FORM 10-Q

Quarterly report pursuant to sections 13 or 15(d)

Filing Date: **2024-08-08** | Period of Report: **2024-06-30**
SEC Accession No. 0000950170-24-093341

(HTML Version on secdatabase.com)

FILER

Wave Life Sciences Ltd.
CIK:**1631574**| IRS No.: **000000000** | State of Incorp.:**U0** | Fiscal Year End: **1231**
Type: **10-Q** | Act: **34** | File No.: **001-37627** | Film No.: **241186118**
SIC: **2834** Pharmaceutical preparations

Mailing Address
733 CONCORD AVENUE
CAMBRIDGE MA 02138

Business Address
7 STRAITS VIEW
#12-00, MARINA ONE EAST TOWER
SINGAPORE U0 018936
617-949-2900

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 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 **(State or other jurisdiction of incorporation or organization)**		**98-135** **(I.R.S. Employe Identific 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(s)	Name of each exchan on which regist
$0 Par Value Ordinary Shares	**WVE**	**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	☐	Accelera filer
Non-accelerated filer	☒	Smaller reporting ☒ompany
		Emergin growth ☐ompany

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

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

The number of outstanding ordinary shares of the registrant as of August 7, 2024 was 124,737,862.

WAVE LIFE SCIENCES LTD.

QUARTERLY REPORT ON FORM 10-Q

TABLE OF CONTENTS

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, rising inflation, rising 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)

	June 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 153,958	$ 200,351
Accounts receivable	1,290	21,086
Prepaid expenses	12,147	9,912
Other current assets	4,680	4,024
Total current assets	172,075	235,373
Long-term assets:		
Property and equipment, net of accumulated depreciation of $44,459 and $42,709 as of June 30, 2024 and December 31, 2023, respectively	11,783	13,084
Operating lease right-of-use assets	20,329	22,637
Restricted cash	3,731	3,699
Other assets	900	156
Total long-term assets	36,743	39,576
Total assets	$ 208,818	$ 274,949
Liabilities, Series A preferred shares, and shareholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 18,149	$ 12,839
Accrued expenses and other current liabilities	10,677	16,828
Current portion of deferred revenue	137,138	150,059
Current portion of operating lease liability	7,164	6,714
Total current liabilities	173,128	186,440
Long-term liabilities:		
Deferred revenue, net of current portion	9,582	15,601
Operating lease liability, net of current portion	21,711	25,404
Total long-term liabilities	31,293	41,005
Total liabilities	$ 204,421	$ 227,445
Series A preferred shares, no par value; 3,901,348 shares issued and outstanding at June 30, 2024 and December 31, 2023	$ 7,874	$ 7,874

Shareholders' equity (deficit):		
Ordinary shares, no par value; 122,479,289 and 119,162,234 shares issued and outstanding at June 30, 2024 and December 31, 2023, respectively	$ 950,530	$ 935,367
Additional paid-in capital	135,603	129,237
Accumulated other comprehensive loss	(279)	(124)
Accumulated deficit	(1,089,331)	(1,024,850)
Total shareholders' equity (deficit)	$ (3,477)	$ 39,630
Total liabilities, Series A preferred shares, and shareholders' equity (deficit)	$ 208,818	$ 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 LOSS

(In thousands, except share and per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Revenue	$ 19,692	$ 22,106	$ 32,230	$ 35,035
Operating expenses:				
Research and development	40,393	33,314	73,840	64,293
General and administrative	14,296	12,265	27,845	24,500
Total operating expenses	54,689	45,579	101,685	88,793
Loss from operations	(34,997)	(23,473)	(69,455)	(53,758)
Other income, net:				
Dividend income and interest income	2,092	2,251	4,627	4,124
Other income (expense), net	(18)	118	347	1,125
Total other income, net	2,074	2,369	4,974	5,249
Loss before income taxes	(32,923)	(21,104)	(64,481)	(48,509)
Income tax benefit (provision)	—	—	—	—
Net loss	$ (32,923)	$ (21,104)	$ (64,481)	$ (48,509)
Net loss per share attributable to ordinary shareholders—basic and diluted	$ (0.25)	$ (0.20)	$ (0.50)	$ (0.47)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted	129,527,003	105,462,414	129,399,340	103,768,971
Other comprehensive loss:				
Net loss	$ (32,923)	$ (21,104)	$ (64,481)	$ (48,509)
Foreign currency translation	(81)	(100)	(155)	(121)
Comprehensive loss	$ (33,004)	$ (21,204)	$ (64,636)	$ (48,630)

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-	Accumul Other Compre Loss	
	Shares	Amount		Shares		Amount		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)	

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-	Accumul Other Compre Equity (Defici
	Shares	Amount		Shares		Amount		
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)

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)

	Six Months Ended June 30,	
	2024	**2023**
Cash flows from operating activities		
Net loss	$ (64,481)	$ (48,509)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Amortization of right-of-use assets	2,308	2,038
Depreciation of property and equipment	2,041	2,722
Share-based compensation expense	6,366	5,159
Changes in operating assets and liabilities:		
Accounts receivable	19,796	—
Prepaid expenses	(2,235)	(1,080)
Other assets	(1,400)	(2,373)
Accounts payable	5,039	(4,456)
Accrued expenses and other current liabilities	(6,151)	(7,123)
Deferred revenue	(18,940)	104,341
Operating lease liabilities	(3,243)	(2,454)
Net cash provided by (used in) operating activities	(60,900)	48,265
Cash flows from investing activities		
Purchases of property and equipment	(469)	(561)
Net cash used in investing activities	(469)	(561)
Cash flows from financing activities		
Proceeds from the issuance of ordinary shares, net of offering costs	14,038	—
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	547	1,764
Proceeds from the exercise of share options	229	86
Proceeds from the ESPP	349	429
Net cash provided by financing activities	15,163	36,902
Effect of foreign exchange rates on cash, cash equivalents, and restricted cash	(155)	(121)

Net increase (decrease) in cash, cash equivalents, and restricted cash	(46,361)	84,485
Cash, cash equivalents, and restricted cash, beginning of period	204,050	92,157
Cash, cash equivalents, and restricted cash, end of period	$ 157,689	$ 176,642
Supplemental disclosure of cash flow information		
Offering costs in accounts payable at period end	$ —	$ 60

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

Wave Life Sciences Ltd.

Notes to 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 June 30, 2024, the Company had cash and cash equivalents of $154.0 million. Subsequent to June 30, 2024, the Company received $12.7 million in net proceeds under the Company's at-the-market equity program. 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 six months ended June 30, 2024.

Unaudited Interim Financial Data

The accompanying interim consolidated balance sheet as of June 30, 2024, the related interim consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2024 and 2023, the consolidated statements of Series A preferred shares and shareholders' equity (deficit) for the three months ended March 31 and June 30, 2024 and 2023, the consolidated statements of cash flows for the six months ended June 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 six months ended June 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 six months ended June 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:

	June 30, 2024	December 31, 2023
	(in thousands)	
Accrued compensation	$ 7,435	$ 14,065
Accrued expenses related to CROs and CMOs	2,210	1,768
Accrued expenses and other current liabilities	1,032	995
Total accrued expenses and other current liabilities	$ 10,677	$ 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 and August 1, 2023 (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 and 17,950,000 in August 2022 and August 2023, 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 six months ended June 30, 2024, the Company granted an aggregate of 6,935,000 options and 106,300 time-based RSUs to employees.

As of June 30, 2024, 1,866,279 ordinary shares remained available for future grant under the 2021 Plan.

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

	As of June 30,	
	2024	2023
Options to purchase ordinary shares	20,574,934	14,176,822
RSUs	660,750	626,465

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 six months ended June 30, 2024, 101,542 ordinary shares were issued under the ESPP. As of June 30, 2024, there were 2,388,958 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 June 30, 2024 (in thousands):

		Transaction Price Allocated		**Transaction Price Unsatisfied** (1)
Performance Obligations:				
AATD Collaboration	$	156,778	$	62,230
Discovery Research Collaboration		20,225		17,271
GSK Collaboration Program		12,000		11,820
Total	$	189,003	$	91,321

(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.

Under the GSK Collaboration Agreement, for the three months ended June 30, 2024 and 2023 the Company recognized revenue of $19.1 million and $20.8 million, respectively, using the input method described above. For the six months ended June 30, 2024 and 2023, the Company recognized revenue of $31.4 million and $33.1 million, respectively, using the input method described above. Through June 30, 2024, the Company had recognized revenue of $97.7 million under the GSK Collaboration Agreement as collaboration revenue in the Company's consolidated statements of operations and comprehensive 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 June 30, 2024 was approximately $76.2 million, of which approximately $66.7 million was included in current liabilities and approximately $9.6 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 (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 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.

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.

During the three months ended June 30, 2024 and 2023, the Company recognized revenue of approximately $0.6 million and $1.3 million, respectively, under the Takeda Collaboration Agreement in the Company's consolidated statements of operations and comprehensive loss. During the six months ended June 30, 2024 and 2023, the Company recognized revenue of $0.8 million and $2.0 million, respectively, under the Takeda Collaboration Agreement. Through June 30, 2024, the Company had recognized revenue of $129.0 million under the Takeda Collaboration Agreement as collaboration revenue in the Company's consolidated statements of operations and comprehensive 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 June 30, 2024 and December 31, 2023 was $70.5 million and $71.3 million, respectively, and all of the deferred revenue was included in current liabilities. The Company expects to recognize revenue for the portion of the deferred revenue that relates to the research and development services for each remaining Category 1 Program as costs are incurred, over the remaining research term. The Company expects to recognize revenue for the portion of the deferred revenue that relates to the material right for each remaining Category 1 Program option upon Takeda's exercise or termination of such option, or immediately as each option expires unexercised.

6. NET LOSS PER ORDINARY SHARE

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

As of June 30, 2024, there are 7,093,656 vested and exercisable pre-funded warrants ("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 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 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.

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:

	As of June 30,	
	2024	2023
Options to purchase ordinary shares	20,574,934	14,176,822
RSUs	660,750	626,465
Series A preferred shares	3,901,348	3,901,348

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

7. INCOME TAXES

During the three and six months ended June 30, 2024 and 2023, the Company recorded no income tax provision.

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

8. GEOGRAPHIC DATA

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

9. 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 six months

ended June 30, 2024, the Company made a payment of $5 thousand to SNBL. Through June 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.

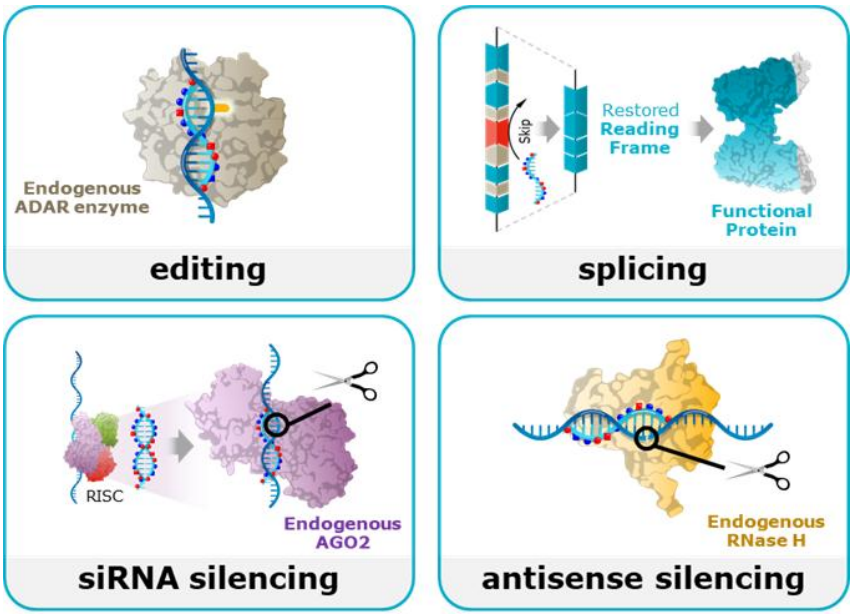
Overview

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:
  - oAATD: WVE-006 is a GalNAc-conjugated SERPINA1 RNA editing oligonucleotide; and
  - oObesity: WVE-007 is a GalNAc-conjugated RNAi oligonucleotide targeting inhibin βE ("INHBE").
- Unconjugated oligonucleotides for muscle, CNS and other disease areas including:
  - oDMD: WVE-N531 is an exon 53 splicing oligonucleotide; and
  - oHD: 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. In the fourth quarter of 2023, we initiated our RestorAATion clinical program investigating WVE-006 as a treatment for AATD. 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. We expect to deliver proof-of-mechanism data in patients with AATD in the fourth quarter of 2024.

