# 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 September 30, 2024**

☐ **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** | **98-1356880** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(I.R.S. Employer Identification No.)** |
| **7 Straits View #12-00, Marina One East Tower Singapore** | |
| **(Address of principal executive offices)** | **018936** **(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 November 7, 2024 was 152,519,770.

**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 (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), 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; the expected impact of new accounting standards; and our expectations regarding the impact of any local and global health epidemics on our business, including our research and development activities, preclinical studies and clinical trials, supply of drug product, and workforce.

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; 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; competition from others developing therapies for similar uses; and any impacts on our business as a result of or related to any local and global health epidemics, the conflict involving Russia and Ukraine, the conflict in the Middle East, global economic uncertainty, volatility in inflation, volatility in interest rates or market disruptions on our business, as well as other risks and uncertainties under the caption “Risk Factors” and any other disclosures contained in this Quarterly Report on Form 10-Q and in other filings we make with the Securities and Exchange Commission (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 Quarterly Report on Form 10-Q 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.

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. 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 Quarterly Report on Form 10-Q are the property of Wave Life Sciences Ltd. This Quarterly Report on 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 Quarterly Report on 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)*

| | September 30, 2024 | December 31, 2023 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 310,948 | $ 200,351 |
| Accounts receivable | — | 21,086 |
| Prepaid expenses | 10,572 | 9,912 |
| Other current assets | 2,995 | 4,024 |
| Total current assets | 324,515 | 235,373 |
| Long-term assets: | | |
| Property and equipment, net of accumulated depreciation of $45,490 and $42,709 as of September 30, 2024 and December 31, 2023, respectively | 10,928 | 13,084 |
| Operating lease right-of-use assets | 19,119 | 22,637 |
| Restricted cash | 3,746 | 3,699 |
| Other assets | 196 | 156 |
| Total long-term assets | 33,989 | 39,576 |
| Total assets | $ 358,504 | $ 274,949 |
| **Liabilities, Series A preferred shares, and shareholders' equity** | | |
| Current liabilities: | | |
| Accounts payable | $ 12,781 | $ 12,839 |
| Accrued expenses and other current liabilities | 14,642 | 16,828 |
| Current portion of deferred revenue | 135,907 | 150,059 |
| Current portion of operating lease liability | 7,398 | 6,714 |
| Total current liabilities | 170,728 | 186,440 |
| Long-term liabilities: | | |
| Deferred revenue, net of current portion | 18,490 | 15,601 |
| Operating lease liability, net of current portion | 19,772 | 25,404 |
| Total long-term liabilities | 38,262 | 41,005 |
| Total liabilities | $ 208,990 | $ 227,445 |
| Series A preferred shares, no par value; 3,901,348 shares issued and outstanding at September 30, 2024 and December 31, 2023 | $ 7,874 | $ 7,874 |
| Shareholders' equity: | | |
| Ordinary shares, no par value; 148,392,939 and 119,162,234 shares issued and outstanding at September 30, 2024 and December 31, 2023, respectively | $ 1,139,714 | $ 935,367 |
| Additional paid-in capital | 153,196 | 129,237 |
| Accumulated other comprehensive loss | (159) | (124) |
| Accumulated deficit | (1,151,111) | (1,024,850) |
| Total shareholders' equity | $ 141,640 | $ 39,630 |
| Total liabilities, Series A preferred shares, and shareholders' equity | $ 358,504 | $ 274,949 |

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

**WAVE LIFE SCIENCES LTD.**
**UNAUDITED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)**

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

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2024 | 2023 | 2024 | 2023 |
| Revenue | $ (7,676) | $ 49,214 | $ 24,554 | $ 84,249 |
| Operating expenses: | | | | |
| Research and development | 41,197 | 31,642 | 115,037 | 95,935 |
| General and administrative | 15,042 | 13,128 | 42,887 | 37,628 |
| Total operating expenses | 56,239 | 44,770 | 157,924 | 133,563 |
| Income (loss) from operations | (63,915) | 4,444 | (133,370) | (49,314) |
| Other income, net: | | | | |
| Dividend income and interest income | 1,798 | 1,960 | 6,425 | 6,084 |
| Other income, net | 337 | 171 | 684 | 1,296 |
| Total other income, net | 2,135 | 2,131 | 7,109 | 7,380 |
| Income (loss) before income taxes | (61,780) | 6,575 | (126,261) | (41,934) |
| Income tax benefit (provision) | — | 677 | — | 677 |
| Net income (loss) | $ (61,780) | $ 7,252 | $ (126,261) | $ (41,257) |
| Less: net income attributable to participating securities | $ — | $ (257) | $ — | $ — |
| Net income (loss) attributable to ordinary shareholders, basic and diluted | $ (61,780) | $ 6,995 | $ (126,261) | $ (41,257) |
| Net income (loss) per share attributable to ordinary shareholders—basic | $ (0.47) | $ 0.07 | $ (0.97) | $ (0.39) |
| Weighted-average ordinary shares used in computing net income (loss) per share attributable to ordinary shareholders—basic | 132,563,467 | 106,025,063 | 130,470,603 | 104,529,266 |
| Net income (loss) per share attributable to ordinary shareholders—diluted | $ (0.47) | $ 0.07 | $ (0.97) | $ (0.39) |
| Weighted-average ordinary shares used in computing net income (loss) per share attributable to ordinary shareholders—diluted | 132,563,467 | 106,975,231 | 130,470,603 | 104,529,266 |
| Other comprehensive income (loss): | | | | |
| Net income (loss) | $ (61,780) | $ 7,252 | $ (126,261) | $ (41,257) |
| Foreign currency translation | 120 | (32) | (35) | (153) |
| Comprehensive income (loss) | $ (61,660) | $ 7,220 | $ (126,296) | $ (41,410) |

*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 (DEFICIT)**

*(In thousands, except share amounts)*

| | Series A Preferred Shares | | Ordinary Shares | | Additional Paid-In- | Accumulated Other Comprehensive | Accumulated | Total Shareholders' |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Capital | Loss | Deficit | Equity (Deficit) |
| **Balance at December 31, 2022** | 3,901,348 | $ 7,874 | 86,924,643 | $ 802,833 | $ 119,442 | $ (29) | $ (967,337) | $ (45,091) |
| Issuance of ordinary shares, pursuant to the GSK Collaboration Agreement | — | — | 10,683,761 | 34,623 | — | — | — | 34,623 |
| Share-based compensation | — | — | — | — | 2,750 | — | — | 2,750 |
| Vesting of RSUs | — | — | 363,161 | — | — | — | — | — |
| Option exercises | — | — | 181 | 1 | — | — | — | 1 |
| Issuance of ordinary shares under the ESPP | — | — | 133,098 | 429 | — | — | — | 429 |
| Other comprehensive loss | — | — | — | — | — | (21) | — | (21) |
| Net loss | — | — | — | — | — | — | (27,405) | (27,405) |
| **Balance at March 31, 2023** | 3,901,348 | $ 7,874 | 98,104,844 | $ 837,886 | $ 122,192 | $ (50) | $ (994,742) | $ (34,714) |
| Issuance of ordinary shares pursuant to the "at-the-market" equity program, net | — | — | 429,051 | 1,704 | — | — | — | 1,704 |
| Share-based compensation | — | — | — | — | 2,409 | — | — | 2,409 |
| Vesting of RSUs | — | — | 9,234 | — | — | — | — | — |
| Option exercises | — | — | 23,687 | 85 | — | — | — | 85 |
| Other comprehensive loss | — | — | — | — | — | (100) | — | (100) |
| Net loss | — | — | — | — | — | — | (21,104) | (21,104) |
| **Balance at June 30, 2023** | 3,901,348 | $ 7,874 | 98,566,816 | $ 839,675 | $ 124,601 | $ (150) | $ (1,015,846) | $ (51,720) |
| Issuance of ordinary shares pursuant to the "at-the-market" equity program, net | — | — | 322,637 | 1,376 | — | — | — | 1,376 |
| Share-based compensation | — | — | — | — | 2,284 | — | — | 2,284 |
| Vesting of RSUs | — | — | 16,657 | — | — | — | — | — |
| Option exercises | — | — | 12,976 | 35 | — | — | — | 35 |
| Issuance of ordinary shares under the ESPP | — | — | 92,815 | 319 | — | — | — | 319 |
| Other comprehensive loss | — | — | — | — | — | (32) | — | (32) |
| Net income | — | — | — | — | — | — | 7,252 | 7,252 |
| **Balance at September 30, 2023** | 3,901,348 | $ 7,874 | 99,011,901 | $ 841,405 | $ 126,885 | $ (182) | $ (1,008,594) | $ (40,486) |

*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 (DEFICIT) CONTINUED**
*(In thousands, except share amounts)*

| | Series A Preferred Shares | | Ordinary Shares | | Additional Paid-In- | Accumulated Other Comprehensive | Accumulated | Total Shareholders' |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Capital | Income (loss) | Deficit | Equity (Deficit) |
| **Balance at December 31, 2023** | 3,901,348 | $ 7,874 | 119,162,234 | $ 935,367 | $ 129,237 | $ (124) | $ (1,024,850) | $ 39,630 |
| Issuance of ordinary shares, net of offering costs | — | — | 3,000,000 | 14,038 | — | — | — | 14,038 |
| Share-based compensation | — | — | — | — | 2,881 | — | — | 2,881 |
| Vesting of RSUs | — | — | 21,683 | — | — | — | — | — |
| Option exercises | — | — | 35,925 | 123 | — | — | — | 123 |
| Issuance of ordinary shares under the ESPP | — | — | 101,542 | 349 | — | — | — | 349 |
| Other comprehensive loss | — | — | — | — | — | (74) | — | (74) |
| Net loss | — | — | — | — | — | — | (31,558) | (31,558) |
| **Balance at March 31, 2024** | 3,901,348 | $ 7,874 | 122,321,384 | $ 949,877 | $ 132,118 | $ (198) | $ (1,056,408) | $ 25,389 |
| Issuance of ordinary shares pursuant to the "at-the-market" equity program, net | — | — | 109,204 | 547 | — | — | — | 547 |
| Share-based compensation | — | — | — | — | 3,485 | — | — | 3,485 |
| Vesting of RSUs | — | — | 17,778 | — | — | — | — | — |
| Option exercises | — | — | 30,923 | 106 | — | — | — | 106 |
| Other comprehensive loss | — | — | — | — | — | (81) | — | (81) |
| Net loss | — | — | — | — | — | — | (32,923) | (32,923) |
| **Balance at June 30, 2024** | 3,901,348 | $ 7,874 | 122,479,289 | $ 950,530 | $ 135,603 | $ (279) | $ (1,089,331) | $ (3,477) |
| Issuance of ordinary shares, net of offering costs | — | — | 23,125,001 | 173,438 | — | — | — | 173,438 |
| Issuance of ordinary shares pursuant to the "at-the-market" equity program, net | — | — | 2,453,490 | 14,746 | — | — | — | 14,746 |
| Issuance of pre-funded warrants, net of offering costs | — | — | — | — | 14,062 | — | — | 14,062 |
| Share-based compensation | — | — | — | — | 3,531 | — | — | 3,531 |
| Vesting of RSUs | — | — | 25,003 | — | — | — | — | — |
| Option exercises | — | — | 235,200 | 690 | — | — | — | 690 |
| Issuance of ordinary shares under the ESPP | — | — | 74,956 | 310 | — | — | — | 310 |
| Other comprehensive income | — | — | — | — | — | 120 | — | 120 |
| Net loss | — | — | — | — | — | — | (61,780) | (61,780) |
| **Balance at September 30, 2024** | 3,901,348 | $ 7,874 | 148,392,939 | $ 1,139,714 | $ 153,196 | $ (159) | $ (1,151,111) | $ 141,640 |

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

**WAVE LIFE SCIENCES LTD.**
**UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS**

*(In thousands)*

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2024 | 2023 |
| **Cash flows from operating activities** | | |
| Net loss | $ (126,261) | $ (41,257) |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: | | |
| Amortization of right-of-use assets | 3,518 | 3,105 |
| Depreciation of property and equipment | 2,989 | 3,919 |
| Share-based compensation expense | 9,897 | 7,443 |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | 21,086 | (7,000) |
| Prepaid expenses | (660) | 418 |
| Other assets | 989 | (2,101) |
| Accounts payable | (39) | (3,953) |
| Accrued expenses and other current liabilities | (2,686) | (4,928) |
| Deferred revenue | (11,263) | 62,299 |
| Operating lease liabilities | (4,948) | (3,947) |
| Other non-current liabilities | — | (190) |
| Net cash provided by (used in) operating activities | (107,378) | 13,808 |
| **Cash flows from investing activities** | | |
| Purchases of property and equipment | (852) | (759) |
| Net cash used in investing activities | (852) | (759) |
| **Cash flows from financing activities** | | |
| Proceeds from the issuance of ordinary shares as a part of the December 2023 Offering, net of offering costs | 14,038 | — |
| Proceeds from the issuance of ordinary shares as a part of the September 2024 Offering, net of offering costs | 173,900 | — |
| Proceeds from the issuance of pre-funded warrants as a part of the September 2024 Offering, net of offering costs | 14,100 | — |
| Proceeds from the issuance of ordinary shares pursuant to the GSK Collaboration Agreement | — | 34,623 |
| Proceeds from issuance of ordinary share pursuant to the “at-the-market” equity program, net of offering costs | 15,293 | 3,080 |
| Proceeds from the exercise of share options | 919 | 121 |
| Proceeds from the ESPP | 659 | 748 |
| Net cash provided by financing activities | 218,909 | 38,572 |
| Effect of foreign exchange rates on cash, cash equivalents, and restricted cash | (35) | (153) |
| Net increase in cash, cash equivalents, and restricted cash | 110,644 | 51,468 |
| Cash, cash equivalents, and restricted cash, beginning of period | 204,050 | 92,157 |
| Cash, cash equivalents, and restricted cash, end of period | $ 314,694 | $ 143,625 |
| **Supplemental disclosure of cash flow information** | | |
| Offering costs related to the September 2024 Offering in accrued expenses at period end | $ 500 | $ — |

*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 biotechnology company focused on unlocking the broad potential of ribonucleic acid ("RNA") medicines (also known as oligonucleotides), or those targeting RNA, to transform human health. Wave's RNA medicines platform, PRISM, combines multiple modalities, chemistry innovation and deep insights into human genetics to deliver scientific breakthroughs that treat both rare and prevalent disorders. The Company's toolkit of RNA-targeting modalities includes RNA editing, splicing, antisense silencing and RNA interference ("RNAi"), providing the Company with unique capabilities for designing and sustainably delivering candidates that optimally address disease biology. The Company's lead programs are in rare and prevalent diseases, including alpha-1 antitrypsin deficiency ("AATD"), obesity, Duchenne muscular dystrophy ("DMD"), and Huntington's disease ("HD").

