.**  
**UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS**

(In thousands, except share amounts)

	<b>June 30, 2016</b>	<b>December 31, 2015</b>
<b>Assets</b>		
Current assets:		
Cash	\$181,765	\$ 161,220
Prepaid expenses and other current assets	2,176	146
Deferred tax assets	—	18
Total current assets	183,941	161,384
Property and equipment, net	5,093	2,789
Deferred tax assets	192	192
Restricted cash	1,055	1,055
Other assets	57	4
Total assets	\$190,338	\$ 165,424
<b>Liabilities, Series A preferred shares and shareholders' equity</b>		
Current liabilities:		
Accounts payable	\$ 3,899	\$ 2,811
Accrued expenses and other current liabilities	2,161	945
Current portion of capital lease obligation	62	62
Deferred tax liabilities	25	—
Current portion of deferred revenue	2,500	—
Total current liabilities	8,647	3,818
Long-term liabilities:		
Capital lease obligation, net of current portion	47	78
Deferred revenue, net of current portion	7,083	—
Other liabilities	409	163
Total long-term liabilities	7,539	241
Total liabilities	\$ 16,186	\$ 4,059
Series A preferred shares, no par value; 3,901,348 shares issued and outstanding	7,874	7,874
Shareholders' equity:		
Ordinary shares, no par value; 23,432,923 and 21,551,423 shares issued and outstanding at June 30, 2016 and December 31, 2015, respectively	215,372	185,344
Additional paid-in capital	5,318	3,182
Accumulated other comprehensive income	76	41
Accumulated deficit	(54,488)	(35,076)
Total shareholders' equity	166,278	153,491
Total liabilities, Series A preferred shares and shareholders' equity	\$190,338	\$ 165,424



**WAVE LIFE SCIENCES LTD.**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**

*(In thousands, except share and per share amounts)*

	<u>Three Months Ended June 30,</u>		<u>Six Months Ended June 30,</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Revenue	\$ 417	\$ 126	\$ 417	\$ 152
Operating expenses:				
Research and development	8,401	1,850	13,137	3,457
General and administrative	3,654	1,905	6,870	3,789
Total operating expenses	<u>12,055</u>	<u>3,755</u>	<u>20,007</u>	<u>7,246</u>
Loss from operations	(11,638)	(3,629)	(19,590)	(7,094)
Other income (expense):				
Interest income (expense), net	106	(15)	211	(15)
Other income (expense), net	15	(7)	10	43
Total other income (expense), net	<u>121</u>	<u>(22)</u>	<u>221</u>	<u>28</u>
Loss before income tax provision	(11,517)	(3,651)	(19,369)	(7,066)
Income tax provision	(48)	(49)	(43)	(99)
Net loss	<u>\$ (11,565)</u>	<u>\$ (3,700)</u>	<u>\$ (19,412)</u>	<u>\$ (7,165)</u>
Net loss per share attributable to ordinary shareholders—basic and diluted	<u>\$ (0.51)</u>	<u>\$ (0.40)</u>	<u>\$ (0.88)</u>	<u>\$ (0.82)</u>
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted	<u>22,708,022</u>	<u>9,223,405</u>	<u>22,126,562</u>	<u>8,729,072</u>