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 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.

If we are successful in the clinic with WVE-006, this would validate our clinical approach to AATD and demonstrate the feasibility of RNA editing as a therapeutic modality in humans.

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 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 in combination with 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 plan to share additional preclinical data later this year and expect to initiate a clinical trial for WVE-007 in the first quarter of 2025.

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 December 2022 (data cut-off: December 6, 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"). In Part B, boys are being dosed at 10 mg/kg every other week, and we plan to assess dystrophin protein 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. We expect to deliver data from FORWARD-53, including dystrophin protein expression from muscle biopsies taken after 24 weeks of treatment, in the third quarter of 2024. 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.

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.

We have submitted an opt-in package to our partner, Takeda, and initiated engagement with regulators on a clinical development path to accelerated approval. We expect to receive a decision from Takeda on their option right, as well as feedback from regulators by year-end.

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.

Through our collaboration with GSK, we are 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 million from GSK. These programs utilize our next generation GalNAc-siRNA format and are in hepatology.

We expect to select five new clinical candidates by the end of 2025, including WVE-007, our INHBE candidate for obesity.

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 June 30, 2024 and 2023 was $32.9 million and $21.1 million, respectively. Our net loss for the six months ended June 30, 2024 and 2023 was $64.5 million and $48.5 million, respectively. As of June 30, 2024 and December 31, 2023, we had an accumulated deficit of $1,089.3 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 June 30, 2024 and 2023

	Three Months Ended June 30,		
	2024	2023	Change
	(in thousands)		
Revenue	$ 19,692	$ 22,106	$ (2,414)
Operating expenses:			
Research and development	40,393	33,314	7,079
General and administrative	14,296	12,265	2,031
Total operating expenses	54,689	45,579	9,110
Loss from operations	(34,997)	(23,473)	(11,524)
Total other income, net	2,074	2,369	(295)

Loss before income taxes	(32,923)	(21,104)	(11,819)
Income tax benefit (provision)	—	—	—
Net loss	$ (32,923)	$ (21,104)	$ (11,819)

Revenue

Revenue for the three months ended June 30, 2024 and 2023 was $19.7 million and $22.1 million, respectively, and is comprised of revenue earned under the GSK Collaboration Agreement and the Takeda Collaboration Agreement. There was a slight decrease in the revenue earned under both the GSK Collaboration Agreement and the Takeda Collaboration Agreement year-over-year.

Research and Development Expenses

	Three Months Ended June 30,		
	2024	2023	Change
	(in thousands)		
AATD program	$ 3,172	$ 2,156	$ 1,016
DMD programs	4,051	2,255	1,796
HD programs	3,636	4,095	(459)
Other research and development expenses[(1)], including INHBE, RNA editing, PRISM, others	29,460	21,474	7,986
ALS and FTD programs (discontinued)	74	3,334	(3,260)
Total research and development expenses	$ 40,393	$ 33,314	$ 7,079

(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 $40.4 million for the three months ended June 30, 2024, compared to $33.3 million for the three months ended June 30, 2023. The increase of approximately $7.1 million was due to the following:

- an increase of $1.0 million in external expenses related to our AATD program, WVE-006 (RNA editing);
- an increase of $1.8 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 $8.0 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 facilities-related expenses, partially offset by decreases in other external research and development expenses; and
- a decrease of $3.3 million in external expenses related to our discontinued ALS and FTD program, WVE-004.

General and Administrative Expenses

General and administrative expenses were $14.3 million for the three months ended June 30, 2024, as compared to $12.3 million for the three months ended June 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 June 30, 2024 and 2023 was $2.1 million and $2.4 million, respectively, and consisted primarily of dividend income.

Income Tax Benefit (Provision)

During the three months ended June 30, 2024 and 2023, we recorded no income tax provision. We maintained a full valuation allowance for the three months ended June 30, 2024 and 2023 in all jurisdictions due to uncertainty regarding future taxable income.

Comparison of the six months ended June 30, 2024 and 2023

	Six Months Ended June 30,		
	2024	2023	Change
	(in thousands)		
Revenue	$ 32,230	$ 35,035	$ (2,805)
Operating expenses:			
Research and development	73,840	64,293	9,547
General and administrative	27,845	24,500	3,345
Total operating expenses	101,685	88,793	12,892
Loss from operations	(69,455)	(53,758)	(15,697)
Total other income, net	4,974	5,249	(275)
Loss before income taxes	(64,481)	(48,509)	(15,972)
Income tax benefit (provision)	—	—	—
Net loss	$ (64,481)	$ (48,509)	$ (15,972)

Revenue

Revenue for the six months ended June 30, 2024 and 2023 was $32.2 million and $35.0 million, respectively, and is comprised of revenue earned under the GSK Collaboration Agreement and the Takeda Collaboration Agreement. There was a slight decrease in the revenue earned under both the GSK Collaboration Agreement and the Takeda Collaboration Agreement year-over-year.

Research and Development Expenses

	Six Months Ended June 30,		
	2024	2023	Change
	(in thousands)		
AATD program	$ 6,365	$ 3,724	$ 2,641
DMD programs	7,101	2,569	4,532
HD programs	6,015	7,417	(1,402)
Other research and development expenses[(1)], including INHBE, RNA editing, PRISM, others	54,240	44,532	9,708
ALS and FTD programs (discontinued)	119	6,051	(5,932)
Total research and development expenses	$ 73,840	$ 64,293	$ 9,547

(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 $73.8 million for the six months ended June 30, 2024, compared to $64.3 million for the six months ended June 30, 2023. The increase of approximately $9.5 million was due to the following:

- an increase of $2.6 million in external expenses related to our AATD program, WVE-006 (RNA editing);
- an increase of $4.5 million in external expenses related to our DMD programs, including WVE-N531 (splicing);
- a decrease of $1.4 million in external expenses related to our HD programs, including WVE-003 (silencing);
- an increase of $9.7 million in other research and development expenses[(1)], including INHBE, RNA editing, PRISM, and other internal and external research and development expenses that are no 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 facilities-related expenses, partially offset by decreases in other external research and development expenses; and

•a decrease of $5.9 million in external expenses related to our discontinued ALS and FTD program, WVE-004.

General and Administrative Expenses

General and administrative expenses were $27.8 million for the six months ended June 30, 2024, as compared to approximately $24.5 million for the six months ended June 30, 2023. The increase of $3.3 million was primarily driven by increases in compensation related expenses and professional fees.

Other Income (Expense), Net

Other income, net for the six months ended June 30, 2024 and 2023 was $5.0 million and $5.2 million, respectively, and consisted primarily of dividend income, as well as estimated refundable tax credits.

Income Tax Benefit (Provision)

During the six months ended June 30, 2024 and 2023, we recorded no income tax provision. We maintained a full valuation allowance for the six months ended June 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 June 30, 2024, we have received an aggregate of approximately $1,342.7 million in net proceeds from these transactions, consisting of $742.1 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.

As of June 30, 2024, we had cash and cash equivalents totaling $154.0 million, restricted cash of $3.7 million and an accumulated deficit of $1,089.3 million. Subsequent to June 30, 2024, we received $12.7 million in net proceeds under our at-the-market equity program.

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 June 30, 2024 total approximately $33.7 million, of which approximately $4.6 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" 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 includes 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. As of August 7, 2024,

we have $298.2 million in securities available for issuance under the 2022 Form S-3, including approximately $115.2 million in ordinary shares available for issuance under our at-the-market equity program.

Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

Cash Flows

The following table summarizes our cash flow activity:

	Six Months Ended June 30,	
	2024	2023
	(in thousands)	
Net cash provided by (used in) operating activities	$ (60,900)	$ 48,265
Net cash used in investing activities	(469)	(561)
Net cash provided by financing activities	15,163	36,902
Effect of foreign exchange rates on cash, cash equivalents, and restricted cash	(155)	(121)
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ (46,361)	$ 84,485

Operating Activities

During the six months ended June 30, 2024, operating activities used $60.9 million of cash, due to our net loss of $64.5 million and changes in operating assets and liabilities of $7.1 million, offset by non-cash charges of $10.7 million.

During the six months ended June 30, 2023, operating activities provided $48.3 million of cash, due to our net loss of $48.5 million, offset by non-cash charges of $9.9 million and changes in operating assets and liabilities of $86.9 million. The largest change in operating assets and liabilities was a $104.3 million increase in deferred revenue, mainly driven by our GSK Collaboration Agreement, which became effective in January 2023.

Investing Activities

During the six months ended June 30, 2024, investing activities used $0.5 million of cash, related to purchases of property and equipment.

During the six months ended June 30, 2023, investing activities used $0.6 million of cash, related to purchases of property and equipment.

Financing Activities

During the six months ended June 30, 2024, net cash provided by financing activities was $15.2 million, which was primarily due to 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 $0.5 million in net proceeds from sales under our at-the-market equity program.

During the six months ended June 30, 2023, net cash provided by financing activities was $36.9 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 six months ended June 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 June 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 June 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 June 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 June 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 June 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 May 20, 2024, Paul B. Bolno, M.D., MBA, our President and Chief Executive Officer, terminated a Rule 10b5-1 Trading Plan that was originally adopted on March 19, 2024. Dr. Bolno’s former Rule 10b5-1 Trading Plan provided for the sale of up to an aggregate of 435,594 of our ordinary shares. No ordinary shares were sold under Dr. Bolno’s Rule 10b5-1 Trading Plan prior to its termination.

On May 22, 2024, Mr. Bolno adopted a Rule 10b5-1 Trading Plan providing for the sale of up to an aggregate of 435,594 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 November 15, 2024, or earlier, if and when all transactions under the Rule 10b5-1 Trading Plan are completed.

Item 6. Exhibits

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Registration Number
10.1+	Form of Inducement Non-qualified Share Option Agreement	X			
10.2+	Form of Inducement Restricted Share Unit Agreement	X			
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	X			

	Financial Officer	
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: August 8, 2024	By:	/s/ Paul B. Bolno, M.D., MBA Paul B. Bolno, M.D., MBA President and Chief Executive Officer (Principal Executive Officer)
Date: August 8, 2024	By:	/s/ Kyle Moran Kyle Moran Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

Exhibit 10.1

Grant No. __

WAVE LIFE SCIENCES LTD.
(the "Company")
Nasdaq Inducement Non-qualified Share Option Grant Notice and
Nasdaq Inducement Non-qualified Share Option Agreement

A. Name of Participant:

B. Grant Date:

C. Expiration Date: 10-year anniversary of the Grant Date

D. Maximum Number of Ordinary Shares for which this Option is exercisable:

E. Exercise (purchase) Price per Ordinary Share:

F. Vesting Start Date: _____

G. Vesting Schedule:

This Option shall become vested and exercisable with respect to the number of Ordinary Shares set forth below provided that at all times the Participant is providing Continuous Service:

[insert vesting schedule].