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 have been developing and evolving PRISM to design, develop and commercialize RNA medicines, advancing the Company's differentiated portfolio, building the Company's research, development and manufacturing capabilities, 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.

### *Liquidity*

Since its inception, the Company has not generated any product revenue and has incurred recurring operating losses. To date, the Company has primarily funded its operations through private placements of debt and equity securities, public and other registered offerings of its equity securities and collaborations with third parties. Until the Company can generate significant revenue from product sales, if ever, the Company expects to continue to finance operations through a combination of public or private equity or debt financings or other sources, which may include upfront and milestone payments from collaborations with third parties. Adequate additional financing may not be available to the Company on acceptable terms, or at all. The inability to raise capital as and when needed would have a negative impact on the Company's financial condition and ability to pursue its business strategy.

As of September 30, 2024, the Company had cash and cash equivalents of $310.9 million. Subsequent to September 30, 2024, the representatives of the underwriters in connection with the previously disclosed underwritten public offering (the "September 2024 Offering") exercised their option in full to purchase an additional 3,750,000 ordinary shares, for additional net proceeds of approximately $28.2 million to the Company. The Company expects that its existing cash and cash equivalents will be sufficient to fund its operations for at least the next twelve months. The Company has based this expectation on the best information available, however the Company may use its available capital resources sooner than it currently expects. If the Company's anticipated operating results are not achieved in future periods, planned expenditures may need to be further reduced in order to extend the time period over which the then-available resources would be able to fund the Company's operations. In addition, the Company may elect to raise additional funds before it needs them if the conditions for raising capital are favorable due to market conditions or strategic considerations, even if the Company expects it has sufficient funds for its current or future operating plans.

***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, maintaining 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, 2023, and the notes thereto, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2023, filed with the Securities and Exchange Commission ("SEC") on March 6, 2024, as amended (the "2023 Annual Report on Form 10-K"), have had no material changes during the nine months ended September 30, 2024.

***Unaudited Interim Financial Data***

The accompanying interim consolidated balance sheet as of September 30, 2024, the related interim consolidated statements of operations and comprehensive income (loss) for the three and nine months ended September 30, 2024 and 2023, the consolidated statements of Series A preferred shares and shareholders' equity (deficit) for the three months ended March 31, June 30, and September 30, 2024 and 2023, the consolidated statements of cash flows for the nine months ended September 30, 2024 and 2023, and the related interim information contained within the notes to the unaudited 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 nine months ended September 30, 2024 and 2023 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 nine months ended September 30, 2024 and 2023. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the year ending December 31, 2024 or any other interim period or future year or period.

## 3. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consist of the following:

| | September 30, 2024 | December 31, 2023 |
|---|---|---|
| | (in thousands) | |
| Accrued compensation | $ 9,736 | $ 14,065 |
| Accrued expenses related to CROs and CMOs | 2,825 | 1,768 |
| Accrued expenses and other current liabilities | 2,081 | 995 |
| Total accrued expenses and other current liabilities | $ 14,642 | $ 16,828 |

## 4. SHARE-BASED COMPENSATION

The Wave Life Sciences Ltd. 2021 Equity Incentive Plan was approved by the Company's shareholders and went into effect on August 10, 2021 and was amended effective as of August 9, 2022, August 1, 2023, and August 6, 2024 (as amended, the "2021 Plan"). The 2021 Plan serves as the successor to the Wave Life Sciences Ltd. 2014 Equity Incentive Plan, as amended (the "2014 Plan"), such that outstanding awards granted under the 2014 Plan continue to be governed by the terms of the 2014 Plan, but no awards may be made under the 2014 Plan after August 10, 2021. The aggregate number of ordinary shares authorized for issuance of awards under the 2021 Plan was originally 5,450,000 ordinary shares, and was subsequently increased to 11,450,000, 17,950,000, and 22,950,000 in August 2022, August 2023, and August 2024, respectively, plus the number of ordinary shares underlying any awards under the 2014 Plan that are forfeited, cancelled or otherwise terminated (other than by exercise or withheld by the Company to satisfy any tax withholding obligation) on or after August 10, 2021.

The 2021 Plan authorizes (and the 2014 Plan previously authorized) the Company's board of directors or a committee of the board of directors to, among other things, grant non-qualified share options, restricted awards, which include restricted shares and restricted share units ("RSUs"), and performance awards to eligible employees and directors of the Company. The Company accounts for grants to its board of directors as grants to employees.

Options generally vest over periods of one to four years, and 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 can be time-based or performance-based. Time-based RSUs generally vest over a period of one to four years. The vesting of performance-based RSUs is contingent on the achievement of certain performance milestones. Any RSUs that are forfeited are available to be granted again.

During the nine months ended September 30, 2024, the Company granted an aggregate of 7,337,900 options and 307,750 time-based RSUs to employees and non-employee directors.

As of September 30, 2024, 6,550,786 ordinary shares remained available for future grant under the 2021 Plan.

The table below shows the options and RSUs outstanding as of September 30, 2024 and 2023.

| | As of September 30, | |
|---|---|---|
| | **2024** | **2023** |
| Options to purchase ordinary shares | 20,463,734 | 14,238,590 |
| RSUs | 827,240 | 633,283 |

The Wave Life Sciences Ltd. 2019 Employee Share Purchase Plan, as amended (the "ESPP"), allows full-time and certain part-time employees to purchase the Company's ordinary shares at a discount to fair market value. Eligible employees may enroll in a six-month offering period beginning every January 15th and July 15th. Ordinary shares are purchased at a price equal to 85% of the lower of the fair market value of the Company's ordinary shares on the first business day or the last business day of an offering period. The aggregate number of ordinary shares authorized for issuance under the ESPP was originally 1,000,000 and was subsequently increased to 3,000,000 in August 2023. During the nine months ended September 30, 2024, 176,498 ordinary shares were issued under the ESPP. As of September 30, 2024, there were 2,314,002 ordinary shares available for issuance under the ESPP.

## 5. COLLABORATION AGREEMENTS

### *GSK Collaboration and Equity Agreements*

On December 13, 2022, Wave USA and Wave UK entered into a Collaboration and License Agreement (the "GSK Collaboration Agreement") with GlaxoSmithKline Intellectual Property (No. 3) ("GSK"). Pursuant to the GSK Collaboration Agreement, Wave and GSK have agreed to collaborate on the research, development, and commercialization of oligonucleotide therapeutics, including an exclusive global license to WVE-006. The discovery collaboration component has an initial four-year research term and combines Wave's proprietary discovery and drug development platform, PRISM, with GSK's unique genetic insights and its global development and commercial capabilities. On January 27, 2023, the GSK Collaboration Agreement became effective, and GSK paid Wave an upfront payment of $120.0 million.

Simultaneously with the execution of the GSK Collaboration Agreement, Wave entered into a Share Purchase Agreement (the "SPA") on December 13, 2022, with Glaxo Group Limited ("GGL"), an affiliate of GSK, pursuant to which Wave agreed to sell 10,683,761 of its ordinary shares to GGL at a purchase price of $4.68 per share (the "GSK Equity Investment"). The GSK Equity Investment closed on January 26, 2023, following the completion of customary closing conditions. The ordinary shares purchased by GGL are subject to lock-up and standstill restrictions and carry certain registration rights, customary for transactions of this kind. The Company did not incur any material costs in connection with the issuance of the ordinary shares under the SPA.

The GSK Collaboration Agreement has three components:

1.An exclusive global license for GSK to WVE-006, the Company's then preclinical, first-in-class A-to-I(G) RNA editing candidate for alpha-1 antitrypsin deficiency ("AATD"), with development and commercialization responsibilities transferring to GSK after the Company completes the first-in-patient study (the "AATD Collaboration"). The Company will be responsible for preclinical, regulatory, manufacturing, and clinical activities for WVE-006 through the initial Phase 1/2 study, at the Company's sole cost. Thereafter, GSK will be responsible for advancing WVE-006 through pivotal studies, registration, and global commercialization at GSK's sole cost;

2.A discovery research collaboration which enables GSK to advance up to eight programs leveraging PRISM and the Company's oligonucleotide expertise and discovery capabilities (the "Discovery Research Collaboration"); and

3.A discovery collaboration which enables the Company to advance up to three programs leveraging targets informed by GSK's novel genetic insights ("Wave's Collaboration Programs").

Under the GSK Collaboration Agreement, each party grants to the other party certain licenses to the collaboration products to enable the other party to perform its obligations and exercise its rights under the GSK Collaboration Agreement, including license grants to enable each party to conduct research, development and commercialization activities pursuant to the terms of the GSK Collaboration Agreement. The parties' exclusivity obligations to each other are limited on a target-by-target basis with regard to targets in the collaboration. GSK may terminate the GSK Collaboration Agreement for convenience, in its entirety or on a target-by-target basis. Subject to certain exceptions, each party has the right to terminate the GSK Collaboration Agreement on a target-by-target basis if the other party, or a related party, challenges the patentability, enforceability or validity of any patents within the licensed technology that cover any product that is subject to the GSK Collaboration Agreement. In the event of any material breach of the GSK Collaboration Agreement by a party, subject to cure rights, the other party may terminate the GSK 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 GSK and its affiliates cease development, manufacturing and commercialization activities with respect to compounds or products subject to the GSK Collaboration Agreement and directed to a particular target, the Company may terminate the GSK Collaboration Agreement with respect to such target. Either party may terminate the GSK Collaboration Agreement for the other party's insolvency. In certain termination circumstances, the Company would receive a license from GSK to continue researching, developing and manufacturing certain products.

The GSK Collaboration Agreement, unless terminated earlier, will continue until the date on which: (i) with respect to a validation target, the date on which such validation target is not advanced into a collaboration program; or (ii) with respect to a collaboration target, the royalty term has expired for all collaboration products directed to the applicable collaboration target. The GSK Collaboration Agreement includes options to extend the research term for up to three additional years, which would increase the number of programs available to both parties. The Company will lead all preclinical research for GSK and the Company's collaboration programs up to investigational new drug ("IND")-enabling studies. The Company will lead IND-enabling studies, clinical development and commercialization for the Company's collaboration programs. GSK collaboration programs will transfer to GSK for IND-enabling studies, clinical development and commercialization.

The GSK Collaboration Agreement is managed by a joint steering committee in which both parties are represented equally. In addition, the AATD Collaboration is overseen by a joint development committee, a joint patent committee advises on intellectual property activities, and the Discovery Research Collaboration is overseen by a joint research committee. Both parties are represented equally for these committees and report to the joint steering committee.

The Company assessed this arrangement in accordance with ASC 606, Revenue from Contracts with Customers ("ASC 606") and concluded that the contract counterparty, GSK, is a customer for the AATD Collaboration prior to GSK exercising its option and, for the Discovery Research Collaboration programs during the target validation research term. The Company identified the following material promises under the arrangement: (1) the exclusive global license for WVE-006; (2) the research and development services for WVE-006 through the Phase 1/2 study; (3) the discovery research services under the Discovery Research Collaboration to perform target validation programs; (4) research and development license for the Discovery Research Collaboration; and (5) the research and development services for the GSK collaboration programs through completion of a candidate selection. The research and development services for WVE-006 were determined to not be distinct from the exclusive global license and should therefore be combined into a single performance obligation for the AATD Collaboration. The research and development services for the Discovery Research Collaboration were determined to not be distinct from the research and development license for the Discovery Research Collaboration and should therefore be combined into a single performance obligation. In addition, the Company determined the standalone selling price for the option to advance up to eight programs from the Discovery Research Collaboration and determined it did not provide a material right to GSK.