Notwithstanding the foregoing, in the event the Company consummates a Change of Control and on or within one year following the Change of Control the Participant is terminated by the Company other than for Cause (including in the event of death or Disability) or the Participant resigns from the Company for Good Reason (the "Termination Date"), the Option to the extent outstanding and unvested shall on the Termination Date become immediately vested and exercisable with respect to 100% of the Ordinary Shares subject to the Option. However, in the event of a Change of Control where the Option is not assumed or substituted in accordance with Section 7.2 of the Nasdaq Inducement Non-qualified Share Option Agreement attached hereto, the Option shall become immediately vested and exercisable with respect to 100% of the Ordinary Shares subject to the Option in connection with the Change of Control.

Change of Control shall mean (I) if the Participant is a party to an employment or other service agreement with the Company or its Affiliates and such agreement provides for a definition of Change of Control, the definition contained therein; or (II) if no such agreement exists that defines Change of Control: (A) a merger or consolidation of the Company whether or not approved by the Board of Directors, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the parent of such corporation) more than 50% of the total voting power represented by

the voting securities of the Company or such surviving entity or parent of such corporation, as the case may be, outstanding

immediately after such merger or consolidation; or (B) the sale or disposition by the Company of all or substantially all of the Company's assets in a transaction requiring shareholder approval.

Good Reason shall mean (A) if the Participant is a party to an employment or other service agreement with the Company or its Affiliates and such agreement provides for a definition of Good Reason, the definition contained therein; or (B) if no such agreement exists that defines Good Reason: (i) relocation of the Participant's principal business location to a location more than fifty (50) miles from the Participant's then-current business location; (ii) a material diminution in the Participant's duties, authority or responsibilities; or (iii) a material reduction in the Participant's Base Salary (other than as a result of a broad based reduction of salary similarly affecting other Company employees having comparable rank, authority and seniority); provided that (a) the Participant provides the Company with written notice that the Participant intends to terminate his or her employment hereunder for one of the grounds set forth above within thirty (30) days of such ground occurring, (b) if such ground is capable of being cured, the Company has failed to cure such ground within a period of thirty (30) days from the date of such written notice, and (c) the Participant terminates his or her employment within sixty-five days from the date that Good Reason first occurs.

The Company and the Participant acknowledge receipt of this Nasdaq Inducement Non-qualified Share Option Grant Notice and agree to the terms of the Nasdaq Inducement Non-qualified Share Option Agreement attached hereto and incorporated by reference herein, and the terms of this Option Grant as set forth above.

Wave Life Sciences Ltd.

By: _____

Title: Authorized Signatory

Participant

By: _____

Name:

NASDAQ INDUCEMENT NON-QUALIFIED SHARE OPTION AGREEMENT – INCORPORATED TERMS AND CONDITIONS

This Nasdaq Inducement Non-qualified Share Option Agreement (this "Agreement") is made and entered into as of the Grant Date by and between Wave Life Sciences Ltd., a company incorporated in Singapore (the "Company"), and the "Participant" whose name appears on the Nasdaq Inducement Non-qualified Share Option Grant Notice.

1.Grant of Option.

1.1Grant; Type of Option. The Company hereby grants to the Participant an option (the "Option") to purchase (subscribe for) the total number of Ordinary Shares of the Company equal to the number of Ordinary Shares set forth on the Nasdaq Inducement Non-qualified Share Option Grant Notice, at the Exercise Price per Ordinary Share set forth on the Nasdaq Inducement Non-qualified Share Option Grant Notice, subject to adjustment, as provided in Section 7.1 hereof, in the event of a stock split, reverse stock split or other events affecting the holders of Ordinary Shares after the date hereof (the "Exercise Price"). The Option is being granted as an inducement material to the Participant's entering into employment with the Company under NASDAQ Listing Rule 5635(c)(4). The Option is intended to be a Non-qualified Share Option.

1.2Consideration and Conditions. The grant of the Option is made in consideration of the services to be rendered by the Participant to the Company and is subject to the terms and conditions contained herein.

1.3Definitions. Unless otherwise specified or unless the context otherwise requires, the following terms, as used in this Agreement, have the following meanings:

"Affiliate" means a corporation or other entity that, directly or through one or more intermediaries, controls, is controlled by or is under common control with, the Company.

"Applicable Laws" means the requirements related to or implicated by this Agreement under (i) applicable laws of the Republic of Singapore, including but not limited to, the Singaporean Equity Remuneration Incentive Scheme and the Income Tax Act of Singapore; (ii) applicable laws of the United States, including but not limited to, United States federal and state securities laws and the Code; (iii) applicable laws of Japan, including but not limited to, the Financial Instruments and Exchange Act of Japan; (iv) any stock exchange or quotation system on which the Ordinary Shares are listed or quoted; and (v) the applicable laws of any foreign country or jurisdiction where the Option was granted.

"Board" means the Board of Directors of the Company, as constituted at any time.

"Cause" means: (a) if the Participant is a party to an employment agreement with the Company or its Affiliates and such agreement provides for a definition of Cause, the definition contained therein; or (b) if no such agreement exists, or if such agreement does not define Cause: (i) the commission of, or plea of guilty or no contest to, a felony or a crime involving fraud, embezzlement or any other act of moral turpitude or the commission of any other act involving willful malfeasance or material fiduciary breach with respect to the Company or an Affiliate; (ii) conduct that results in or is reasonably likely to result in harm to the reputation or business of the Company or any of its Affiliates; (iii) gross negligence or willful misconduct with respect to the Company or an Affiliate; (iv) material breach of any employment, consulting, advisory, nondisclosure, non-solicitation, non-competition or similar agreement with the Company or its Affiliates; or (v) material violation of state or federal securities laws. The Committee, in its absolute discretion, shall determine the effect of all matters and questions relating to whether the Participant has been discharged for Cause.

"Code" means the U.S. Internal Revenue Code of 1986, as it may be amended from time to time. Any reference to a section of the Code shall be deemed to include a reference to any regulations promulgated thereunder.

"Committee" means a committee of one or more members of the Board to which the Board has delegated power to act.

"Consultant" means any individual who is engaged by the Company or any Affiliate to render consulting or advisory services.

"Continuous Service" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Consultant or Director, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of: (a) a change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service; or (b) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the Participant's right to reemployment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Committee otherwise so provides in writing, in either case, except to the extent inconsistent with Applicable Laws.

"Corporate Transaction" means the merger, consolidation or other reorganization of the Company, or a successor corporation or organization succeeding to all or substantially all of the assets and business of the Company and its Affiliates, taken as a whole.

"Director" means a member of the Board.

"Disability" means that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment. The determination of whether the Participant has a Disability shall be determined under procedures established by the Committee. The Committee may rely on any determination that the Participant is disabled for purposes of benefits under any long-term disability plan maintained by the Company or any Affiliate in which the Participant participates.

"Employee" means any person, including an Officer or Director, employed by the Company or an Affiliate.

"Fair Market Value" means, as of any date, the value of an Ordinary Share as determined below. If an Ordinary Share is listed on any established stock exchange or a national market system, including without limitation, the New York Stock Exchange or the NASDAQ Stock Market, the Fair Market Value shall be the closing price of an Ordinary Share (or if no sales were reported the closing price on the date immediately preceding such date) as quoted on such exchange or system on the day of determination, as reported in the *Wall Street Journal*. In the absence of an established market for an Ordinary Share, the Fair Market Value shall be determined in good faith by the Committee and such determination shall be conclusive and binding on all persons.

"Non-qualified Share Option" means an Option that by its terms does not qualify or is not intended to qualify as an incentive stock option under Section 422 of the Code.

"Officer" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

"Ordinary Shares" means ordinary shares in the capital of the Company, or such other securities of the Company as may be designated by the Committee from time to time in substitution thereof.

"Permitted Transferee" means the following if prior approval is obtained from the Committee in its sole and absolute discretion: (a) a member of the Participant's immediate family (child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships), any person sharing the Participant's household (other than a tenant or employee), a trust in which these persons have more than 50% of the beneficial interest, a foundation in which these persons (or the Participant's) control the management of assets; and any other entity in which these persons (or the Participant's) own more than 50% of the voting interests; and (b) such other transferees as may be permitted by the Committee in its sole discretion and in compliance with Applicable Laws.

2.Exercise Period; Vesting.

2.1Vesting Schedule. The Option will become vested and exercisable as set forth on the Nasdaq Inducement Non-qualified Share Option Grant Notice.

2.2Unvested Option. The unvested portion of the Option will not be exercisable on or after the Participant's termination of Continuous Service.

2.3Expiration. The Option will expire on the Expiration Date set forth on the Nasdaq Inducement Non-qualified Share Option Grant Notice, or earlier as provided in this Agreement.

3.Termination of Continuous Service.

3.1Termination for Reasons Other Than Cause, Death, Disability. If the Participant's Continuous Service is terminated for any reason other than Cause, death or Disability, the Participant may exercise the vested portion of the Option, but only within such period of time ending on the earlier of: (a) the date three months following the termination of the Participant's Continuous Service; or (b) the Expiration Date.

3.2Termination for Cause. If the Participant's Continuous Service is terminated for Cause, the Option (whether vested or unvested) shall immediately terminate and cease to be exercisable.

3.3Termination Due to Disability. If the Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise the vested portion of the Option, but only within such period of time ending on the earlier of: (a) the date 12 months following the Participant's termination of Continuous Service; or (b) the Expiration Date.

3.4Termination Due to Death. If the Participant's Continuous Service terminates as a result of the Participant's death, or the Participant dies within a period following termination of the Participant's Continuous Service during which the vested portion of the Option remains exercisable, the vested portion of the Option may be exercised by the Participant's estate, by a person who acquired the right to exercise the Option by bequest or inheritance or by the person designated to exercise the Option upon the Participant's death, but only within the time period ending on the earlier of: (a) the date 12 months following the Participant's termination of Continuous Service; or (b) the Expiration Date.

4.Manner of Exercise.

4.1Election to Exercise. To exercise the Option, the Participant (or in the case of exercise after the Participant's death or incapacity, the Participant's executor, administrator, heir or legatee, as the case may be) must deliver to the Company a notice of intent to exercise in the manner designated by the Board or the Committee. If someone other than the Participant exercises the Option, then such person must submit

documentation reasonably acceptable to the Company verifying that such person has the legal right to exercise the Option.

4.2Payment of Exercise Price. The entire Exercise Price of the Option shall be payable in full at the time of exercise. The Exercise Price shall be paid, to the extent permitted by Applicable Laws, either (a) in cash or by certified or bank check at the time the Option is exercised; (b) in accordance with a cashless exercise program established with a securities brokerage firm; or (c) in the discretion of the Committee, upon such terms as the Committee shall approve, by reduction in the number of Ordinary Shares otherwise deliverable upon exercise of such Option with a Fair Market Value equal to the aggregate Option Exercise Price at the time of exercise; or (d) in any other form of legal consideration that may be acceptable to the Committee.

4.3Withholding. Prior to the issuance of shares upon the exercise of the Option, the Participant must make arrangements satisfactory to the Company to pay or provide for any applicable foreign, federal, state and local withholding obligations of the Company. The Participant may satisfy any foreign, federal, state or local tax withholding obligation relating to the exercise of the Option by any of the following means:

(a)tendering a cash payment; or

(b)authorizing the Company to withhold Ordinary Shares from the Ordinary Shares otherwise issuable to the Participant as a result of the exercise of the Option; *provided, however*, that no Ordinary Shares are withheld with a value exceeding the maximum amount of tax required to be withheld by Applicable Laws.

The Company has the right to withhold from any compensation paid to a Participant.