Based on these assessments, the Company identified two performance obligations in the GSK Collaboration Agreement: (1) AATD Collaboration consisting of the research and development services through completion of the Phase 1/2 study and research and development license for WVE-006 and (2) Discovery Research Collaboration which consists of research and development services for validating the targets and license for research and development license for targets.

At the outset of the arrangement, the transaction price included fixed consideration of the $120.0 million upfront, the $15.4 million in premium related to the GSK Equity Investment and the fixed consideration related to the additional target validation research funding. The Company allocated the estimated variable consideration relating to the target validation research to the Discovery Research Collaboration and the variable consideration relating to the development milestone to the AATD Collaboration and then allocated the fixed consideration to the performance obligations on a relative standalone selling price basis. The Company determined that the GSK Collaboration Agreement did not contain a significant financing component. The program initiation fees to advance up to eight programs from the Discovery Research Collaboration to preclinically develop the GSK collaboration programs and the additional potential milestone payments were excluded from the transaction price, as all milestone amounts were fully constrained at the inception of the GSK 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, the Company will adjust its estimate of the transaction price.

Under the GSK Collaboration Agreement, GSK can advance up to eight programs leveraging Wave's PRISM platform and multiple RNA-targeting modalities (RNA editing, splicing, siRNA, and antisense) with target validation work ongoing across multiple therapy areas. GSK selected its first two programs to advance to development candidates following achievement of target validation in the three months ended June 30, 2024. These programs utilize Wave's next generation GalNAc-siRNA format and are in hepatology. Under the GSK Collaboration Agreement, GSK is required to provide an aggregate initiation payment of $12.0 million to Wave for these two oligonucleotide programs, for which the $12.0 million was received during the three months ended June 30, 2024.

The following table summarizes the allocation of the total transaction price to the identified performance obligation under the GSK Collaboration Agreement, and the amount of the transaction price unsatisfied as of September 30, 2024 (in thousands):

| | | Transaction Price Allocated | | Transaction Price Unsatisfied [1] |
|---|---|---|---|---|
| Performance Obligations: | | | | |
| AATD Collaboration | $ | 156,778 | $ | 71,326 |
| Discovery Research Collaboration | | 17,964 | | 14,403 |
| GSK Collaboration Programs | | 12,000 | | 11,323 |
| Total | $ | 186,742 | $ | 97,052 |

(1) The Unsatisfied transaction price will be recognized over the remaining applicable research or program term.

The Company developed the estimated standalone selling price for the global license for WVE-006, under the AATD Collaboration, using a discounted cash flow model. For the performance obligation associated with the research and development services under the Discovery Research Collaboration and the research and development services for WVE-006 under the AATD Collaboration, the Company determined the standalone selling price using estimates of the costs to perform the research and development services, including expected internal and external costs for services and supplies, adjusted to reflect a profit margin. The total estimated cost of the research and development services reflected the nature of the services to be performed and the Company's best estimate of the length of time required to perform the services.

Revenue associated with the AATD Collaboration performance obligation is being recognized as the research and development services are provided using an input measure, according to the costs incurred and the total costs expected to be incurred to satisfy the performance obligation. The revenue associated with the Discovery Research Collaboration performance obligation is being recognized as the research and development services are provided using an input measure, according to the costs incurred and the total costs expected to be incurred to satisfy the performance obligation. The amounts received that have not yet been recognized as revenue are recorded in deferred revenue on the Company's consolidated balance sheet. Additional funding related to the Company's research activities related to Discovery Research Collaboration will be recorded as accounts receivable when contractually enforceable and recorded as deferred revenue, or as revenue as the services are provided.

During the year ended December 31, 2023, the Company achieved a developmental milestone which pertained to the initiation of dosing in healthy volunteers in the RestorAATion clinical trial program, triggering a $20.0 million milestone payment to the Company from GSK. As of December 31, 2023, the $20.0 million related to the achievement of the milestone was included in the current portion of accounts receivable and payment was received from GSK in the first quarter of 2024.

For the three months ended September 30, 2024, the Company recorded an $8.0 million reduction to cumulative revenue due to a change in the estimate to fulfill the GSK Collaboration performance obligations. For the three months ended September 30, 2023, the Company recognized revenue of $14.3 million under the GSK Collaboration Agreement using the input method described above. For the nine months ended September 30, 2024 and 2023, the Company recognized revenue of $23.4 million and $47.4 million, respectively, using the input method described above. Through September 30, 2024, the Company had recognized revenue of $89.7 million under the GSK Collaboration Agreement as collaboration revenue in the Company's consolidated statements of operations and comprehensive income (loss).

The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and recorded in deferred revenue on September 30, 2024 was approximately $84.2 million, of which approximately $65.7 million was included in current liabilities and approximately $18.5 million was included in long-term liabilities. The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and recorded in deferred revenue on December 31, 2023 was approximately $94.3 million, of which approximately $78.7 million was included in current liabilities and $15.6 million was included in long-term liabilities.

***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 the Company with at least $230.0 million in committed cash and Takeda with the option to co-develop and co-commercialize the Company's CNS development programs in (1) Huntington's disease ("HD"); (2) amyotrophic lateral sclerosis ("ALS") and frontotemporal dementia ("FTD"); and (3) the Company's discovery-stage program targeting *ATXN3* for the treatment of spinocerebellar ataxia 3 ("SCA3") (collectively, "Category 1 Programs"). In addition, the Takeda Collaboration provided Takeda 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 the Company $110.0 million as an upfront payment. Takeda also agreed to fund the Company's research and preclinical activities in the amount of $60.0 million during the four-year research term and to reimburse the Company 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 dated February 19, 2018, as amended (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 the shares.

With respect to Category 1 Programs, the Company 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, the Company 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 the Company will be eligible to receive development and commercial milestone payments. In addition to its 50% profit share, the Company 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, the Company 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 Takeda Collaboration provided that the parties may collaborate on preclinical programs for up to six targets at any one time. The Company was responsible for researching and preclinically developing products and companion diagnostics directed to the agreed upon targets through completion of Investigational IND enabling studies in the first major market country. Thereafter, Takeda would have an exclusive worldwide license to develop and commercialize products and companion diagnostics directed to such targets, subject to the Company's retained rights to lead manufacturing activities for products directed to such targets. Takeda agreed to fund the Company's research and preclinical activities in the amount of $60.0 million during the research term and reimburse the Company for any collaboration-budgeted research and preclinical expenses incurred by the Company that exceeded that amount. The Company was 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 granted 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, the Company 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, the Company would receive a license from Takeda to continue researching, developing and manufacturing certain products, and companion diagnostics.

The Takeda Collaboration is managed by a joint steering committee in which both parties are represented equally. The joint steering committee is tasked with overseeing the scientific progression of each Category 1 Program and, prior to the Amendment (discussed below), the Category 2 Programs.

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 therefore were 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.

The Company allocated the transaction price to the performance obligations on a relative standalone selling price basis. For the performance obligations associated with the research and development services through completion of the first proof of mechanism and non-exclusive research and development license for HD; the research and development services through completion of the first proof of mechanism and non-exclusive research and development license for ALS and FTD; the research and development services through completion of the first proof of mechanism and non-exclusive research and development license for SCA3; and the research and preclinical development services and right to exclusively license the Category 2 Programs, the Company determined the standalone selling price using estimates of the costs to perform the research and development services, including expected internal and external costs for services and supplies, adjusted to reflect a profit margin. The total estimated cost of the research and development services reflected the nature of the services to be performed and the Company's best estimate of the length of time required to perform the services. For the performance obligations associated with the material right provided for the exclusive option to license, co-develop and co-commercialize HD; the material right provided for the exclusive option to license, co-develop and co-commercialize ALS and FTD; and the material right provided for the exclusive option to license, co-develop and co-commercialize SCA3, the Company estimated the standalone fair value of the option to license each Category 1 Program utilizing an adjusted market assessment approach, and determined that any standalone fair value in excess of the amounts to be paid by Takeda associated with each option represented a material right.

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. Prior to the Amendment described below, revenue associated with the research and preclinical development services for the Category 2 Programs performance obligation was recognized as the research and preclinical development services that were 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 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.

On October 15, 2021, Wave USA, Wave UK and Takeda entered into the Second Amendment to the Takeda Collaboration Agreement (the "Amendment"), which discontinued the Category 2 component of the Takeda Collaboration. The Category 1 Programs under the Collaboration Agreement remain in effect and are unchanged by the Amendment. Pursuant to the Amendment, Takeda agreed to pay the Company an additional $22.5 million as full payment for reimbursable Category 2 Programs collaboration-budgeted research and preclinical expenses. The Company received this payment from Takeda related to the Category 2 component and recognized the full amount as collaboration revenue in the year ended December 31, 2021.

In May 2023, the Company announced its decision to discontinue clinical development of WVE-004 for C9orf72-associated ALS and FTD ("C9 for ALS/FTD"), one of the Category 1 Programs. In July 2023, the joint steering committee that manages the Takeda Collaboration terminated C9 for ALS/FTD as a target under the collaboration (the "C9 Target") and consequently Takeda and the Company's rights and obligations under the Takeda Collaboration were terminated with respect to the C9 Target. As a result of the termination of the C9 for ALS/FTD Category 1 Program, the Company recognized $28.0 million in revenue during the three months ended September 30, 2023, which represented the remainder of the deferred revenue for the C9 for ALS/FTD Category 1 Program as of June 30, 2023.

In the third quarter of 2023, the Company achieved a developmental milestone related to the HD Category 1 Program, which pertained to the positive results from a non-clinical study of WVE-003 in non-human primates ("NHPs"). As a result of achieving the milestone, the Company recognized $7.0 million in revenue, which was not previously recorded in deferred revenue, as it was fully constrained at the inception of the Takeda Collaboration.

In December 2023, the joint steering committee that manages the Takeda Collaboration terminated the SCA3 Category 1 Program as a target under the collaboration and consequently, Takeda and the Company's rights and obligations under the Takeda Collaboration were terminated with respect to the SCA3 Category 1 Program. As a result of the termination of the SCA3 Category 1 Program, the Company recognized $9.9 million in revenue during the three months ended December 31, 2023, which represented the remainder of the deferred revenue for the SCA3 Category 1 Program as of September 30, 2023.

Subsequent to September 30, 2024, on October 11, 2024, the Company was notified by Takeda that Takeda did not intend to exercise and therefore elected to terminate its option ("Option Termination") for the HD target under the Takeda Collaboration Agreement. As HD was the last active collaboration target under the Takeda Collaboration Agreement, the Takeda Collaboration Agreement expired with immediate effect.

During the three months ended September 30, 2024 and 2023, the Company recognized revenue of approximately $0.3 million and $34.9 million, respectively, under the Takeda Collaboration Agreement in the Company's consolidated statements of operations and comprehensive income (loss). During the nine months ended September 30, 2024 and 2023, the Company recognized revenue of approximately $1.2 million and $36.9 million, respectively, under the Takeda Collaboration Agreement. Through September 30, 2024, the Company had recognized revenue of $129.3 million under the Takeda Collaboration Agreement as collaboration revenue in the Company's consolidated statements of operations and comprehensive income (loss).

The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and recorded in deferred revenue as of September 30, 2024 and December 31, 2023 was $70.2 million and $71.3 million, respectively, and all of the deferred revenue was included in current liabilities. The Company expects to recognize the remaining deferred revenue in the fourth quarter of 2024.

## 6. SHAREHOLDERS' EQUITY

***September 2024 Offering***

On September 27, 2024, the Company closed the September 2024 Offering in which the Company issued and sold 23,125,001 of the Company's ordinary shares at a price of $8.00 per share and pre-funded warrants (the "2024 Pre-Funded Warrants") to purchase up to 1,875,023 of the Company's ordinary shares at an offering price of $7.9999 per 2024 Pre-Funded Warrant, which represents the per share offering price for the ordinary shares less the $0.0001 per share exercise price for each 2024 Pre-Funded Warrant. These 2024 Pre-Funded Warrants were recorded as a component of shareholders' equity within additional paid-in capital. The gross proceeds to the Company from the September 2024 Offering were $200.0 million before deducting underwriting discounts and commissions and other offering expenses. The net proceeds to the Company from the September 2024 Offering were approximately $187.5 million after deducting underwriting commissions and offering expenses. The 2024 Pre-Funded Warrants are exercisable at any time after their original issuance and on or prior to the five-year anniversary of the original issuance date. A holder of the 2024 Pre-Funded Warrants may not exercise the warrant if the holder, together with its affiliates, would beneficially own more than 4.99% (or at the election of such holder, 9.99% or 19.99%) of the number of the Company's ordinary shares outstanding or more than 4.99% (or at the election of such holder, 9.99% or 19.99%) of the combined voting power of the Company's securities outstanding immediately after giving effect to such exercise, unless and until shareholder approval is obtained.