4.4Issuance of Shares. Provided that the exercise notice and payment are in compliance with this Agreement and in form and substance satisfactory to the Company, the Company shall issue the Ordinary Shares registered in the name of the Participant, the Participant’s authorized assignee, or the Participant's legal representative, which shall be evidenced by share certificates representing the shares with the appropriate legends affixed thereto, appropriate entry on the books of the Company or of a duly authorized transfer agent, or other appropriate means as determined by the Company. No fractional Ordinary Shares shall be issued or delivered pursuant to this Agreement. The Committee shall determine whether any fractional shares should be rounded, forfeited or otherwise eliminated.

5.No Right to Continued Employment; No Rights as Shareholder. This Agreement shall not confer upon the Participant any right to be retained in any position, as an Employee, Consultant or Director of the Company or its Affiliates. Further, nothing in this Agreement shall be construed to limit the discretion of the Company to terminate the Participant's Continuous Service at any time, with or without Cause. The Participant shall not have any rights as a shareholder with respect to any Ordinary Shares subject to the Option prior to the date of exercise of the Option, and no adjustment shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions of other rights for which the record date is prior to the date such Ordinary Shares are issued, except as provided in Section 7.1 hereof.

6.Transferability. The Option is not transferable by the Participant other than to a designated beneficiary upon the Participant's death or by will or the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by Applicable Laws, and otherwise shall be exercisable during the Participant's lifetime only by him or her unless the Board allows transfer to a Permitted Transferee. No assignment or transfer of the Option, or the rights represented thereby, whether voluntary or involuntary, by operation of law or otherwise (except to a designated beneficiary, upon death, by will or the laws of descent or distribution) will vest in the assignee or transferee any interest or right herein

whatsoever, but immediately upon such assignment or transfer the Option will terminate and become of no further effect.

7.Corporate Transactions and Adjustments.

7.1Adjustments Upon Changes in Shares. In the event of changes in the outstanding Ordinary Shares or in the capital structure of the Company by reason of any share or extraordinary cash dividend, share split, reverse share split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the Grant Date, the Exercise Price and the maximum number of Ordinary Shares subject to the Option will be equitably adjusted or substituted, as to the number, price or kind of an Ordinary Share to the extent necessary to preserve the economic intent of the Option. In the case of adjustments made pursuant to this Section 7.1, unless the Committee specifically determines that such adjustment is in the best interests of the Company or its Affiliates, the Committee shall ensure that any adjustments under this Section 7.1 will not constitute a modification of the Option within the meaning of Section 409A of the Code. The Company shall give the Participant notice of an adjustment hereunder and, upon notice, such adjustment shall be conclusive and binding for all purposes.

7.2Effect of a Corporate Transaction. The obligations of the Company under this Agreement shall be binding upon any successor corporation or organization resulting from a Corporate Transaction. In the event of a Corporate Transaction, the Board may take one or more of the following actions with respect to the Option: (i) make appropriate provision for the continuation of the Option by substituting on an equitable basis for the Ordinary Shares then subject to the Option either the consideration payable with respect to the outstanding Ordinary Shares in connection with the Corporate Transaction or securities of any successor or acquiring entity; (ii) require that the Participant surrender the Option in exchange for a payment by the Company, in cash or Ordinary Shares as determined by the Board, in an amount equal to the amount by which the then Fair Market Value of the Ordinary Shares subject to the vested portion of the Option exceeds the Exercise Price; or (iii) after giving the Participant an opportunity to exercise, to the extent vested, the Option, terminate the unexercised Option at such time as the Board deems appropriate. Such surrender or termination shall take place as of the date of the Corporate Transaction or such other date as the Board may specify.

8.Tax Liability and Withholding. Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding ("Tax-Related Items"), the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility and the Company (a) makes no representation or undertakings regarding the treatment of any Tax-Related Items in connection with the grant, vesting, or exercise of the Option or the subsequent sale of any shares acquired on exercise; and (b) does not commit to structure the Option to reduce or eliminate the Participant's liability for Tax-Related Items.

9.Compliance with Law. The exercise of the Option and the issuance and transfer of Ordinary Shares shall be subject to compliance by the Company and the Participant with all Applicable Laws. No Ordinary Shares shall be issued pursuant to this Option unless and until any then Applicable Laws have been fully complied with to the satisfaction of the Company and its counsel. The Participant understands that the Company is under no obligation to register the Ordinary Shares with the U.S. Securities and Exchange Commission, any state securities commission or any stock exchange or under any other Applicable Laws to effect such compliance.

10.Governing Law. This Agreement will be construed and interpreted in accordance with the laws of the State of Delaware and any other Applicable Laws, without giving effect to the conflict of law

principles thereof. For the purpose of litigating any dispute that arises under this Agreement, if the Participant is a tax resident of the United States the parties hereby consent to exclusive jurisdiction in the Commonwealth of Massachusetts and agree that such litigation shall be conducted in the state courts of Middlesex County, Massachusetts or the federal courts of the United States for the District of Massachusetts and if the Participant is a resident of any other country the parties consent to the exclusive jurisdiction in the country in which such Participant resides.

11.Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Committee for review. The resolution of such dispute by the Committee shall be final and binding on the Participant and the Company.

12.Successors and Assigns. The Company may assign any of its rights under this Agreement. This Agreement will be binding upon and inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth herein, this Agreement will be binding upon the Participant and the Participant's beneficiaries, executors, administrators and the person(s) to whom this Agreement may be transferred by will or the laws of descent or distribution.

13.Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

14.No Right to Future Grants. The grant of the Option in this Agreement does not create any contractual right or other right to receive any Options or other awards in the future. Future awards, if any, will be at the sole discretion of the Company.

15.Amendment. The Committee has the right to amend, alter, suspend, discontinue or cancel the Option and this Agreement, prospectively or retroactively; *provided, that*, no such amendment shall adversely affect the Participant's material rights under this Agreement unless (a) the Company requests the consent of the Participant; and (b) the Participant consents in writing.

16.No Impact on Other Benefits. The value of the Participant's Option is not part of his or her normal or expected compensation for purposes of calculating any severance, retirement, welfare, insurance or similar employee benefit.

17.Clawback. Notwithstanding anything to the contrary contained in this Agreement, the Company may recover from the Participant any compensation received from the Option (whether or not vested or settled) or cause the Participant to forfeit the Option (whether or not vested) in the event that the Company's Clawback Policy then in effect is triggered.

18.Data Privacy. By entering into this Agreement, the Participant: (i) authorizes the Company and each Affiliate, and any agent of the Company or any Affiliate administering this Agreement or providing recordkeeping services, to disclose to the Company or any of its Affiliates such information and data as the Company or any such Affiliate shall request in order to facilitate the grant and administration of the Option; and (ii) authorizes the Company and each Affiliate to store and transmit such information in electronic form for the purposes set forth in this Agreement.

19.Acceptance. The Participant hereby acknowledges receipt of this Agreement. The Participant has read and understands the terms and provisions thereof, and accepts the Option subject to all of the terms and conditions of this Agreement. The Participant acknowledges that there may be adverse tax consequences upon exercise of

the Option or disposition of the underlying shares and that the Participant should consult a tax advisor prior to such exercise or disposition.

Exhibit 10.2

Grant. No. RSU-____

WAVE LIFE SCIENCES LTD.
(the "Company")

Nasdaq Inducement Restricted Share Unit Award Grant Notice and

Nasdaq Inducement Restricted Share Unit Agreement

A. Name of Participant:

B. Grant Date:

C. Maximum Number of Shares Underlying Restricted Share Unit Award:

D. Vesting Start Date: _____

E. Vesting Schedule:

This Restricted Share Unit Award shall vest as follows provided the Participant remains in Continuous Service through the applicable vesting date:

[insert vesting schedule].

Notwithstanding the foregoing, in the event the Company consummates a Change of Control and on or within one year following the Change of Control the Participant is terminated by the Company other than for Cause (including in the event of death or Disability) or the Participant resigns from the Company for Good Reason (the "Termination Date"), the Restricted Share Units shall on the Termination Date become immediately vested in full. However, in the event of a Change of Control where the Restricted Share Units are not assumed or substituted in accordance with Section 10.2 of the Nasdaq Inducement Restricted Share Unit Agreement attached hereto, the Restricted Share Units shall become immediately vested in full in connection with the Change of Control.

Change of Control shall mean (I) if the Participant is a party to an employment or other service agreement with the Company or its Affiliates and such agreement provides for a definition of Change of Control, the definition contained therein; or (II) if no such agreement exists that defines Change of Control (A) a merger or consolidation of the Company whether or not approved by the Board of Directors, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the parent of such corporation) more than 50% of the total voting power represented by the voting securities of the Company or such surviving entity or parent of such corporation, as

the case may be, outstanding immediately after such merger or consolidation; or (B) the sale or disposition by the Company of all or substantially all of the Company's assets in a transaction requiring shareholder approval.

Good Reason shall mean (A) if the Participant is a party to an employment or other service agreement with the Company or its Affiliates and such agreement provides for a definition of Good Reason, the definition contained therein; or (B) if no such agreement exists that defines Good Reason: (i) relocation of the Participant's principal business location to a location more than fifty (50) miles from the Participant's then-current business location; (ii) a material diminution in the Participant's duties, authority or responsibilities; or (iii) a material reduction in the Participant's Base Salary (other than as a result of a broad based reduction of salary similarly affecting other Company employees having comparable rank, authority and seniority); provided that (a) the Participant provides the Company with written notice that the Participant intends to terminate his or her employment hereunder for one of the grounds set forth above within thirty (30) days of such ground occurring, (b) if such ground is capable of being cured, the Company has failed to cure such ground within a period of thirty (30) days from the date of such written notice, and (c) the Participant terminates his or her employment within sixty-five days from the date that Good Reason first occurs.

The Company and the Participant acknowledge receipt of this Nasdaq Inducement Restricted Share Unit Award Grant Notice and agree to the terms of the Nasdaq Inducement Restricted Share Unit Agreement attached hereto and incorporated by reference herein and the terms of this Restricted Share Unit Award as set forth above.

Wave Life Sciences Ltd.

By: _____

Title: Authorized Signatory

Participant

By: _____

Name:

NASDAQ INDUCEMENT RESTRICTED SHARE UNIT AGREEMENT - INCORPORATED TERMS AND CONDITIONS

This Nasdaq Inducement Restricted Share Unit Agreement (this "Agreement") is made and entered into as of the Grant Date set forth on the Nasdaq Inducement Restricted Share Unit Award Grant Notice by and between Wave Life Sciences Ltd., a company incorporated in Singapore (the "Company"), and the individual whose name appears on the Nasdaq Inducement Restricted Share Unit Award Grant Notice (the "Participant").

WHEREAS, the Board or the Committee has determined that it is in the best interests of the Company and its shareholders to grant an award of Restricted Share Units as an inducement material to the Participant's entering into employment with the Company under NASDAQ Listing Rule 5635(c)(4) the ("Award") as provided for herein.

NOW, THEREFORE, the parties hereto, intending to be legally bound, agree as follows:

1.Definitions. Unless otherwise specified or unless the context otherwise requires, the following terms, as used in this Agreement, have the following meanings:

"Affiliate" means a corporation or other entity that, directly or through one or more intermediaries, controls, is controlled by or is under common control with, the Company.

"Applicable Laws" means the requirements related to or implicated by this Agreement under (i) applicable laws of the Republic of Singapore, including but not limited to, the Singaporean Equity Remuneration Incentive Scheme and the Income Tax Act of Singapore; (ii) applicable laws of the United States, including but not limited to, United States federal and state securities laws and the Code; (iii) applicable laws of Japan, including but not limited to, the Financial Instruments and Exchange Act of Japan; (iv) any stock exchange or quotation system on which the Ordinary Shares are listed or quoted; and (v) the applicable laws of any foreign country or jurisdiction where the Award was granted.