Subsequent to September 30, 2024, on October 1, 2024, the representatives of the underwriters in connection with the September 2024 Offering exercised their option in full to purchase an additional 3,750,000 ordinary shares, which increased the aggregate number of ordinary shares sold in the September 2024 Offering to 26,875,001. The Company's aggregate gross proceeds from the September 2024 Offering were $230.0 million, before deducting underwriting discounts and commissions and offering expenses; $30.0 million of which relates to the exercise of the underwriters' option in October 2024.

## 7. NET INCOME (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.

In connection with the September 2024 Offering, the Company sold 1,875,023 2024 Pre-Funded Warrants, which are included in the total vested and exercisable pre-funded warrants (the "Pre-Funded Warrants"). As of September 30, 2024, there are 8,968,679 vested and exercisable Pre-Funded Warrants outstanding to purchase ordinary shares for the exercise price of $0.0001 per share, provided that, unless and until the Company obtains shareholder approval for the issuance of the shares underlying the Pre-Funded Warrants, a holder will not be entitled to exercise any portion of any Pre-Funded Warrant, which, upon giving effect to such exercise, would cause (i) the aggregate number of our ordinary shares beneficially owned by the holder (together with its affiliates) to exceed 4.99% (or at the election of such holder, 9.99% or 19.99%) of the number of our ordinary shares outstanding immediately after giving effect to the exercise, or (ii) the combined voting power of our securities beneficially owned by the holder (together with its affiliates) to exceed 4.99% (or at the election of such holder, 9.99% or 19.99%) of the combined voting power of all of our securities then outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. The Pre-Funded Warrants are included in the weighted-average shares outstanding used in the calculation of basic net loss per share as the exercise price is negligible and the warrants are fully vested and exercisable.

Basic loss per share is computed by dividing net loss attributable to ordinary shareholders and Pre-Funded Warrant holders by the weighted-average number of ordinary shares and Pre-Funded Warrants outstanding.

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.

As of September 30, 2024 and 2023, there were 3,901,348 Series A preferred shares outstanding; the Series A preferred shares are participating securities under the two-class method. For the three and nine months ended September 30, 2024, and the nine months ended September 30, 2023, 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 and holders of Series A preferred shares do not participate in losses.

The table below sets forth the computation of the Company's basic and diluted net income (loss) attributable to ordinary shareholders:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2024 | 2023 | 2024 | 2023 |
| | (in thousands, except share and per share data) | | | |
| *Numerator* | | | | |
| Net income (loss) | $ (61,780) | $ 7,252 | $ (126,261) | $ (41,257) |
| Less: net income attributable to participating securities | — | (257) | — | — |
| Net income (loss) attributable to ordinary shareholders, basic and diluted | $ (61,780) | $ 6,995 | $ (126,261) | $ (41,257) |
| | | | | |
| *Denominator* | | | | |
| Weighted-average ordinary shares used in computing net income (loss) per share attributable to ordinary shareholders—basic | 132,563,467 | 106,025,063 | 130,470,603 | 104,529,266 |
| Effect of employee share plans | — | 950,168 | — | — |
| Weighted-average ordinary shares used in computing net income (loss) per share attributable to ordinary shareholders—diluted | 132,563,467 | 106,975,231 | 130,470,603 | 104,529,266 |
| | | | | |
| Net income (loss) per share attributable to ordinary shareholders—basic | $ (0.47) | $ 0.07 | $ (0.97) | $ (0.39) |
| Net income (loss) per share attributable to ordinary shareholders—diluted | $ (0.47) | $ 0.07 | $ (0.97) | $ (0.39) |

The following potential ordinary shares, 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:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2024 | 2023 | 2024 | 2023 |
| Options to purchase ordinary shares | 14,308,841 | 9,470,166 | 13,566,333 | 10,303,670 |
| RSUs | 14,388 | 62,899 | 18,862 | 85,648 |

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.

**8. INCOME TAXES**

During the three and nine months ended September 30, 2024, the Company recorded no income tax benefit or provision. During the three and nine months ended September 30, 2023, the Company recorded an income tax benefit of $0.7 million due to a provision to return adjustment in connection with the U.S. tax guidance relating to the capitalization of research and development expenditures.

The Company maintained a full valuation allowance for the three and nine months ended September 30, 2024 and 2023 in all jurisdictions due to uncertainty regarding future taxable income.

The Company's utilization of its net operating loss carryforwards and general business credit carryforwards in the United States may be subject to a substantial annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. As of September 30, 2024, the Company is evaluating whether an ownership change occurred during 2024. Should an ownership change have occurred or occur in the future, the Company's ability to utilize its net operating losses and general business credit carryforwards may be limited.

**9. GEOGRAPHIC DATA**

Substantially all of the Company's long-lived assets were located in the United States as of September 30, 2024 and December 31, 2023.

**10. RELATED PARTY TRANSACTIONS**

The Company had the following related party transactions:

- 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. In October 2022, the compensation committee of the Company's board of directors granted Dr. Verdine a non-qualified share option for 163,467 ordinary shares in lieu of cash as payment under this consulting agreement for the service period of October 1, 2022 through December 31, 2024, the monthly vesting of which is subject to Dr. Verdine's continued service under the consulting agreement.

- In April 2023, the Company engaged Shin Nippon Biomedical Laboratories Ltd. ("SNBL"), one of the Company's shareholders, to provide approximately $2.8 million in certain NHP contract research services to the Company. During the three and nine months ended September 30, 2024, the Company made no payment and a payment of $5 thousand to SNBL, respectively. Through September 30, 2024, the Company has paid $1.4 million to SNBL for the aforementioned NHP contract research services.

**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, 2023, filed with the Securities and Exchange Commission ("SEC") on March 6, 2024, as amended (the "2023 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 and the "Risk Factor" section of our 2023 Annual Report on Form 10-K, our actual results could differ materially from the results described in, or implied by, these forward-looking statements.*

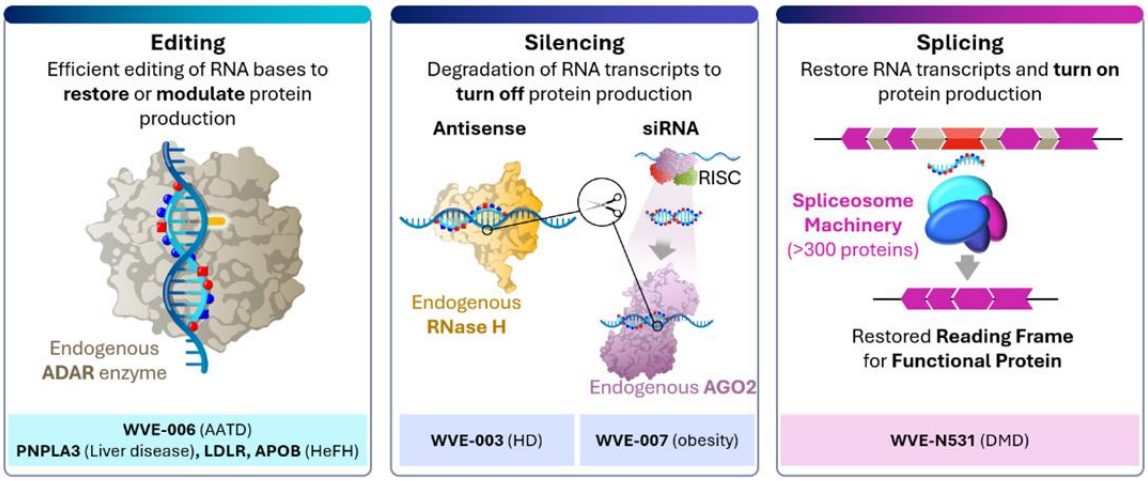
**Overview**

We are a clinical-stage biotechnology company focused on unlocking the broad potential of ribonucleic acid ("RNA") medicines (also known as oligonucleotides), or those targeting RNA, to transform human health. Our RNA medicines platform, PRISM®, combines multiple modalities, chemistry innovation and deep insights into human genetics to deliver scientific breakthroughs that treat both rare and prevalent disorders. Our toolkit of RNA-targeting modalities includes RNA editing, splicing, antisense silencing and RNA interference ("RNAi"), providing us with unique capabilities for designing and sustainably delivering candidates that optimally address disease biology. Our lead programs are in rare and prevalent diseases, including alpha-1 antitrypsin deficiency ("AATD"), obesity, Duchenne muscular dystrophy ("DMD"), and Huntington's disease ("HD").

We were founded on the recognition that there was a significant, untapped opportunity to use chemistry innovation to tune the pharmacological properties of oligonucleotides. Today, we have more than a decade of experience challenging convention related to oligonucleotide design and pioneering novel chemistry modifications to optimize the pharmacological properties of our molecules. We have seen preclinically and in clinical trials that these chemistry modifications enhance potency, distribution, and durability of effect of our molecules. Our novel chemistry also allows us to avoid using complex delivery vehicles, such as lipid nanoparticles and viruses, and instead use clinically proven conjugates (*e.g., N*-acetylgalactosamine or ("GalNAc")) or free uptake for delivery to a variety of cell and tissue types. We maintain strong and broad intellectual property, including for our novel chemistry modifications.

Our best-in-class chemistry capabilities have also unlocked new areas of biology, such as harnessing adenosine deaminases acting on RNA ("ADAR") enzymes for messenger RNA ("mRNA") correction and upregulation, selectively silencing a mutant allele, and more. By opening up new areas of biology, we have also opened up new opportunities to slow, stop or reverse disease and have expanded the possibilities offered through our platform.

The inspiration for our multimodal platform is based on the recognition that the biological machinery *(i.e.,* enzymes) needed to address human disease already exists within our cells and can be harnessed for therapeutic purposes with the right tools. We believe that we have built the most versatile toolkit of RNA-targeting modalities in the industry, with multiple means of repairing, restoring, or reducing proteins and designing best-fit solutions based on the unique biology of a given disease target. We are actively advancing programs in all of our modalities.



We intentionally focus on targeting the transcriptome using oligonucleotides rather than other nucleic acid modalities such as gene therapy and DNA editing. This focus enables us to:

- Leverage diversity of expression across cell types by modulating the many regulatory pathways that impact gene expression, including transcription, endogenous RNA interference pathways, splicing, and translation;
- Address diseases that have historically been difficult to treat with small molecules or biologics;
- Access a variety of tissue types or cell types throughout the body and modulate the frequency of dosing for broad distribution in tissues over time;
- Avoid the risk of permanent off-target genetic changes and other challenges associated with DNA editing or gene therapy approaches; and
- Leverage well-established industry manufacturing processes and regulatory, access, and reimbursement pathways.

We have a robust and diverse pipeline of potential first-or best-in-class programs, including:

- GalNAc-conjugated oligonucleotides for hepatic and metabolic diseases including:
  - AATD: WVE-006 is a GalNAc-conjugated SERPINA1 RNA editing oligonucleotide;
  - Obesity: WVE-007 is a GalNAc-conjugated RNAi oligonucleotide targeting inhibin βE (“INHBE”);
  - Liver disease: GalNAc-conjugated RNA editing oligonucleotide targeting PNPLA3 I148M for correction; and
  - Heterozygous Familial Hypercholesterolemia (“HeFH”): GalNAc-conjugated RNA editing oligonucleotide targeting low-density lipoprotein receptor (“LDLR”) for upregulation and GalNAc-conjugated RNA editing oligonucleotide targeting apolipoprotein B (“APOB”) for correction.

- Unconjugated oligonucleotides for muscle, CNS and other disease areas including:
  - DMD: WVE-N531 is an exon 53 splicing oligonucleotide; and
  - HD: WVE-003 is an allele-selective oligonucleotide designed to lower mutant huntingtin (“mHTT”) protein and preserve healthy, wild-type huntingtin (“wtHTT”) protein.

We are also building a pipeline of novel A-to-I RNA editing oligonucleotides (“AIMers”). Our RNA editing capability affords us the dexterity to address both rare diseases, as well as those diseases impacting large patient populations. AIMers are designed to target single bases on an RNA transcript and recruit proteins that exist in the body, called ADAR enzymes, which naturally possess the ability to change an adenine (A) to an inosine (I), which cells read as guanine (G). This approach enables both the correction of G-to-A point mutations and the modulation of RNA to either upregulate protein expression, modify protein-protein interactions, or alter RNA folding and processing. AIMers enable simplified delivery and avoid the risk of permanent changes to the genome and irreversible off-target effects with DNA-targeting approaches. AIMers are short in length, fully chemically modified, and use our novel chemistry, which make them distinct from other ADAR-mediated editing approaches.

In December 2022, we announced a strategic collaboration with GlaxoSmithKline Intellectual Property (No. 3) (“GSK”) to advance transformative oligonucleotide therapeutics, including WVE-006. The collaboration combines GSK’s novel genetic insights, as well as its global development and commercial capabilities, with our PRISM platform and oligonucleotide expertise. The collaboration will enable us to continue building a pipeline of first-in-class oligonucleotide-based therapeutics and unlock new areas of disease biology, as well as realize the full value of WVE-006 as a potential best-in-class treatment for AATD that has the potential to simultaneously address both liver and lung manifestations of the disease.