"Board" means the Board of Directors of the Company, as constituted at any time.

"Cause" means: (a) if the Participant is a party to an employment agreement with the Company or its Affiliates and such agreement provides for a definition of Cause, the definition contained therein; or (b) if no such agreement exists, or if such agreement does not define Cause: (i) the commission of, or plea of guilty or no contest to, a felony or a crime involving fraud, embezzlement or any other act of moral turpitude or the commission of any other act involving willful malfeasance or material fiduciary breach with respect to the Company or an Affiliate; (ii) conduct that results in or is reasonably likely to result in harm to the reputation or business of the Company or any of its Affiliates; (iii) gross negligence or willful misconduct with respect to the Company or an Affiliate; (iv) material breach of any employment, consulting, advisory, nondisclosure, non-solicitation, non-competition or similar agreement with the Company or its Affiliates; or (v) material violation of state or federal securities laws. The Committee, in its absolute discretion, shall determine the effect of all matters and questions relating to whether the Participant has been discharged for Cause.

"Code" means the U.S. Internal Revenue Code of 1986, as it may be amended from time to time. Any reference to a section of the Code shall be deemed to include a reference to any regulations promulgated thereunder.

"Committee" means a committee of one or more members of the Board to which the Board has delegated power to act.

"Consultant" means any individual who is engaged by the Company or any Affiliate to render consulting or advisory services.

"Continuous Service" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Consultant or Director, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of: (a) a change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service; or (b) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the Participant's right to reemployment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Committee otherwise so provides in writing, in either case, except to the extent inconsistent with Applicable Laws.

"Corporate Transaction" means the merger, consolidation or other reorganization of the Company, or a successor corporation or organization succeeding to all or substantially all of the assets and business of the Company and its Affiliates, taken as a whole.

"Director" means a member of the Board.

"Disability" means that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment. The determination of whether the Participant has a Disability shall be determined under procedures established by the Committee. The Committee may rely on any determination that the Participant is disabled for purposes of benefits under any long-term disability plan maintained by the Company or any Affiliate in which the Participant participates.

"Dividend Equivalents" means the right to receive cash on a Restricted Share Unit when a dividend is declared by the Company.

"Employee" means any person, including an Officer or Director, employed by the Company or an Affiliate.

"Fair Market Value" means, as of any date, the value of an Ordinary Share as determined below. If an Ordinary Share is listed on any established stock exchange or a national market system, including without limitation, the New York Stock Exchange or the NASDAQ Stock Market, the Fair Market Value shall be the closing price of an Ordinary Share (or if no sales were reported the closing price on the date immediately preceding such date) as quoted on such exchange or system on the day of determination, as reported in the *Wall Street Journal*. In the absence of an established market for an Ordinary Share, the Fair Market Value shall be determined in good faith by the Committee and such determination shall be conclusive and binding on all persons.

"non-assessable", in relation to the Ordinary Shares to be issued pursuant to this Agreement, means that holders of such shares, having fully paid up all amounts due on such shares, or such shares having been credited as fully paid up, as the case may be, are under no further personal liability to make payments to the Company or its creditors or contribute to the assets or liabilities of the Company in their capacities purely as holders of such shares;

"Officer" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

"Ordinary Shares" means ordinary shares in the capital of the Company, or such other securities of the Company as may be designated by the Committee from time to time in substitution thereof.

2.Grant of Restricted Share Units. The Company hereby issues to the Participant on the Grant Date set forth in the Nasdaq Inducement Restricted Share Unit Award Grant Notice (the "Notice") the number of Restricted Share Units (the "Restricted Share Units") set forth in the Notice. Each Restricted Share Unit represents a contingent right to receive one Ordinary Share, subject to the terms and conditions set forth in this Agreement. Capitalized terms that are used but not defined herein have the meaning ascribed to them in this Agreement.

3.Consideration. The grant of the Restricted Share Units is made in consideration of the services to be rendered by the Participant to the Company. No Ordinary Shares shall be issued on the Grant Date of the Award, and the Company will not be required to set aside a fund for the payment of this Award.

4.Vesting.

4.1Except as otherwise provided herein, provided that the Participant remains in Continuous Service through the applicable vesting date, the Restricted Share Units will vest, and no longer be subject to any restrictions, in accordance with the schedule set forth in the Award (the period during which restrictions apply, the "Restricted Period").

4.2The foregoing vesting schedule notwithstanding, if the Participant's Continuous Service terminates for any reason at any time before all of his or her Restricted Share Units have vested, the Participant's unvested Restricted Share Units shall be automatically forfeited upon such termination of Continuous Service and neither the Company nor any Affiliate shall have any further obligations to the Participant under this Agreement.

5.Rights as Shareholder; Dividend Equivalents.

5.1The Participant shall not have any rights of a shareholder with respect to the Ordinary Shares underlying the Restricted Share Units (including, without limitation, any voting rights or any right to dividends paid with respect to the Ordinary Shares underlying the Restricted Share Units).

5.2The Participant shall not be entitled to any Dividend Equivalents in respect of the Restricted Share Units.

6.Settlement of Restricted Share Units.

6.1Within ten days of the vesting of a Restricted Share Unit, the Company shall issue Ordinary Shares registered in the name of the Participant, the Participant's authorized assignee, or the Participant's legal representative, which shall be evidenced by share certificates representing the shares with the appropriate legends affixed thereto, appropriate entry on the books of the Company or of a duly authorized transfer agent, or other appropriate means as determined by the Company. No fractional Ordinary Shares shall be issued or delivered pursuant to this Agreement. The Committee shall determine whether any fractional shares should be rounded, forfeited or otherwise eliminated. The Ordinary Shares issued upon the vesting of the Restricted Share Units shall, upon issuance, be fully paid or credited as fully paid, non-assessable Ordinary Shares.

6.2To the extent that the Participant does not vest in any Restricted Share Units, all interest in such Restricted Share Units shall be forfeited. The Participant has no right or interest in any Restricted Share Units that are forfeited.

7.Tax Liability and Withholding.

7.1The Participant shall be required to pay to the Company, and the Company shall have the right to deduct from any compensation paid to the Participant pursuant to the vesting of the Restricted Share Units, the amount of any applicable foreign, federal, state and local withholding obligations of the Company in respect of the Restricted Share Units and to take all such other action as the Company deems necessary to satisfy all obligations for the payment of such withholding taxes. The Company shall not deliver any shares to the Participant until it is satisfied that all required withholdings have been made. At the option of the Company, the Company may require the sale by the Participant on the applicable vesting date such number of Ordinary Shares as the Company deems necessary to satisfy the Company's withholding obligation, after deduction of the broker's commission, and the broker shall be required to remit to the Company the cash necessary in order for the Company to satisfy its withholding obligation. Such sales shall be made pursuant to a mandatory "sell-to-cover" program instituted by the Company with no discretion by the Participant with respect to any sale under the "sell-to-cover" program. To the extent the proceeds of such sale exceed the Company's withholding obligation the Company agrees to pay such excess cash to the Participant as soon as practicable. In addition, if such sale is not sufficient to pay the Company's withholding obligation the Participant agrees to pay to the Company as soon as practicable, including through additional payroll withholding, the amount of any withholding obligation that is not satisfied by the sale of shares. The Participant agrees to hold the Company and the broker harmless from all costs, damages or expenses relating to any such sale. The Participant acknowledges that the Company and the broker are under no obligation to arrange for such sale at any particular price. In connection with such sale of shares, the Participant shall execute any such documents requested by the broker in order to effectuate the sale of Ordinary Shares and payment of the withholding obligation to the Company.

7.2Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding ("Tax-Related Items"), the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility and the Company (a) makes no representation or undertakings regarding the treatment of any Tax-Related Items in connection with the grant, vesting or settlement of the Restricted Share Units; and (b) does not commit to structure the Restricted Share Units to reduce or eliminate the Participant's liability for Tax-Related Items.

8.No Right to Continued Service; No Rights as Shareholder. This Agreement shall not confer upon the Participant any right to be retained in any position, as an Employee, Consultant or Director of the Company. Further, nothing in this Agreement shall be construed to limit the discretion of the Company to terminate the Participant's Continuous Service at any time, with or without Cause. The Participant shall not have any rights as a shareholder with respect to any Ordinary Shares subject to the Restricted Share Units prior to the date of settlement.

9.Transferability. The Restricted Share Units are not transferable by the Participant other than to a designated beneficiary upon the Participant's death or by will or the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by Applicable Laws. No assignment or transfer of the Restricted Share Units, or the rights represented thereby, whether voluntary or involuntary, by operation of law or otherwise (except to a designated beneficiary, upon death, by will or the laws of descent or distribution) will vest in the assignee or transferee any interest or right herein whatsoever, but immediately upon such

assignment or transfer the Restricted Share Units will be forfeited by the Participant and all of the Participant's rights to such Restricted Share Units shall immediately terminate without payment or consideration by the Company and become of no further effect.

10.Corporate Transaction and Adjustments.

10.1Adjustments Upon Changes in Shares. In the event of changes in the outstanding Ordinary Shares or in the capital structure of the Company by reason of any share or extraordinary cash dividend, share split, reverse share split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the Grant Date of the Award, the maximum number of Ordinary Shares subject to the Award will be equitably adjusted or substituted, as to the number or kind of an Ordinary Share to the extent necessary to preserve the economic intent of the Award. In the case of adjustments made pursuant to this Section 10.1, unless the Committee specifically determines that such adjustment is in the best interests of the Company or its Affiliates, the Committee shall ensure that any adjustments under this Section 10.1 will not constitute a modification of the Award within the meaning of Section 409A of the Code. The Company shall give the Participant notice of an adjustment hereunder and, upon notice, such adjustment shall be conclusive and binding for all purposes.

10.2Effect of a Corporate Transaction. The obligations of the Company under this Agreement shall be binding upon any successor corporation or organization resulting from a Corporate Transaction. In the event of a Corporate Transaction, the Board, shall make appropriate provision for the continuation of this Award on the same terms and conditions by substituting on an equitable basis for the Ordinary Shares then subject to this Award either the consideration payable with respect to the outstanding Ordinary Shares in connection with the Corporate Transaction or securities of any successor or acquiring entity. In lieu of the foregoing, in connection with any Corporate Transaction, the Board may provide that, upon consummation of the Corporate Transaction, the Award shall be terminated in exchange for payment of an amount equal to the consideration payable upon consummation of such Corporate Transaction to a holder of the number of Ordinary Shares equal to the number of Restricted Stock Units then comprising the Award. Such surrender or termination shall take place as of the date of the Corporate Transaction or such other date as the Board may specify.

10.3Compliance with Law. This Award and the issuance and transfer of Ordinary Shares shall be subject to compliance by the Company and the Participant with all Applicable Laws. No Ordinary Shares shall be issued upon vesting of the Restricted Share Units unless and until any then Applicable Laws have been fully complied with to the satisfaction of the Company and its counsel. The Participant understands that the Company is under no obligation to register the Ordinary Shares with the U.S. Securities and Exchange Commission, any state securities commission or any stock exchange or under any other Applicable Laws to effect such compliance.

11.Governing Law. This Agreement will be construed and interpreted in accordance with the laws of the State of Delaware and any other Applicable Laws, without giving effect to the conflict of law principles thereof. For the purpose of litigating any dispute that arises under this Agreement, if the Participant is a tax resident of the United States the parties hereby consent to exclusive jurisdiction in the Commonwealth of Massachusetts and agree that such litigation shall be conducted in the state courts of Middlesex County, Massachusetts or the federal courts of the United States for the District of Massachusetts and if the Participant is a resident of any other country the parties consent to the exclusive jurisdiction in the country in which such Participant resides.