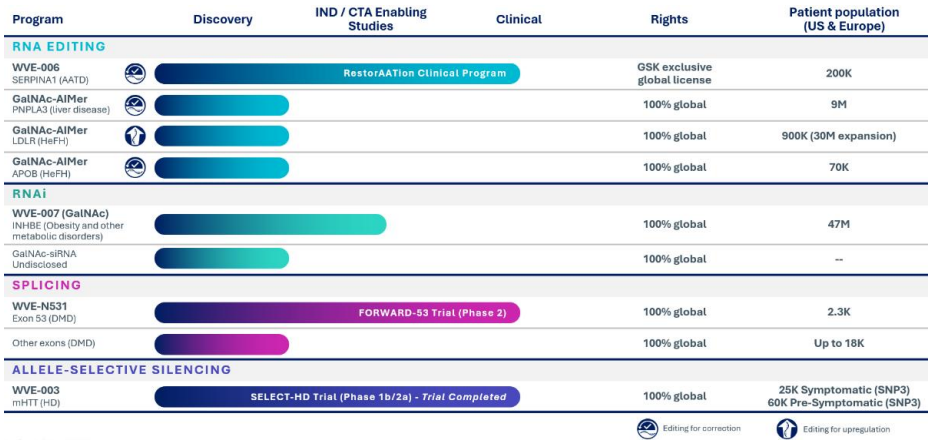
Our GSK collaboration has three components:

(1) A discovery collaboration which enables us to advance up to three programs leveraging targets informed by GSK’s novel insights, the first of which is our INHBE program (WVE-007) for obesity and other metabolic disorders;

(2) A discovery collaboration which enables GSK to advance up to eight programs leveraging PRISM and our oligonucleotide expertise and discovery capabilities, the first two of which were selected in April 2024; and

(3) An exclusive global license for GSK to WVE-006, our AATD program, that uses our proprietary AIMer technology. We will maintain development responsibilities for WVE-006 through completion of RestorAATion-2, at which point development and commercial responsibilities will transition to GSK.

***Our Current Programs***




Additional details regarding our lead therapeutic programs are set forth below.

*Alpha-1 antitrypsin deficiency ("AATD")*

Our AATD program is the first to leverage our novel RNA editing capability and uses GalNAc-conjugated AIMers (RNA editing oligonucleotides) and endogenous ADAR enzymes to correct a single base in the mutant SERPINA1 mRNA. By correcting the single RNA base mutation that causes a majority of AATD cases with the Pi*ZZ genotype (approximately 200,000 in the United States and Europe), RNA editing may provide an ideal approach for increasing circulating levels of wild-type Alpha-1 antitrypsin ("AAT") protein and reducing mutant protein aggregation in the liver, thus simultaneously addressing both the lung and liver manifestations of the disease.

WVE-006 is first-in-class in AATD and is the most advanced program currently in development using an oligonucleotide to harness an endogenous enzyme for RNA editing. Our RestorAATion clinical program investigating WVE-006 as a treatment for AATD is ongoing. The RestorAATion clinical program includes both healthy volunteers ("RestorAATion-1"), as well as patients with AATD who have the homozygous Pi*ZZ mutation ("RestorAATion-2") and is designed to provide an efficient path to proof-of-mechanism as measured by restoration of wild-type alpha-1 antitrypsin ("M-AAT") protein in serum. RestorAATion-2 is a Phase 1b/2a open label study designed to evaluate the safety, tolerability, pharmacodynamics ("PD") and pharmacokinetics ("PK") of WVE-006 in individuals with AATD who have the homozygous Pi*ZZ mutation. The trial includes both single ascending dose ("SAD") and multiple ascending dose ("MAD") portions. In the third quarter of 2024, we initiated dosing in the single dose portion of the first dose cohort of RestorAATion-2.

In the fourth quarter of 2024, we announced positive proof-of-mechanism data from the ongoing Phase 1b/2a RestorAATion-2 study, which provided the first-ever clinical demonstration of RNA editing in humans. Following a single subcutaneous dose of 200 mg of WVE-006 in the study's first two patients, circulating wild-type M-AAT protein in plasma reached a mean of 6.9 micromolar at day 15, representing more than 60% of total AAT. Increases in neutrophil elastase inhibition from baseline were consistent with production of functional M-AAT. Mean total AAT protein increased from below the level of quantification at baseline to 10.8 micromolar at day 15, meeting the level that has historically been the basis for regulatory approval for AAT augmentation therapies. Increases in total AAT from baseline and M-AAT protein were observed as early as day 3 and through day 57. WVE-006 has been well-tolerated with a favorable safety profile. All adverse events in RestorAATion-2, as well as in the ongoing RestorAATion-1 trial of healthy volunteers, were mild to moderate, with no Serious Adverse Events reported. The RestorAATion-2 trial is ongoing and we expect to share multidose data in 2025.

Under our GSK collaboration, GSK received an exclusive global license for WVE-006, with clinical development and commercial responsibilities transitioning to GSK after we complete the RestorAATion-2 trial. Under the terms of the collaboration, we are eligible to receive up to $525 million in development, launch, and commercial milestone payments, as well as double-digit tiered royalties up to the high teens, as a percentage of net sales for WVE-006. In December 2023, we announced that we achieved the first WVE-006 milestone in our collaboration with GSK, resulting in a $20.0 million payment.

Preclinical data show that treatment with WVE-006 resulted in serum AAT protein levels of up to 30 micromolar in an established AATD mouse model (NSG-PiZ). WVE-006 also led to restoration of approximately 50% wild-type M-AAT protein in serum and a 3-fold increase in neutrophil elastase inhibition activity, indicating that the restored M-AAT protein was functional. Our AATD AIMers are highly specific to SERPINA1 RNA *in vitro* and *in vivo* based on transcriptome-wide analyses.

*Obesity and Other Metabolic Disorders*

Our first wholly owned program to emerge from our collaboration with GSK is WVE-007, a GalNAc-small interfering RNA ("siRNA") that is designed to silence the Inhibin βE gene ("INHBE") to induce lipolysis (fat-burning) while preserving muscle mass to restore and maintain a healthy metabolic profile. There are approximately 174 million people in the United States and Europe living with obesity, and therapeutic options beyond GLP-1 receptor agonists are needed. GLP-1 receptor agonists lead to weight loss at the expense of muscle, suppress the general reward system, and are associated with a poor tolerability profile and 68% drop-off after one year. Heterozygous INHBE loss-of-function human carriers exhibit a healthy metabolic profile, including reduced waist-to-hip ratio and reduced odds of developing type 2 diabetes or coronary artery disease, and reduction of INHBE by 50% or more is expected to restore a healthy metabolic profile. In connection with our 2023 Research and Development Day, we shared *in vivo* proof-of-concept data in diet-induced obesity mice demonstrating INHBE silencing well beyond the anticipated 50% therapeutic threshold, which led to substantially lower body weight and reduction of visceral fat as compared to controls. These are the first data to demonstrate INHBE silencing *in vivo* in an animal model is consistent with the phenotypes of heterozygous loss-of-function carriers.

WVE-007 utilizes our next generation GalNAc-siRNA format. In preclinical diet-induced obesity ("DIO") mouse models, our INHBE GalNAc-siRNA has demonstrated highly potent INHBE silencing (ED50 < 1 mg/kg), durable silencing following one, low-single digit dose supporting every-six-month or annual subcutaneous dosing in humans, weight loss with no loss of muscle mass and reduction in fat mass, with preferential effect to the visceral fat, consistent with the profile of INHBE LoF in human genetics. In a head-to-head study in DIO mice, we have observed a weight loss effect from a single dose of our INHBE GalNAc-siRNA similar to semaglutide. In addition, treatment with our INHBE GalNAc-siRNA upon cessation of semaglutide treatment curtailed expected rebound weight gain. Additionally, in a separate ongoing study in DIO mice, when administered as an add-on to semaglutide, a single dose of our INHBE GalNAc-siRNA doubled the weight loss observed with semaglutide alone and this effect was sustained throughout the duration of the study. We are on track to initiate a Phase 1 clinical trial for WVE-007 in adults living with overweight or obesity in the first quarter of 2025. The trial is planned to assess safety, tolerability, pharmacokinetics, and Activin E lowering (a biomarker for target engagement), as well as body composition.

*Duchenne muscular dystrophy ("DMD")*

In DMD, we are advancing WVE-N531, which is designed to skip exon 53 within the dystrophin gene – a therapeutic approach that would address approximately 8-10% of DMD cases. WVE-N531 is designed to cause the cellular splicing machinery to skip over exon 53 during pre-mRNA processing, which restores the dystrophin mRNA reading frame and enables production of a truncated, but functional, dystrophin protein. Exon skipping produces dystrophin from the endogenous dystrophin gene (not micro or mini dystrophin expressed from a foreign vector), under the control of native gene-regulatory elements, resulting in normal expression. WVE-N531 is our first splicing candidate incorporating PN backbone ("PN") chemistry to be assessed in the clinic. In the third quarter of 2024, the FDA granted Rare Pediatric Disease Designation and Orphan Drug Designation to WVE-N531.

In December 2022, we announced a positive update from Part A of the Phase 1b/2a proof-of-concept, open label trial of WVE-N531 in three boys with DMD amenable to exon 53 skipping. High muscle concentrations of WVE-N531 and exon skipping were observed six weeks after initiating multi-dosing at 10 mg/kg every other week, achieving proof-of-concept in the trial. WVE-N531 also appeared safe and well-tolerated.

In September 2023, we shared an analysis of muscle biopsy data from the Part A proof-of-concept trial indicating that WVE-N531 was present in myogenic stem cells, which are integral to muscle regeneration. This is the first demonstration of uptake in myogenic stem cells in a clinical study and supports the potential differentiation of WVE-N531 from other therapeutics, including gene therapies.

In December 2023, we initiated dosing of WVE-N531 in FORWARD-53, the Phase 2 portion of the open-label trial ("Part B"). The study is designed to administer 10 mg/kg infusions of WVE-N531 every two weeks ("Q2W") and muscle biopsies are taken after 24 and 48 weeks of dosing. The primary endpoint will be dystrophin protein levels, and the trial will also evaluate pharmacokinetics, digital and functional endpoints, and safety and tolerability.

In September 2024, we announced positive interim data from the ongoing Phase 2 FORWARD-53 study. Eleven boys amenable to exon 53 skipping (age 5-11; 10 ambulatory and 1 non-ambulatory) are enrolled. The interim analysis was conducted after 24 weeks of 10 mg/kg dosing Q2W. WVE-N531 appeared safe and well tolerated. We observed mean muscle content-adjusted dystrophin expression of 9.0% and unadjusted dystrophin of 5.5%, with high consistency across participants, in a prespecified analysis. Dystrophin expression was quantified from two isoforms consistent with those observed in Becker muscular dystrophy patients who display milder disease. In addition, we observed meaningful improvements in serum biomarkers for muscle health, with localization of WVE-N531 present in myogenic stem cells and regeneration of myofibers. Skeletal muscle concentrations of ~41,000 ng/g and 61-day tissue half-life observed support monthly dosing going forward.

In the first quarter of 2025, we expect to deliver the complete 48-week FORWARD-53 data, and receive feedback from regulators on a pathway to accelerated approval. Pending positive results from this trial, we are planning to advance a broader DMD pipeline with PN-modified splicing oligonucleotides designed to skip other exons, with the goal of providing new treatment options for a larger population of boys with DMD.

*Huntington's disease ("HD")*

In HD, we are currently advancing WVE-003, a stereopure allele-selective oligonucleotide designed to selectively target an undisclosed single nucleotide polymorphism ("SNP"), "mHTT SNP3", associated with the disease-causing mHTT mRNA transcript within the Huntingtin ("HTT") gene. Approximately 40% of the HD population carries SNP3 according to published literature (Carroll et al., Molecular Therapy, 2011), and up to 80% of HD may be addressed in the future with other SNP-targeted candidates. There are currently no disease modifying therapies for HD, which affects over 200,000 individuals across all disease stages in the United States and Europe alone.

WVE-003 incorporates our proprietary PN chemistry. Targeting mRNA with SNP3 allows us to lower expression of transcript from the mutant allele, while leaving the healthy transcript relatively intact, thereby preserving wild-type (healthy) huntingtin ("wtHTT") protein, which is important for neuronal function. Only an allele-selective approach to mHTT lowering has the potential to both protect the reservoir of wtHTT protein and decrease the mHTT to wtHTT ratio in neurons, potentially releasing wtHTT from the inhibitory actions of mHTT. Our allele-selective approach may also enable us to address HD patient populations in early stages of disease prior to onset of clinical symptoms. In preclinical studies, WVE-003 showed dose-dependent and selective reduction of mHTT mRNA *in vitro*, as well as potent and durable knockdown of mHTT mRNA and protein *in vivo* in mouse models.