12.Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Committee for review. The resolution of such dispute by the Committee shall be final and binding on the Participant and the Company.

13.Successors and Assigns. The Company may assign any of its rights under this Agreement. This Agreement will be binding upon and inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth herein, this Agreement will be binding upon the Participant and the Participant's beneficiaries, executors, administrators and the person(s) to whom the Restricted Share Units may be transferred by will or the laws of descent or distribution.

14.Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

15.No Right to Future Grants. The grant of the Restricted Share Units in this Agreement does not create any contractual right or other right to receive any Restricted Share Units or any other equity awards in the future. Future awards, if any, will be at the sole discretion of the Company.

16.Amendment. The Committee has the right to amend, alter, suspend, discontinue or cancel the Restricted Share Units and this Agreement, prospectively or retroactively; *provided, that*, no such amendment shall adversely affect the Participant's material rights under this Agreement unless (a) the Company requests the consent of the Participant; and (b) the Participant consents in writing.

17.Section 409A. This Agreement is intended to comply with an exemption from Section 409A of the Code and shall be construed and interpreted in a manner that is consistent with the requirements for avoiding additional taxes or penalties under Section 409A of the Code. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A of the Code and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Participant on account of non-compliance with Section 409A of the Code.

18.No Impact on Other Benefits. The value of the Participant's Restricted Share Units is not part of his or her normal or expected compensation for purposes of calculating any severance, retirement, welfare, insurance or similar employee benefit.

19.Clawback. Notwithstanding anything to the contrary contained in this Agreement, the Company may recover from the Participant any compensation received from the Award (whether or not vested or settled) or cause the Participant to forfeit the Award (whether or not vested) in the event that the Company’s Clawback Policy then in effect is triggered.

20.Data Privacy. By entering into this Agreement, the Participant: (i) authorizes the Company and each Affiliate, and any agent of the Company or any Affiliate administering this Agreement or providing recordkeeping services, to disclose to the Company or any of its Affiliates such information and data as the Company or any such Affiliate shall request in order to facilitate the grant of Restricted Share Units and the administration of the Award; and (ii) authorizes the Company and each Affiliate to store and transmit such information in electronic form for the purposes set forth in this Agreement.

21.Acceptance. The Participant hereby acknowledges receipt of a copy of this Agreement. The Participant has read and understands the terms and provisions thereof, and accepts the Restricted Share Units subject to all of

the terms and conditions of this Agreement. The Participant acknowledges that there may be adverse tax consequences upon the vesting or settlement of the Restricted Share Units and that the Participant should consult a tax advisor prior to such vesting or settlement.

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: August 8, 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: August 8, 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 June 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: August 8, 2024	/s/ Paul B. Bolno, M.D., MBA Paul B. Bolno, M.D., MBA President and Chief Executive Officer (Principal Executive Officer)
Dated: August 8, 2024	/s/ Kyle Moran Kyle Moran Chief Financial Officer (Principal Financial Officer)

Document and Entity Information - shares	6 Months Ended Jun. 30, 2024	Aug. 07, 2024
Cover [Abstract]		
Document Type	10-Q	
Amendment Flag	false	
Document Period End Date	Jun. 30, 2024	
Document Fiscal Year Focus	2024	
Document Fiscal Period Focus	Q2	
Trading Symbol	WVE	
Entity Registrant Name	WAVE LIFE SCIENCES LTD.	
Entity Incorporation, State or Country Code	U0	
Entity Central Index Key	0001631574	
Current Fiscal Year End Date	--12-31	
Entity Filer Category	Non-accelerated Filer	
Document Quarterly Report	true	
Document Transition Report	false	
Entity Current Reporting Status	Yes	
Entity Interactive Data Current	Yes	
Entity Small Business	true	
Entity Emerging Growth Company	false	
Entity Common Stock, Shares Outstanding		124,737,862
Entity Shell Company	false	
Entity Tax Identification Number	98-1356880	
Entity File Number	001-37627	
Entity Address, Address Line One	7 Straits View #12-00	
Entity Address, Address Line Two	Marina One	
Entity Address, City or Town	East Tower	
Entity Address, Country	SG	
Entity Address, Postal Zip Code	018936	
City Area Code	+65	
Local Phone Number	6236 3388	
Title of 12(b) Security	$0 Par Value Ordinary Shares	
Security Exchange Name	NASDAQ	

Unaudited Consolidated Balance Sheets - USD ($) $ in Thousands	Jun. 30, 2024	Dec. 31, 2023
Current assets:		
Cash and cash equivalents	$ 153,958	$ 200,351
Accounts receivable	1,290	21,086
Prepaid expenses	12,147	9,912
Other current assets	4,680	4,024
Total current assets	172,075	235,373
Long-term assets:		
Property and equipment, net of accumulated depreciation of $44,459 and $42,709 as of June 30, 2024 and December 31, 2023, respectively	11,783	13,084
Operating lease right-of-use assets	20,329	22,637
Restricted cash	3,731	3,699
Other assets	900	156
Total long-term assets	36,743	39,576
Total assets	208,818	274,949
Current liabilities:		
Accounts payable	18,149	12,839
Accrued expenses and other current liabilities	10,677	16,828
Current portion of deferred revenue	137,138	150,059
Current portion of operating lease liability	7,164	6,714
Total current liabilities	173,128	186,440
Long-term liabilities:		
Deferred revenue, net of current portion	9,582	15,601
Operating lease liability, net of current portion	21,711	25,404
Total long-term liabilities	31,293	41,005
Total liabilities	204,421	227,445
Series A preferred shares, no par value; 3,901,348 shares issued and outstanding at June 30, 2024 and December 31, 2023	7,874	7,874
Shareholders' equity (deficit):		
Ordinary shares, no par value; 122,479,289 and 119,162,234 shares issued and outstanding at June 30, 2024 and December 31, 2023, respectively	950,530	935,367
Additional paid-in capital	135,603	129,237
Accumulated other comprehensive loss	(279)	(124)
Accumulated deficit	(1,089,331)	(1,024,850)
Total shareholders' equity (deficit)	(3,477)	39,630
Total liabilities, Series A preferred shares, and shareholders' equity (deficit)	$ 208,818	$ 274,949

Unaudited Consolidated Balance Sheets (Parenthetical) - USD ($) $ in Thousands	Jun. 30, 2024	Dec. 31, 2023
Statement of Financial Position [Abstract]		
Net of accumulated depreciation	$ 44,459	$ 42,709
Series A preferred stock, par value	$ 0	$ 0
Series A preferred stock, shares issued	3,901,348	3,901,348
Series A preferred stock, shares outstanding	3,901,348	3,901,348
Common stock, par value	$ 0	$ 0
Common stock, shares issued	122,479,289	119,162,234
Common stock, shares outstanding	122,479,289	119,162,234

Unaudited Consolidated Statements of Operations and Comprehensive Loss - USD ($) $ in Thousands	3 Months Ended		6 Months Ended	
	Jun. 30, 2024	Jun. 30, 2023	Jun. 30, 2024	Jun. 30, 2023
Income Statement [Abstract]				
Revenue	$ 19,692	$ 22,106	$ 32,230	$ 35,035
Operating expenses:				
Research and development	40,393	33,314	73,840	64,293
General and administrative	14,296	12,265	27,845	24,500
Total operating expenses	54,689	45,579	101,685	88,793
Loss from operations	(34,997)	(23,473)	(69,455)	(53,758)
Other income, net:				
Dividend income and interest income	2,092	2,251	4,627	4,124
Other income (expense), net	(18)	118	347	1,125
Total other income, net	2,074	2,369	4,974	5,249
Loss before income taxes	(32,923)	(21,104)	(64,481)	(48,509)
Income tax benefit (provision)	0	0	0	0
Net loss	$ (32,923)	$ (21,104)	$ (64,481)	$ (48,509)
Net loss per share attributable to ordinary shareholders basic	$ (0.25)	$ (0.2)	$ (0.5)	$ (0.47)
Net loss per share attributable to ordinary shareholders diluted	$ (0.25)	$ (0.2)	$ (0.5)	$ (0.47)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders basic	129,527,003	105,462,414	129,399,340	103,768,971
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders diluted	129,527,003	105,462,414	129,399,340	103,768,971
Other comprehensive loss:				
Net loss	$ (32,923)	$ (21,104)	$ (64,481)	$ (48,509)
Foreign currency translation	(81)	(100)	(155)	(121)
Comprehensive loss	$ (33,004)	$ (21,204)	$ (64,636)	$ (48,630)

Unaudited Consolidated Statements of Series A Preferred Shares and Shareholders' Equity (Deficit) - USD ($) $ in Thousands	Total	GSK Collaboration Agreement [Member]	At-The-Market Equity Program [Member]	Series A Preferred Shares [Member]	Ordinary Shares [Member]	Ordinary Shares [Member] GSK Collaboration Agreement [Member]	Ordinary Shares [Member] At-The-Market Equity Program [Member]	Additional Paid-In-Capital [Member]	Accumulated Other Comprehensive Loss [Member]	Accumulated Deficit [Member]
Beginning balance at Dec. 31, 2022	$ (45,091)				$ 802,833			$ 119,442	$ (29)	$ (967,337)
Beginning balance, shares at Dec. 31, 2022					86,924,643					
Temporary equity, Beginning balance at Dec. 31, 2022				$ 7,874						
Temporary equity, Beginning balance, shares at Dec. 31, 2022				3,901,348						
Issuance of ordinary shares		$ 34,623				$ 34,623				
Issuance of ordinary shares, shares						10,683,761				
Share-based compensation	2,750							2,750		
Vesting of RSUs, shares					363,161					
Option exercises	1				$ 1					
Option exercises, shares					181					
Issuance of ordinary shares under the ESPP	429				$ 429					
Issuance of ordinary shares under ESPP, shares					133,098					
Other comprehensive loss	(21)								(21)	
Net loss	(27,405)									(27,405)
Ending balance at Mar. 31, 2023	(34,714)				$ 837,886			122,192	(50)	(994,742)
Ending balance, shares at Mar. 31, 2023					98,104,844					
Temporary equity, Ending balance at Mar. 31, 2023				$ 7,874						
Temporary equity, Ending balance, shares at Mar. 31, 2023				3,901,348						
Beginning balance at Dec. 31, 2022	(45,091)				$ 802,833			119,442	(29)	(967,337)
Beginning balance, shares at Dec. 31, 2022					86,924,643					
Temporary equity, Beginning balance at Dec. 31, 2022				$ 7,874						
Temporary equity, Beginning balance, shares at Dec. 31, 2022				3,901,348						
Net loss	(48,509)									
Ending balance at Jun. 30, 2023	(51,720)				$ 839,675			124,601	(150)	(1,015,846)
Ending balance, shares at Jun. 30, 2023					98,566,816					
Temporary equity, Ending balance at Jun. 30, 2023				$ 7,874						
Temporary equity, Ending balance, shares at Jun. 30, 2023				3,901,348						
Beginning balance at Mar. 31, 2023	(34,714)				$ 837,886			122,192	(50)	(994,742)
Beginning balance, shares at Mar. 31, 2023					98,104,844					
Temporary equity, Beginning balance at Mar. 31, 2023				$ 7,874						

Temporary equity, Beginning balance, shares at Mar. 31, 2023			3,901,348				
Issuance of ordinary shares		$ 1,704			$ 1,704		
Issuance of ordinary shares, shares					429,051		
Share-based compensation	2,409				2,409		
Vesting of RSUs, shares			9,234				
Option exercises	85		$ 85				
Option exercises, shares			23,687				
Other comprehensive loss	(100)					(100)	
Net loss	(21,104)						(21,104)
Ending balance at Jun. 30, 2023	(51,720)		$ 839,675		124,601	(150)	(1,015,846)
Ending balance, shares at Jun. 30, 2023			98,566,816				
Temporary equity, Ending balance at Jun. 30, 2023		$ 7,874					
Temporary equity, Ending balance, shares at Jun. 30, 2023		3,901,348					
Beginning balance at Dec. 31, 2023	39,630		$ 935,367		129,237	(124)	(1,024,850)
Beginning balance, shares at Dec. 31, 2023			119,162,234				
Temporary equity, Beginning balance at Dec. 31, 2023	$ 7,874	$ 7,874					
Temporary equity, Beginning balance, shares at Dec. 31, 2023	3,901,348	3,901,348					
Issuance of ordinary shares	$ 14,038		$ 14,038				
Issuance of ordinary shares, shares			3,000,000				
Share-based compensation	2,881				2,881		
Vesting of RSUs, shares			21,683				
Option exercises	123		$ 123				
Option exercises, shares			35,925				
Issuance of ordinary shares under the ESPP	349		$ 349				
Issuance of ordinary shares under ESPP, shares			101,542				
Other comprehensive loss	(74)					(74)	
Net loss	(31,558)						(31,558)
Ending balance at Mar. 31, 2024	25,389		$ 949,877		132,118	(198)	(1,056,408)
Ending balance, shares at Mar. 31, 2024			122,321,384				
Temporary equity, Ending balance at Mar. 31, 2024		$ 7,874					
Temporary equity, Ending balance, shares at Mar. 31, 2024		3,901,348					
Beginning balance at Dec. 31, 2023	39,630		$ 935,367		129,237	(124)	(1,024,850)
Beginning balance, shares at Dec. 31, 2023			119,162,234				
Temporary equity, Beginning balance at Dec. 31, 2023	$ 7,874	$ 7,874					
Temporary equity, Beginning balance, shares at Dec. 31, 2023	3,901,348	3,901,348					
Net loss	$ (64,481)						
Ending balance at Jun. 30, 2024	(3,477)		$ 950,530		135,603	(279)	(1,089,331)

Ending balance, shares at Jun. 30, 2024			122,479,289				
Temporary equity, Ending balance at Jun. 30, 2024	$ 7,874	$ 7,874					
Temporary equity, Ending balance, shares at Jun. 30, 2024	3,901,348	3,901,348					
Beginning balance at Mar. 31, 2024	$ 25,389		$ 949,877		132,118	(198)	(1,056,408)
Beginning balance, shares at Mar. 31, 2024			122,321,384				
Temporary equity, Beginning balance at Mar. 31, 2024		$ 7,874					
Temporary equity, Beginning balance, shares at Mar. 31, 2024		3,901,348					
Issuance of ordinary shares		$ 547		$ 547			
Issuance of ordinary shares, shares				109,204			
Share-based compensation	3,485				3,485		
Vesting of RSUs, shares			17,778				
Option exercises	106		$ 106				
Option exercises, shares			30,923				
Other comprehensive loss	(81)					(81)	
Net loss	(32,923)						(32,923)
Ending balance at Jun. 30, 2024	(3,477)		$ 950,530		$ 135,603	$ (279)	$ (1,089,331)
Ending balance, shares at Jun. 30, 2024			122,479,289				
Temporary equity, Ending balance at Jun. 30, 2024	$ 7,874	$ 7,874					
Temporary equity, Ending balance, shares at Jun. 30, 2024	3,901,348	3,901,348					

Unaudited Consolidated Statements of Cash Flows - USD ($) $ in Thousands	6 Months Ended	
	Jun. 30, 2024	Jun. 30, 2023
Cash flows from operating activities		
Net loss	$ (64,481)	$ (48,509)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Amortization of right-of-use assets	2,308	2,038
Depreciation of property and equipment	2,041	2,722
Share-based compensation expense	6,366	5,159
Changes in operating assets and liabilities:		
Accounts receivable	19,796	0
Prepaid expenses	(2,235)	(1,080)
Other assets	(1,400)	(2,373)
Accounts payable	5,039	(4,456)
Accrued expenses and other current liabilities	(6,151)	(7,123)
Deferred revenue	(18,940)	104,341
Operating lease liabilities	(3,243)	(2,454)
Net cash provided by (used in) operating activities	(60,900)	48,265
Cash flows from investing activities		
Purchases of property and equipment	(469)	(561)
Net cash used in investing activities	(469)	(561)
Cash flows from financing activities		
Proceeds from the issuance of ordinary shares, net of offering costs	14,038	0
Proceeds from the issuance of ordinary shares pursuant to the GSK Collaboration Agreement	0	34,623
Proceeds from issuance of ordinary share pursuant to the at-the-market equity program, net of offering costs	547	1,764
Proceeds from the exercise of share options	229	86
Proceeds from the ESPP	349	429
Net cash provided by financing activities	15,163	36,902
Effect of foreign exchange rates on cash, cash equivalents, and restricted cash	(155)	(121)
Net increase (decrease) in cash, cash equivalents, and restricted cash	(46,361)	84,485
Cash, cash equivalents, and restricted cash, beginning of period	204,050	92,157
Cash, cash equivalents, and restricted cash, end of period	157,689	176,642
Supplemental disclosure of cash flow information:		
Offering costs in accounts payable at period end	$ 0	$ 60

Pay vs Performance Disclosure - USD ($) $ in Thousands	3 Months Ended				6 Months Ended	
	Jun. 30, 2024	Mar. 31, 2024	Jun. 30, 2023	Mar. 31, 2023	Jun. 30, 2024	Jun. 30, 2023
Pay vs Performance Disclosure						
Net Income (Loss)	$ (32,923)	$ (31,558)	$ (21,104)	$ (27,405)	$ (64,481)	$ (48,509)

Insider Trading Arrangements	3 Months Ended Jun. 30, 2024 shares
Trading Arrangements, by Individual	
Material Terms of Trading Arrangement	We describe the material terms of these Rule 10b5-1 Trading Plans below. On May 20, 2024, Paul B. Bolno, M.D., MBA, our President and Chief Executive Officer, terminated a Rule 10b5-1 Trading Plan that was originally adopted on March 19, 2024. Dr. Bolno's former Rule 10b5-1 Trading Plan provided for the sale of up to an aggregate of 435,594 of our ordinary shares. No ordinary shares were sold under Dr. Bolno's Rule 10b5-1 Trading Plan prior to its termination. On May 22, 2024, Mr. Bolno adopted a Rule 10b5-1 Trading Plan providing for the sale of up to an aggregate of 435,594 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 November 15, 2024, or earlier, if and when all transactions under the Rule 10b5-1 Trading Plan are completed.
Trading Arrangement 1 [Member] | Paul B. Bolno [Member]	
Trading Arrangements, by Individual	
Name	Paul B. Bolno
Title	President and Chief Executive Officer
Rule 10b5-1 Arrangement Adopted	true
Adoption Date	March 19, 2024
Rule 10b5-1 Arrangement Terminated	true
Termination Date	May 20, 2024
Arrangement Duration	62 days
Aggregate Available	435,594
Trading Arrangement 2 [Member] | Paul B. Bolno [Member]	
Trading Arrangements, by Individual	
Name	Paul B. Bolno
Title	President and Chief Executive Officer
Rule 10b5-1 Arrangement Adopted	true
Adoption Date	May 22, 2024
Arrangement Duration	177 days
Aggregate Available	435,594

The Company

6 Months Ended
Jun. 30, 2024

Organization, Consolidation and Presentation of Financial Statements [Abstract]

The Company

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 June 30, 2024, the Company had cash and cash equivalents of $154.0 million. Subsequent to June 30, 2024, the Company received $12.7 million in net proceeds under the Company's at-the-market equity program. 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.

Significant Accounting Policies	6 Months Ended Jun. 30, 2024
Accounting Policies [Abstract]	
Significant Accounting Policies	

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 six months ended June 30, 2024.

Unaudited Interim Financial Data

The accompanying interim consolidated balance sheet as of June 30, 2024, the related interim consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2024 and 2023, the consolidated statements of Series A preferred shares and shareholders' equity (deficit) for the three months ended March 31 and June 30, 2024 and 2023, the consolidated statements of cash flows for the six months ended June 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 six months ended June 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 six months ended June 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.

Accrued Expenses and Other Current Liabilities

6 Months Ended
Jun. 30, 2024

Payables and Accruals [Abstract]

Accrued Expenses and Other Current Liabilities

3. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consist of the following:

	June 30, 2024	December 31, 2023
	(in thousands)	
Accrued compensation	$ 7,435	$ 14,065
Accrued expenses related to CROs and CMOs	2,210	1,768
Accrued expenses and other current liabilities	1,032	995
Total accrued expenses and other current liabilities	$ 10,677	$ 16,828

Share-Based Compensation

6 Months Ended
Jun. 30, 2024

Share-Based Payment Arrangement [Abstract]
Share-Based Compensation

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 a as of August 9, 2022 and August 1, 2023 (as amended, the "2021 Plan"). The 2021 Plan serves as the successor to the Wave Life Sciences Ltd. 20 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, b made under the 2014 Plan after August 10, 2021. The aggregate number of ordinary shares authorized for issuance of awards under the 2021 Plan ordinary shares, and was subsequently increased to 11,450,000 and 17,950,000 in August 2022 and August 2023, respectively, plus the number of underlying any awards under the 2014 Plan that are forfeited, cancelled or otherwise terminated (other than by exercise or withheld by the Compa 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, non-qualified share options, restricted awards, which include restricted shares and restricted share units ("RSUs"), and performance awards to eligi 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 contract 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 vesting of performance-based RSUs is contingent on the achievement of certain performance milestones. Any RSUs that are forfeited are availabl

During the six months ended June 30, 2024, the Company granted an aggregate of 6,935,000 options and 106,300 time-based RSUs to employees

As of June 30, 2024, 1,866,279 ordinary shares remained available for future grant under the 2021 Plan.

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

	2024
Options to purchase ordinary shares	20,574,934
RSUs	660,750

The Wave Life Sciences Ltd. 2019 Employee Share Purchase Plan, as amended (the "ESPP"), allows full-time and certain part-time employees to ordinary shares at a discount to fair market value. Eligible employees may enroll in a six-month offering period beginning every January 15th and 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 th offering period. The aggregate number of ordinary shares authorized for issuance under the ESPP was originally 1,000,000 and was subsequently August 2023. During the six months ended June 30, 2024, 101,542 ordinary shares were issued under the ESPP. As of June 30, 2024, there were 2 available for issuance under the ESPP.

Collaboration Agreements

Organization, Consolidation and Presentation of Financial Statements [Abstract]

Collaboration Agreements

6 Months Ended
Jun. 30, 2024

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") wi
Intellectual Property (No. 3) ("GSK"). Pursuant to the GSK Collaboration Agreement, Wave and GSK have agreed to collaborate on the research,
commercialization of oligonucleotide therapeutics, including an exclusive global license to WVE-006. The discovery collaboration component ha
research term and combines Wave's proprietary discovery and drug development platform, PRISM, with GSK's unique genetic insights and its gl
commercial capabilities. On January 27, 2023, the GSK Collaboration Agreement became effective, and GSK paid Wave an upfront payment of $

Simultaneously with the execution of the GSK Collaboration Agreement, Wave entered into a Share Purchase Agreement (the "SPA") on Decemb
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
"GSK Equity Investment"). The GSK Equity Investment closed on January 26, 2023, following the completion of customary closing conditions.
purchased by GGL are subject to lock-up and standstill restrictions and carry certain registration rights, customary for transactions of this kind. Th
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 al
deficiency ("AATD"), with development and commercialization responsibilities transferring to GSK after the Company completes the firs
"AATD Collaboration"). The Company will be responsible for preclinical, regulatory, manufacturing, and clinical activities for WVE-006
1/2 study, at the Company's sole cost. Thereafter, GSK will be responsible for advancing WVE-006 through pivotal studies, registration, a
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 oligonu
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 ge
Collaboration Programs").