In the third quarter of 2023, we achieved a milestone in our collaboration with Takeda Pharmaceutical Company Limited ("Takeda"), which pertained to the positive results from a non-clinical study of WVE-003 in non-human primates and resulted in a payment of $7.0 million to us. This study showed significant tissue exposure levels of WVE-003 in the deep brain regions, including striatum and bolstered our existing datasets that confirm the ability of our oligonucleotides to distribute to the areas of the CNS important for HD.

The SELECT-HD trial was a global, multicenter, randomized, double-blind, placebo-controlled Phase 1b/2a clinical trial to assess the safety and tolerability of WVE-003 in people with a confirmed diagnosis of HD who are in the early stages of the disease and carry SNP3 in association with their cytosine-adenine-guanine ("CAG") expansion. Additional objectives included assessing pharmacokinetics and exploratory pharmacodynamic and clinical endpoints.

In June 2024, we announced positive clinical data from the Phase 1b/2a SELECT-HD study of WVE-003. Results from the multi-dose portion of the trial, which evaluated three doses of 30mg WVE-003 administered every eight weeks, showed clear translation of target engagement to clinic with statistically significant, potent, durable and allele-selective reductions in cerebrospinal fluid ("CSF") mHTT of up to 46% and preservation of healthy protein. This cohort also revealed a statistically significant correlation between mHTT reductions and slowing of caudate atrophy, indicating a potential benefit of allele-selective mHTT reductions. Structural brain magnetic resonance imaging ("MRI") changes such as caudate atrophy are well-characterized measures of disease progression and neurodegeneration in HD. WVE-003 was generally safe and well-tolerated, with mild-to-moderate adverse events ("AEs") and no Serious AEs ("SAEs"). In November 2024, five months after a patient completed their final safety visit, an SAE was reported that we assessed to be not-related to WVE-003.

Following our positive clinical results, we initiated engagement with the U.S. Food and Drug Administration ("FDA"). In November 2024, we received supportive initial feedback from FDA, who recognize the severity of HD and are receptive to and engaged with us regarding a potential pathway to accelerated approval. FDA is open to our plan to evaluate biomarkers, including caudate atrophy, as an endpoint to assess HD progression with the potential to predict clinical outcome. Also in November 2024, FDA granted Orphan Drug Designation to WVE-003.

Planning is underway for a global, potentially registrational Phase 2/3 study, including finalization of key aspects of design. We expect to submit an Investigational New Drug ("IND") application for WVE-003 in the second half of 2025.

*Discovery Pipeline*

We are advancing new targets across multiple disease areas to expand our pipeline of wholly owned programs. Our compelling preclinical data indicates our oligonucleotides can distribute to various tissues and cells without complex delivery vehicles, enabling us to address a wide variety of diseases, including pulmonary and renal diseases. Within RNA editing, we have demonstrated preclinically that we can edit to correct monogenic diseases by restoring or correcting protein function for the treatment of AATD. Building on our work in AATD, we have demonstrated our ability to address more prevalent diseases by editing RNA to upregulate or increase the stability of the mRNA transcript, thereby increasing endogenous protein production. Utilizing our proprietary "edit-verse," which is powered by genetic datasets and deep learning models, we have identified several RNA editing targets that leverage easily accessible biomarkers, offer efficient paths to proof-of-concept in humans, and represent meaningful commercial opportunities. We demonstrated preclinical proof-of-concept data on several of these new targets in 2023, achieving at least 2-fold mRNA upregulation in liver and kidney targets and more than 60% mRNA correction in liver and lung targets.

In October 2024, we announced three new, wholly owned RNA editing programs that are on track for candidate selection in 2025. These programs build on the achievement of proof-of-mechanism for RNA editing with WVE-006. As with WVE-006, these programs leverage GalNAc conjugates and have efficient clinical paths to proof-of-concept. These new programs include PNPLA3, which aims to use mRNA correction to restore the heterozygous phenotype for those at high risk for a variety of liver diseases, and LDLR and APOB which utilize first-in-class mRNA upregulation and mRNA correction treatment approaches to achieve target low-density lipoprotein cholesterol (LDL-c) levels in heterozygous familial hypercholesterolemia patients.

Through our collaboration with GSK, we are also leveraging GSK's novel genetics insights to expand our wholly owned pipeline, with the first being our INHBE program. In addition, we and GSK are actively working on multiple target validation programs for our GSK-partnered programs, for which all of our costs and expenses are prepaid by GSK. In April 2024, GSK selected its first two programs to advance to development candidates following achievement of target validation, triggering an aggregate initiation payment of $12.0 million from GSK. These programs utilize our next generation GalNAc-siRNA format and are in hepatology.

In 2026, we expect to have five GalNAc-conjugated clinical programs, including WVE-006, our WVE-007 siRNA program, and three new RNA editing programs.

***Recent Developments***

As previously disclosed, on September 27, 2024, we closed an underwritten public offering (the "September 2024 Offering") of 26,875,001 of our ordinary shares at a price of $8.00 per ordinary share and pre-funded warrants (the "2024 Pre-Funded Warrants") to purchase 1,875,023 ordinary shares at a price of $7.9999 per 2024 Pre-Funded Warrant, for gross proceeds of $200.0 million. On October 1, 2024, the representatives of the underwriters in the September 2024 Offering exercised their option to purchase an additional 3,750,000 ordinary shares, for additional gross proceeds of $30.0 million to us.

**Financial Operations Overview**

We have never been profitable, and since our inception, we have incurred significant operating losses. Our net loss for the three months ended September 30, 2024 was $61.8 million and our net income for the three months ended September 30, 2023 was $7.3 million. Our net loss for the nine months ended September 30, 2024 and 2023 was $126.3 million and $41.3 million, respectively. As of September 30, 2024 and December 31, 2023, we had an accumulated deficit of $1,151.1 million and $1,024.9 million, respectively. We expect to continue to incur significant expenses and operating losses for the foreseeable future.

***Revenue***

We recognize collaboration revenue under the GSK Collaboration Agreement, which became effective in January 2023, and the Takeda Collaboration Agreement, which became effective in April 2018 (both of which are defined in Note 5 in the notes to our consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q). 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.

***Operating Expenses***

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

***Research and Development Expenses***

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts, and the development of our product candidates, 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;
- 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 has been the development of our RNA medicines platform, PRISM. We are using PRISM, which includes our novel chemistry modifications, to design, develop and commercialize a broad pipeline of first- or best-in-class RNA medicines using our editing, RNAi, splicing, and antisense modalities.

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 "Other research and development expenses[(1)], including INHBE, RNA editing, PRISM, others" 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.

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 to continue to incur significant research and development expenses in the foreseeable future as we continue to manage our existing clinical trials, initiate additional clinical trials for certain product candidates, pursue later stages of clinical development for certain product candidates, maintain our manufacturing capabilities and continue to discover and develop additional product candidates in multiple therapeutic areas.

***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.

***Other Income, Net***

Other income, net is comprised primarily of dividend income and refundable tax credits from tax authorities. 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 of America. 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. Management considers many factors in selecting appropriate financial accounting policies and in developing the estimates and assumptions that are used in the preparation of the financial statements. Management must apply significant judgment in this process. We believe that 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 CROs and CMOs to estimate the 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 September 30, 2024 and 2023***

| | Three Months Ended September 30, | | |
|---|---|---|---|
| | 2024 | 2023 | Change |
| | (in thousands) | | |
| Revenue | $ (7,676) | $ 49,214 | $ (56,890) |
| Operating expenses: | | | |
| Research and development | 41,197 | 31,642 | 9,555 |
| General and administrative | 15,042 | 13,128 | 1,914 |
| Total operating expenses | 56,239 | 44,770 | 11,469 |
| Income (loss) from operations | (63,915) | 4,444 | (68,359) |
| Total other income, net | 2,135 | 2,131 | 4 |
| Income (loss) before income taxes | (61,780) | 6,575 | (68,355) |
| Income tax benefit (provision) | — | 677 | (677) |
| Net income (loss) | $ (61,780) | $ 7,252 | $ (69,032) |

*Revenue*

Revenue recognized for the three months ended September 30, 2024 and 2023 was $(7.7) million and $49.2 million, respectively, and is comprised of revenue recognized under the GSK Collaboration Agreement and the Takeda Collaboration Agreement. The year-over-year change in revenue was primarily driven by the decrease in revenue recognized under the Takeda Collaboration Agreement as we recognized $28.0 million of revenue related to the termination of the C9 program, as well as $7.0 million of revenue related to the achievement of a development milestone under the Takeda Collaboration Agreement in the three months ended September 30, 2023. Additionally, revenue recognized under the GSK Collaboration Agreement also declined year-over-year; $14.3 million was recognized for the three months ended September 30, 2023, and for the same period in 2024, an $8.0 million reduction to cumulative revenue was recorded due to a change in the estimate to fulfill the GSK Collaboration Agreement performance obligations in accordance with the revenue recognition standard.

*Research and Development Expenses*

| | Three Months Ended September 30, | | |
|---|---|---|---|
| | 2024 | 2023 | Change |
| | (in thousands) | | |
| AATD program | $ 2,672 | $ 2,204 | $ 468 |
| DMD programs | 3,379 | 1,528 | 1,851 |
| HD programs | 3,761 | 2,873 | 888 |
| Other research and development expenses[(1)], including INHBE, RNA editing, PRISM, others | 31,437 | 22,473 | 8,964 |
| ALS and FTD programs (discontinued) | (52) | 2,564 | (2,616) |
| Total research and development expenses | $ 41,197 | $ 31,642 | $ 9,555 |

(1)Includes expenses related to 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 $41.2 million for the three months ended September 30, 2024, compared to $31.6 million for the three months ended September 30, 2023. The increase of approximately $9.6 million was due to the following:

- an increase of $0.5 million in external expenses related to our AATD program, WVE-006 (RNA editing);
- an increase of approximately $1.8 million in external expenses related to our DMD programs, including WVE-N531 (splicing);
- an increase of $0.9 million in external expenses related to our HD programs, including WVE-003 (silencing);
- an increase of $9.0 million in other research and development expenses[(1)], including INHBE, RNA editing, PRISM, and other internal and external research and development expenses that are not allocated on a program-by-program basis or are related to other discovery and development programs, and the identification of potential drug discovery candidates, mainly due to increases in compensation-related expenses and in other external research and development expenses; and
- a decrease of $2.6 million in external expenses related to our discontinued ALS and FTD program, WVE-004.

*General and Administrative Expenses*

General and administrative expenses were $15.0 million for the three months ended September 30, 2024, as compared to $13.1 million for the three months ended September 30, 2023. The increase is primarily driven by increases in compensation related expenses and administrative expenses.

*Other Income (Expense), Net*

Other income, net for the three months ended September 30, 2024 and 2023 was $2.1 million and $2.1 million, respectively, and consisted primarily of dividend income.

*Income Tax Benefit (Provision)*

During the three months ended September 30, 2024, we recorded no income tax benefit or provision. During the three months ended September 30, 2023, we recorded an income tax benefit of $0.7 million due to a provision to return adjustment in connection with the U.S. tax guidance relating to the capitalization of research and development expenditures. We maintained a full valuation allowance for the three months ended September 30, 2024 and 2023 in all jurisdictions due to uncertainty regarding future taxable income.

***Comparison of the nine months ended September 30, 2024 and 2023***

| | Nine Months Ended September 30, 2024 | 2023 | Change |
|---|---|---|---|
| | (in thousands) | | |
| Revenue | $ 24,554 | $ 84,249 | $ (59,695) |
| Operating expenses: | | | |
| Research and development | 115,037 | 95,935 | 19,102 |
| General and administrative | 42,887 | 37,628 | 5,259 |
| Total operating expenses | 157,924 | 133,563 | 24,361 |
| Loss from operations | (133,370) | (49,314) | (84,056) |
| Total other income, net | 7,109 | 7,380 | (271) |
| Loss before income taxes | (126,261) | (41,934) | (84,327) |
| Income tax benefit (provision) | — | 677 | (677) |
| Net loss | $ (126,261) | $ (41,257) | $ (85,004) |

*Revenue*

Revenue for the nine months ended September 30, 2024 and 2023 was $24.6 million and $84.2 million, respectively, and is comprised of revenue earned under the GSK Collaboration Agreement and the Takeda Collaboration Agreement. The year-over-year change in revenue was primarily driven by the decrease in revenue recognized under the Takeda Collaboration Agreement, as we recognized $28.0 million of revenue in the nine months ended September 30, 2023 related to the termination of the C9 program, as well as $7.0 million of revenue related to the achievement of a development milestone under the Takeda Collaboration Agreement. Additionally, there was a decrease in revenue recognized under the GSK Collaboration Agreement, as in the nine months ended September 30, 2023, we recognized $47.4 million under the GSK Collaboration Agreement and in the nine months ended September 30, 2024, we recognized $23.4 million under the GSK Collaboration Agreement. As previously discussed, during the three months ended September 30, 2024, an $8.0 million reduction to cumulative revenue was recorded due to a change in the estimate to fulfill the GSK Collaboration Agreement performance obligations in accordance with the revenue recognition standard.

*Research and Development Expenses*

| | Nine Months Ended September 30, | | |
|---|---|---|---|
| | 2024 | 2023 | Change |
| | (in thousands) | | |
| AATD program | $ 9,037 | $ 5,930 | $ 3,107 |
| DMD programs | 10,481 | 4,097 | 6,384 |
| HD programs | 9,776 | 10,290 | (514) |
| Other research and development expenses[(1)], including INHBE, RNA editing, PRISM, others | 85,676 | 67,004 | 18,672 |
| ALS and FTD programs (discontinued) | 67 | 8,614 | (8,547) |
| Total research and development expenses | $ 115,037 | $ 95,935 | $ 19,102 |

(1)Includes expenses related to 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 $115.0 million for the nine months ended September 30, 2024, compared to $95.9 million for the nine months ended September 30, 2023. The increase of approximately $19.1 million was due to the following:

- an increase of $3.1 million in external expenses related to our AATD program, WVE-006 (RNA editing);
- an increase of $6.4 million in external expenses related to our DMD programs, including WVE-N531 (splicing);
- a decrease of $0.5 million in external expenses related to our HD programs, including WVE-003 (silencing);
- an increase of approximately $18.6 million in other research and development expenses[(1)], including INHBE, RNA editing, PRISM, and other internal and external research and development expenses that are not allocated on a program-by-program basis or are related to other discovery and development programs, and the identification of potential drug discovery candidates, mainly due to increases in compensation-related expenses and in other external research and development expenses; and
- a decrease of $8.5 million in external expenses related to our discontinued ALS and FTD program, WVE-004.

*General and Administrative Expenses*

General and administrative expenses were $42.9 million for the nine months ended September 30, 2024, as compared to approximately $37.6 million for the nine months ended September 30, 2023. The increase of $5.3 million was primarily driven by increases in compensation related expenses and professional fees.

*Other Income (Expense), Net*

Other income, net for the nine months ended September 30, 2024 and 2023 was $7.1 million and $7.4 million, respectively, and consisted primarily of dividend income, as well as estimated refundable tax credits.

*Income Tax Benefit (Provision)*

During the nine months ended September 30, 2024, we recorded no income tax benefit or provision. During the nine months ended September 30, 2023, we recorded an income tax benefit of $0.7 million due to a provision to return adjustment in connection with the U.S. tax guidance relating to the capitalization of research and development expenditures. We maintained a full valuation allowance for the nine months ended September 30, 2024 and 2023 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 operating losses. To date, we have primarily funded our operations through public and other registered offerings of our ordinary shares and other securities, collaborations with third parties and private placements of debt and equity securities. Through September 30, 2024, we have received an aggregate of approximately $1,544.9 million in net proceeds from these transactions, consisting of $944.3 million in net proceeds from public and other registered offerings of our ordinary shares and other securities, $511.3 million from our collaborations and $89.3 million in net proceeds from private placements of our debt and equity securities.

In January 2024, the representatives of the underwriters in connection with the previously disclosed underwritten public offering (the "December 2023 Offering") exercised their option to purchase an additional 3,000,000 ordinary shares at a price of $5.00 per ordinary share as a part of the December 2023 Offering. We received an additional $14.0 million in net proceeds from the December 2023 Offering in January 2024.

On September 27, 2024, the Company closed the September 2024 Offering in which the Company issued and sold 23,125,001 of the Company's ordinary shares and the 2024 Pre-Funded Warrants to purchase up to 1,875,023 of the Company's ordinary shares. The gross proceeds to the Company from the September 2024 Offering were $200.0 million before deducting underwriting discounts and commissions and other offering expenses.

As of September 30, 2024, we had cash and cash equivalents totaling $310.9 million, restricted cash of $3.7 million and an accumulated deficit of $1,151.1 million. On October 1, 2024, the representatives of the underwriters in connection with the previously disclosed underwritten public offering exercised their option in full to purchase an additional 3,750,000 ordinary shares, for additional net proceeds to us of approximately $28.2 million.

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 we have sufficient funds for our current or future operating plans.

Our operating lease commitments as of September 30, 2024 total approximately $31.4 million, of which approximately $2.3 million is related to payments in 2024 and approximately $29.1 million is related to payments beyond 2024.

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 included a prospectus covering up to an aggregate of $250.0 million in ordinary shares that we could issue and sell from time to time, through Jefferies LLC ("Jefferies") acting as our sales agent, pursuant to the open market sales agreement that we entered into with Jefferies in May 2019, as amended in March 2020 and March 2022 (the "Sales Agreement"), for our "at-the-market" equity program. Since we no longer qualified as a "well-known seasoned issuer" ("WKSI") at the time of the filing of our Annual Report on Form 10-K for the year ended December 31, 2019, we previously amended the shelf registration statement to register for sale up to $500.0 million 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, including the $250.0 million in ordinary shares that we may issue and sell from time to time pursuant to our "at-the-market" equity program. This registration statement, which we refer to as the "2019 Form S-3," remained effective until our 2022 Form S-3 (as defined below) was declared effective on May 4, 2022, after which time we may no longer offer or sell any securities under the 2019 Form S-3.

On March 3, 2022, we filed a new universal shelf registration on Form S-3 with the SEC, which was declared effective by the SEC on May 4, 2022, pursuant to which we registered for sale up to $500.0 million 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, which we refer to as the "2022 Form S-3." The 2022 Form S-3 included a prospectus covering up to approximately $132.0 million in ordinary shares that had not yet been issued or sold under our Sales Agreement with Jefferies at the time the 2022 Form S-3 was declared effective. In connection with and to access capacity for the September 2024 Offering, we reduced the amount of ordinary shares that may be sold pursuant to our "at-the-market" equity offering program with Jefferies to $0.

On November 12, 2024, we plan to file a WKSI shelf registration statement on Form S-3ASR with the SEC pursuant to which we expect to register 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, which we refer to as the "2024 WKSI Shelf". Our 2024 WKSI Shelf is expected to include a prospectus covering up to an aggregate of $250.0 million in ordinary shares that we could issue and sell from time to time, through Jefferies LLC ("Jefferies") acting as our sales agent, pursuant to the Open Market Sale Agreement, dated May 10, 2019, as amended by Amendment No. 1, dated as of March 2, 2020, Amendment No. 2, dated as of March 3, 2022, and Amendment No. 3 (as defined below) (collectively, the "Sales Agreement"), for our "at-the-market" equity program. As of the filing and automatic effectiveness of our 2024 WKSI Shelf, the 2022 Form S-3 will be deemed terminated.

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:

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2024 | 2023 |
| | (in thousands) | |
| Net cash provided by (used in) operating activities | $ (107,378) | $ 13,808 |
| Net cash used in investing activities | (852) | (759) |
| Net cash provided by financing activities | 218,909 | 38,572 |
| Effect of foreign exchange rates on cash, cash equivalents, and restricted cash | (35) | (153) |
| Net increase in cash, cash equivalents, and restricted cash | $ 110,644 | $ 51,468 |

*Operating Activities*

During the nine months ended September 30, 2024, operating activities used $107.4 million of cash, due to our net loss of $126.3 million and offset by changes in operating assets and liabilities of $2.5 million and by non-cash charges of $16.4 million.

During the nine months ended September 30, 2023, operating activities provided $13.8 million of cash, due to our net loss of $41.3 million, offset by non-cash charges of $14.5 million and changes in operating assets and liabilities of $40.6 million. The largest non-cash charge was the $7.4 million of share-based compensation. The largest change in operating assets and liabilities was a $62.3 million increase in deferred revenue, mainly driven by our GSK Collaboration Agreement, which became effective in January 2023, which was offset by the second largest change in operating assets and liabilities, the $7.0 million increase in accounts receivable related to the achievement of a milestone under the Takeda Collaboration Agreement.

*Investing Activities*

During the nine months ended September 30, 2024, investing activities used $0.9 million of cash, related to purchases of property and equipment.

During the nine months ended September 30, 2023, investing activities used $0.8 million of cash, related to purchases of property and equipment.

*Financing Activities*

During the nine months ended September 30, 2024, net cash provided by financing activities was $218.9 million, which was primarily due to the $188.0 million in net proceeds from the September 2024 Offering of ordinary shares and the 2024 Pre-Funded Warrants; as well as the $14.0 million in net proceeds from the January 2024 exercise of the underwriters' option to purchase an additional 3,000,000 shares under the December 2023 Offering. Additionally, we received $15.3 million in net proceeds from sales under our "at-the-market" equity program.

During the nine months ended September 30, 2023, net cash provided by financing activities was $38.6 million, which was primarily due to the GSK Equity Investment (as defined in Note 5).

***Funding Requirements***

We expect to continue to incur significant expenses in connection with our ongoing research and development activities and our internal cGMP manufacturing activities. Furthermore, we anticipate that our expenses will continue to vary 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;
- make strategic investments in continuing to innovate our research and development platform, PRISM, and in optimizing our manufacturing processes and formulations;
- maintain 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;

- respond to the impacts of the local and global health epidemics, the conflict involving Russia and Ukraine, the conflict in the Middle East, global economic uncertainty, rising inflation, rising interest rates or market disruptions on our business; 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 drug 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 future capital outlays and operating expenses associated with completing the research and development for our therapeutic programs. Our future capital requirements for our therapeutic programs will depend on many factors, including:

- the progress, results and costs of conducting research and continued preclinical and clinical development for our therapeutic programs and 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 Takeda and GSK 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 impacts of the local and global health epidemics, the conflict involving Russia and Ukraine, the conflict in the Middle East, global economic uncertainty, rising inflation, rising interest rates or market disruptions on our business;
- 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 Takeda or GSK under our collaborations with them. 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.

**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 comprised of funds held in checking accounts 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. Changes in the relative values of currencies occur regularly and, in some instances, could materially adversely affect our business, our financial conditions, our results of operations or our cash flows. For the three and nine months ended September 30, 2024 and 2023, changes in foreign currency exchange rates did not have a material impact on our historical financial position, our business, our financial condition, our results of operations or our 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 in the last two years. If global inflation trends continue, we expect appreciable increases in clinical trial, labor, and other operating costs.

***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, including impacts of global economic uncertainty on the capital markets.

**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 September 30, 2024. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under 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 September 30, 2024, 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 of such internal control required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended September 30, 2024 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 2023 Annual Report on Form 10-K.

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

***Recent Unregistered Sales of Equity Securities***

None.

***Issuer Purchases of Equity Securities***

We did not repurchase any of our equity securities during the three months ended September 30, 2024.

### Item 3. Defaults Upon Senior Securities

None.

### Item 4. Mine Safety Disclosures

Not applicable.

### Item 5. Other Information

**Rule 10b5-1 Trading Plans**

During the three months ended September 30, 2024, certain of our officers (as defined in Rule 16a-1(f) of the Exchange Act) entered into contracts, instructions or written plans (each, a "Rule 10b5-1 Trading Plan" and collectively, the "Rule 10b5-1 Trading Plans") for the purchase or sale of our securities that are intended to satisfy the conditions specified in Rule 10b5-1(c) under the Exchange Act for an affirmative defense against liability for trading in securities on the basis of material nonpublic information. We describe the material terms of these Rule 10b5-1 Trading Plans below.

On August 21, 2024, Paul B. Bolno, M.D., MBA, our President and Chief Executive Officer, adopted a Rule 10b5-1 Trading Plan providing for the sale of up to an aggregate of 335,994 of our ordinary shares pursuant to the terms of such Rule 10b5-1 Trading Plan. Dr. Bolno's Rule 10b5-1 Trading Plan is active until April 30, 2025, or earlier, if and when all transactions under the Rule 10b5-1 Trading Plan are completed.

On August 21, 2024, Kyle Moran, CFA, our Chief Financial Officer, adopted a Rule 10b5-1 Trading Plan providing for the sale of up to an aggregate of 17,146 of our ordinary shares pursuant to the terms of such Rule 10b5-1 Trading Plan. Mr. Moran's Rule 10b5-1 Trading Plan is active until March 19, 2025, or earlier, if and when all transactions under the Rule 10b5-1 Trading Plan are completed.

Except as disclosed above, none of our directors or executive officers adopted, modified or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement" as such term is defined in Item 408(a) of Regulation S-K, during the fiscal quarter ended September 30, 2024.

**Amendment to Sales Agreement**

On November 12, 2024, we entered into Amendment No. 3 ("Amendment No. 3") to the Sales Agreement. The Sales Agreement, as amended by Amendment No. 3, provides for the offer and sale of our ordinary shares in our "at-the-market" equity program pursuant to the prospectus covering up to an aggregate of $250.0 million in ordinary shares that we could issue and sell from time to time, through Jefferies acting as our sales agent, expected to be included in our 2024 WKSI Shelf.

**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 |
|---|---|---|---|---|---|
| 4.1 | Form of Pre-Funded Warrant | | Form 8-K (Exhibit 4.1) | 9/26/2024 | 001-37627 |
| 10.1 | Amendment No. 3, dated November 12, 2024, to the Open Market Sale Agreement, dated as of May 10, 2019, by and between Wave Life Sciences Ltd. and Jefferies LLC | X | | | |
| 10.2+ | Non-Employee Director Compensation Policy, effective as of August 6, 2024 | X | | | |
| 10.3+ | Wave Life Sciences Ltd. 2021 Equity Incentive Plan, as amended | | Form 8-K (Exhibit 10.1) | 8/12/2024 | 001-37627 |
| 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 | Inline 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 | Inline XBRL Taxonomy Extension Schema Document | X | | | |
| 104 | Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101) | 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.

(+) Indicates management contract or compensatory plan or arrangement.

**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.

WAVE LIFE SCIENCES LTD.

Date: November 12, 2024

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

Date: November 12, 2024

By: /s/ Kyle Moran
Kyle Moran
Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

**Exhibit 10.1**

**AMENDMENT NO. 3 TO**
**OPEN MARKET SALE AGREEMENT**

**November 12, 2024**

This Amendment No. 3 ("**Amendment No. 3**") amends that certain Open Market Sale Agreement[SM], dated as of May 10, 2019, as amended by Amendment No. 1, dated as of March 2, 2020, and Amendment No. 2, dated March 3, 2022 (collectively, the "**Agreement**"), by and between Wave Life Sciences Ltd. (the "**Company**") and Jefferies LLC, as sales agent and/or principal (the "**Agent**"). Defined terms used herein and not otherwise defined shall have the meaning assigned to such terms in the Agreement.

WITNESSETH THAT:

WHEREAS, Section 8(i) of the Agreement permits the Company and the Agent to amend the Agreement; and

WHEREAS, the Company and the Agent now desire to amend the Agreement as provided herein.

NOW, THEREFORE, in consideration of the foregoing premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Agent agree as follows:

1. Reference to the "Registration Statement" in the Agreement shall refer to the automatic shelf registration statement on Form S-3, originally filed with the Commission on November 12, 2024 (as the same may be amended from time to time, the "**New Registration Statement**").

2. Reference to the "Agreement" in the introductory paragraph of the Agreement is hereby revised to read "Wave Life Sciences Ltd., a company incorporated under the laws of the Republic of Singapore (the "**Company**"), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the "**Agent**"), ordinary shares of the Company, no par value (the "**Ordinary Shares**"), having an aggregate offering price not exceeding the Maximum Program Amount on the terms set forth in this agreement (this "**Agreement**")."

3. Reference to the "Maximum Program Amount" in the Agreement shall refer to the lesser number of (a) the number or dollar amount of Ordinary Shares registered on the effective Registration Statement pursuant to which the offering is being made, (b) the number of authorized but unissued Ordinary Shares (less Ordinary Shares issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company's authorized share capital), (c) the number or dollar amount of Ordinary Shares permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable) or (d) the number or dollar amount of Ordinary Shares for which the Company has filed a prospectus supplement.

4. The definition of "Settlement Date" in Section 1(a) of the Agreement is amended and restated as set forth below:

> "**Settlement Date**" means the first business day following each Trading Day during the Selling Period on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

5. Section 2(yy) of the Agreement is amended and restated in its entirety as set forth below:

> "Well Known Seasoned Issuer. (i) At the original effectiveness of the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment or incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or in the form of a prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Securities Act, the Company was and is a "well-known seasoned issuer" (as defined in Rule 405)."

6. References to the date of the Agreement in the form of Issuance Notice included as Exhibit A to the Agreement is hereby revised to read “May 10, 2019, as amended by Amendment No. 1 thereto, dated March 2, 2020, Amendment No. 2 thereto, dated March 3, 2022, and Amendment No. 3 thereto, dated November 12, 2024.”

7. Except as specifically set forth herein, all other provisions of the Agreement shall remain in full force and effect.

8. This Amendment No. 3 shall become effective upon the date that the New Registration Statement becomes automatically effective under the Securities Act.

9. The Company agrees to pay the reasonable and documented fees and disbursements of the Agent’s counsel in connection with this Amendment No. 3, provided that the amount payable by the Company with respect to such fees and disbursements of the Agent’s counsel shall not exceed $10,000.

10. Section 8(i) of the Agreement is supplemented and amended such that this Amendment No. 3 and the Agreement, as amended hereby, constitute the entire agreement of the parties to the Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof and thereof.

11. Except as amended hereby, the Agreement as now in effect is ratified and confirmed hereby in all respects. For the avoidance of doubt, this Amendment No. 3 and all of its provisions shall be deemed to be a part of the Agreement, as amended hereby.

12. This Amendment No. 3 shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Amendment No. 3 or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the “**Specified Courts**”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth in the Agreement shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

*[Signature page follows.]*

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

**WAVE LIFE SCIENCES LTD.**

By: /s/ Paul B. Bolno, M.D., MBA
Name: Paul B. Bolno, M.D., MBA
Title: President and Chief Executive Officer

The foregoing Amendment is hereby confirmed and accepted by the Agent in New York, New York as of the date first above written.

**JEFFERIES LLC**

By: /s/ Michael Magarro
Name: Michael Magarro
Title: Managing Director

**Exhibit 10.2+**

**Effective: Upon the date of receipt of final voting results (August 12, 2024) evidencing requisite shareholder approval of non-employee director compensation proposal at 2024 Annual General Meeting through 2025 Annual General Meeting**

**WAVE LIFE SCIENCES LTD.**
**2024 NON-EMPLOYEE DIRECTOR COMPENSATION POLICY**

## A. Introduction

The Board of Directors (the "Board") of Wave Life Sciences Ltd. (the "Company") has approved the following 2024 Non-Employee Director Compensation Policy (this "Policy"), which establishes compensation to be paid to non-employee directors of the Company to provide an inducement to obtain and retain the services of qualified persons to serve as members of the Board. Except as otherwise indicated herein, this Policy shall be effective as of the date of receipt of the final voting results evidencing requisite shareholder approval of the non-employee director compensation proposal at the 2024 annual general meeting (the "Effective Date") through the date of the Company's 2025 annual general meeting, at which time the shareholders of the Company will be asked to approve the key parameters of a new or extended non-employee director compensation policy for the Board service period that begins at the 2025 annual general meeting. Subject to receipt of shareholder approval, such new or extended policy shall take effect and the Board service period will generally continue from annual general meeting to annual general meeting.

## B. Applicable Persons

This Policy shall apply to each director of the Company who is not an employee of the Company or any Affiliate (each, an "Outside Director"). "Affiliate" shall mean a corporation which is a direct or indirect parent or subsidiary of the Company, as determined pursuant to Section 424 of the Internal Revenue Code of 1986, as amended.

## C. Equity Compensation - Share Option and Restricted Shares Unit (RSU) Grants

All share amounts set forth herein shall be subject to automatic adjustment in the event of any share split or other recapitalization affecting the Company's ordinary shares (the "Ordinary Shares") following the Effective Date.

(1) Initial Equity Grants for Newly Appointed or Elected Directors

Each new Outside Director appointed or elected on or after the Effective Date shall be granted an "Initial Equity Grant" under the Company's then-effective equity incentive plan (the "Equity Incentive Plan") on the date of their initial appointment or election to the Board. The Initial Equity Grant shall consist of (i) an option to purchase 64,460 ordinary shares, which shall vest as to 12.5% of the shares on a quarterly basis during the two-year period following the grant date; and (ii) a restricted share unit of 32,230 ordinary shares, which shall vest as to 50% of the shares on the earlier of (x) the following year's annual general meeting of shareholders or (y) the following year's anniversary of the grant date, in each case during the two-year period following the grant date, subject to the Outside Director's continued service on the Board during that period; provided that the Initial Equity Grant shall become vested and/or exercisable in full immediately prior to and contingent upon the closing of a Change of Control of the Company (as defined in the applicable equity agreement). In addition, the option component of the Initial Equity Grant shall (a) have an exercise price equal to the fair market value of the Ordinary Shares on the grant date; and (b) expire and no longer be exercisable after the five-year anniversary of the grant date. The Initial Equity Grant shall contain such other terms and conditions as the Board or the Compensation Committee shall determine.

(2) Refresh Equity Grants for Long-Term Service

Section 77 of the Companies Act (Cap. 50 of Singapore) ("Companies Act") imposes a five-year maximum term for share options granted to non-employee directors of public companies (as defined in the Companies Act). Due to this limitation, each Outside Director (other than an Outside Director receiving an Initial Equity Grant or an Annual Equity Grant) who is elected to continue their Board service and who holds an option that was granted in connection with their initial appointment or election to the Board and which has an expiration date within twelve months following the 2024 annual general meeting shall be granted a "Refresh Equity Grant" under the Equity Incentive Plan on the Effective Date. The Refresh Equity Grant shall consist of (i) an option to purchase 64,460 ordinary shares, which shall vest as to 12.5% of the shares on a quarterly basis during the two-year period following the grant date; and (ii) a restricted share unit of 32,230 ordinary shares, which shall vest as to 50% of the shares on the earlier of (x) the following year's annual general meeting of shareholders or (y) the following year's anniversary of the grant date, in each case during the two-year period following the grant date, subject to the Outside Director's continued service on the Board during that period; provided that the Refresh Equity Grant shall become vested and/or exercisable in full immediately prior to and contingent upon the closing of a Change of Control of the Company (as defined in the applicable equity agreement). In addition, the option component of the Refresh Equity Grant shall (a) have an exercise price equal to the fair market value of the Ordinary Shares on the grant date; and (b) expire and no longer be exercisable after the five-year anniversary of the grant date. The Refresh Equity Grant shall contain such other terms and conditions as the Board or the Compensation Committee shall determine.

(3) Annual Equity Grants for Continuing Service

On the Effective Date, each Outside Director (other than an Outside Director receiving an Initial Equity Grant or a Refresh Equity Grant) who is elected to continue their Board service shall be granted an "Annual Equity Grant" under the Equity Incentive Plan. The Annual Equity Grant shall consist of (i) an option to purchase 32,230 ordinary shares, which shall vest as to 100% of the shares on the earlier of the 2025 Annual General Meeting of Shareholders or the first anniversary of the grant date; and (ii) a restricted share unit of 16,115 ordinary shares, which shall vest as to 100% of the shares on the earlier of the 2025 Annual General Meeting of Shareholders or the first anniversary of the grant date, subject to the Outside Director's continued service on the Board during that period; provided that the Annual Equity Grant shall become vested and/or exercisable in full immediately prior to and contingent upon the closing of a Change of Control of the Company (as defined in the applicable equity agreement). In addition, the option component of the Annual Equity Grant shall (a) have an exercise price equal to the fair market value of the Ordinary Shares on the grant date; and (b) expire and no longer be exercisable after the five-year anniversary of the grant date. The Annual Equity Grant shall contain such other terms and conditions as the Board or the Compensation Committee shall determine.

(4) Limitation on Equity Grants

For the avoidance of doubt, an Outside Director shall be eligible to receive only one type of equity grant on the Effective Date, which shall be either (i) an Initial Equity Grant (ii) a Refresh Equity Grant; or (iii) an Annual Equity Grant.

**D. Cash Compensation**

(1) Annual Cash Fees

The following annual cash fees shall be paid to the Outside Directors serving on the Board and the Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, and Research and Development Committee, as applicable.

| Board or Committee of Board | Annual Amount for Member | Annual Amount for Chair |
|---|---|---|
| Board | $40,000 | $75,000 |
| Audit Committee | $10,000 | $20,000 |
| Compensation Committee | $7,500 | $15,000 |
| Nominating and Corporate Governance Committee | $7,500 | $15,000 |
| Research and Development Committee | $7,500 | $15,000 |

(2) Payment Terms for All Cash Fees

Except as otherwise indicated herein, cash fees payable to Outside Directors shall be paid quarterly in arrears as of the last day of each fiscal quarter commencing on the later of the Effective Date or an Outside Director's first election or appointment to the Board, prorated from the Effective Date or such Outside Director's election or appointment date, as applicable. If an Outside Director dies, resigns or is removed during any quarter, he or she shall be entitled to a cash fee on a prorated basis through their last day of Board service.

**E. Expenses**

Upon presentation of documented expenses, reasonably satisfactory to the Company, each Outside Director shall be reimbursed for their reasonable, documented out-of-pocket business expenses incurred in connection with attending meetings of the Board and Committees thereof, or general meetings of shareholders, or in connection with other business related to their Board service.

**F. Amendments**

The Compensation Committee or the Board, as appropriate, shall review this Policy from time to time to assess whether any changes in the type or amount of compensation provided herein should be adjusted in order to fulfill the objectives of this Policy, provided, however, that changes to this Policy which require shareholder approval under applicable law shall require such shareholder approval to be obtained before taking effect.

**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.

Dated: November 12, 2024

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, Kyle Moran, 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.

Dated: November 12, 2024

By: /s/ Kyle Moran
Kyle Moran
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 September 30, 2024 (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: November 12, 2024

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

Dated: November 12, 2024

/s/ Kyle Moran
Kyle Moran
Chief Financial Officer
(Principal Financial Officer)