Under the GSK Collaboration Agreement, each party grants to the other party certain licenses to the collaboration products to enable the other par
obligations and exercise its rights under the GSK Collaboration Agreement, including license grants to enable each party to conduct research, dev
commercialization activities pursuant to the terms of the GSK Collaboration Agreement. The parties' exclusivity obligations to each other are lim
basis with regard to targets in the collaboration. GSK may terminate the GSK Collaboration Agreement for convenience, in its entirety or on a tar
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,
challenges the patentability, enforceability or validity of any patents within the licensed technology that cover any product that is subject to the GS
Agreement. In the event of any material breach of the GSK Collaboration Agreement by a party, subject to cure rights, the other party may termin
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 G
development, manufacturing and commercialization activities with respect to compounds or products subject to the GSK Collaboration Agreemer
particular target, the Company may terminate the GSK Collaboration Agreement with respect to such target. Either party may terminate the GSK
for the other party's insolvency. In certain termination circumstances, the Company would receive a license from GSK to continue researching, de
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
target is not advanced into a collaboration program; or (ii) with respect to a collaboration target, the royalty term has expired for all collaboration
applicable collaboration target. The GSK Collaboration Agreement includes options to extend the research term for up to three additional years, w
number of programs available to both parties. The Company will lead all preclinical research for GSK and the Company's collaboration programs
drug ("IND")-enabling studies. The Company will lead IND-enabling studies, clinical development and commercialization for the Company's col
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
overseen by a joint development committee, a joint patent committee advises on intellectual property activities, and the Discovery Research Colla
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
GSK, is a customer for the AATD Collaboration prior to GSK exercising its option and, for the Discovery Research Collaboration programs durin
research term. The Company identified the following material promises under the arrangement: (1) the exclusive global license for WVE-006; (2)
development services for WVE-006 through the Phase 1/2 study; (3) the discovery research services under the Discovery Research Collaboration
validation programs; (4) research and development license for the Discovery Research Collaboration; and (5) the research and development servic
collaboration programs through completion of a candidate selection. The research and development services for WVE-006 were determined to no
exclusive global license and should therefore be combined into a single performance obligation for the AATD Collaboration. The research and de
Discovery Research Collaboration were determined to not be distinct from the research and development license for the Discovery Research Colla
therefore be combined into a single performance obligation. In addition, the Company determined the standalone selling price for the option to ad
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
and development services through completion of the Phase 1/2 study and research and development license for WVE-006 and (2) Discovery Rese
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 re
Investment and the fixed consideration related to the additional target validation research funding. The Company allocated the estimated variable
the target validation research to the Discovery Research Collaboration and the variable consideration relating to the development milestone to the
then allocated the fixed consideration to the performance obligations on a relative standalone selling price basis. The Company determined that th
Agreement did not contain a significant financing component. The program initiation fees to advance up to eight programs from the Discovery Re
preclinically develop the GSK collaboration programs and the additional potential milestone payments were excluded from the transaction price, a
were fully constrained at the inception of the GSK Collaboration Agreement. The Company will reevaluate the transaction price at the end of each
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-targetin
editing, splicing, siRNA, and antisense) with target validation work ongoing across multiple therapy areas. GSK selected its first two programs to
candidates following achievement of target validation in the three months ended June 30, 2024. These programs utilize Wave's next generation GA
are in hepatology. Under the GSK Collaboration Agreement, GSK is required to provide an aggregate initiation payment of $12.0 million to Wave
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
amount of the transaction price unsatisfied as of June 30, 2024 (in thousands):

		Transaction Price Allocated	
	Performance Obligations:		
AATD Collaboration	$	156,778	$
Discovery Research Collaboration		20,225	
GSK Collaboration Program		12,000	
Total	$	189,003	$

(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 disco
For the performance obligation associated with the research and development services under the Discovery Research Collaboration and the resear
services for WVE-006 under the AATD Collaboration, the Company determined the standalone selling price using estimates of the costs to perfor
development services, including expected internal and external costs for services and supplies, adjusted to reflect a profit margin. The total estima
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 p

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

During the year ended December 31, 2023, the Company achieved a developmental milestone which pertained to the initiation of dosing in health
RestorAATion clinical trial program, triggering a $20.0 million milestone payment to the Company from GSK. As of December 31, 2023, the $20
achievement of the milestone was included in the current portion of accounts receivable and payment was received from GSK in the first quarter o

Under the GSK Collaboration Agreement, for the three months ended June 30, 2024 and 2023 the Company recognized revenue of $19.1 million
respectively, using the input method described above. For the six months ended June 30, 2024 and 2023, the Company recognized revenue of $31
million, respectively, using the input method described above. Through June 30, 2024, the Company had recognized revenue of $97.7 million und
Agreement as collaboration revenue in the Company's consolidated statements of operations and comprehensive loss.

The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and record
June 30, 2024 was approximately $76.2 million, of which approximately $66.7 million was included in current liabilities and approximately $9.6
long-term liabilities. The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance o
deferred revenue on December 31, 2023 was approximately $94.3 million, of which approximately $78.7 million was included in current liabilitie
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 Pharmaceutica
("Takeda"), pursuant to which Wave USA, Wave UK and Takeda agreed to collaborate on the research, development and commercialization of ol
for disorders of the Central Nervous System ("CNS"). The Takeda Collaboration provides the Company with at least $230.0 million in committed
option to co-develop and co-commercialize the Company's CNS development programs in (1) Huntington's disease ("HD"); (2) amyotrophic late
frontotemporal dementia ("FTD"); and (3) the Company's discovery-stage program targeting *ATXN3* for the treatment of spinocerebellar ataxia 3
"Category 1 Programs"). In addition, the Takeda Collaboration provided Takeda the right to exclusively license multiple preclinical programs for
Alzheimer's disease and Parkinson's disease (collectively, "Category 2 Programs"). In April 2018, the Takeda Collaboration became effective and
Company $110.0 million as an upfront payment. Takeda also agreed to fund the Company's research and preclinical activities in the amount of $6
four-year research term and to reimburse the Company for any collaboration-budgeted research and preclinical expenses incurred by Wave that ex

Simultaneously with Wave USA and Wave UK's entry into the collaboration and license agreement with Takeda (the "Takeda Collaboration Agre
entered into a share purchase agreement with Takeda (the "Takeda Equity Agreement," and together with the Takeda Collaboration Agreement, th
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
Agreement and received aggregate cash proceeds of $60.0 million. The Company did not incur any material costs in connection with the issuance

With respect to Category 1 Programs, the Company will be responsible for researching and developing products and companion diagnostics for C
through completion of the first proof of mechanism study for such products. Takeda will have an exclusive option for each target and all associate
diagnostics for such target, which it may exercise at any time through completion of the proof of mechanism study. If Takeda exercises this option

receive an opt-in payment and will lead manufacturing and joint clinical co-development activities and Takeda will lead joint co-commercial activ
and all commercial activities outside of the United States. Global costs and potential profits will be shared 50:50 and the Company will be eligibl
and commercial milestone payments. In addition to its 50% profit share, the Company is eligible to receive option exercise fees and development
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-ye
to limited extension for programs that were initiated prior to the expiration of the research term, in accordance with the Takeda Collaboration Agr
Research Term"). During that term, the Takeda Collaboration provided that the parties may collaborate on preclinical programs for up to six targe
Company was responsible for researching and preclinically developing products and companion diagnostics directed to the agreed upon targets th
Investigational IND enabling studies in the first major market country. Thereafter, Takeda would have an exclusive worldwide license to develop
products and companion diagnostics directed to such targets, subject to the Company's retained rights to lead manufacturing activities for product
Takeda agreed to fund the Company's research and preclinical activities in the amount of $60.0 million during the research term and reimburse th
collaboration-budgeted research and preclinical expenses incurred by the Company that exceeded that amount. The Company was also eligible to
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 t
and exercise its rights under the Takeda Collaboration Agreement, including license grants to enable each party to conduct research, development
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 whic
Category 1 Program target for which Takeda does not exercise its option, the expiration or termination of the development program with respect t
respect to each Category 1 Program target for which Takeda exercises its option, the date on which neither party is researching, developing or ma
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
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. Subj
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 su
patentability, enforceability or validity of any patents within the licensed technology that cover any product or companion diagnostic that is subje
Collaboration Agreement. In the event of any material breach of the Takeda Collaboration Agreement by a party, subject to cure rights, the other p
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 tar
Takeda and its affiliates cease development, manufacturing and commercialization activities with respect to compounds or products subject to the
Agreement and directed to a particular target, the Company may terminate the Takeda Collaboration Agreement with respect to such target. Eithe
Takeda Collaboration Agreement for the other party's insolvency. In certain termination circumstances, the Company would receive a license fro
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
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 Cat
Takeda exercising its option, and for Category 2 Programs during the Category 2 Research Term. The Company identified the following material
arrangement: (1) the non-exclusive, royalty-free research and development license for each Category 1 Program; (2) the research and developmen
Category 1 Program through completion of the first proof of mechanism study; (3) the exclusive option to license, co-develop and co-commercial
Program; (4) the right to exclusively license the Category 2 Programs; and (5) the research and preclinical development services of the Category 2
completion of IND-enabling studies. The research and development services for each Category 1 Program were determined to not be distinct from
development license and should therefore be combined into a single performance obligation for each Category 1 Program. The research and precl
services for the Category 2 Programs were determined to not be distinct from the exclusive licenses for the Category 2 Programs and therefore we
performance obligation.

Additionally, the Company determined that the exclusive option for each Category 1 Program was priced at a discount, and, as such, provide mate
representing three separate performance obligations. Based on these assessments, the Company identified seven performance obligations in the Ta
Agreement: (1) research and development services through completion of the first proof of mechanism and non-exclusive research and developme
research and development services through completion of the first proof of mechanism and non-exclusive research and development license for A
and development services through completion of the first proof of mechanism and non-exclusive research and development license for SCA3; (4)
provided for the exclusive option to license, co-develop and co-commercialize HD; (5) the material right provided for the exclusive option to licen
co-commercialize ALS and FTD; (6) the material right provided for the exclusive option to license, co-develop and co-commercialize SCA3; 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 commi
preclinical funding for the Category 2 Programs. The Company determined that the Takeda Collaboration Agreement did not contain a significant
The option exercise fees to license, co-develop and co-commercialize each Category 1 Program that may be received are excluded from the transa
customer option is exercised. The potential milestone payments were excluded from the transaction price, as all milestone amounts were fully con
of the Takeda Collaboration Agreement. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain ev
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 oblig
research and development services through completion of the first proof of mechanism and non-exclusive research and development license for H
development services through completion of the first proof of mechanism and non-exclusive research and development license for ALS and FTD;
development services through completion of the first proof of mechanism and non-exclusive research and development license for SCA3; and the
development services and right to exclusively license the Category 2 Programs, the Company determined the standalone selling price using estima
perform the research and development services, including expected internal and external costs for services and supplies, adjusted to reflect a profi
estimated cost of the research and development services reflected the nature of the services to be performed and the Company's best estimate of th
to perform the services. For the performance obligations associated with the material right provided for the exclusive option to license, co-develop
HD; the material right provided for the exclusive option to license, co-develop and co-commercialize ALS and FTD; and the material right provid
option to license, co-develop and co-commercialize SCA3, the Company estimated the standalone fair value of the option to license each Categor
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

Revenue associated with the research and development services for each Category 1 Program performance obligation is being recognized as the re services are provided using an input method, according to the costs incurred on each Category 1 Program and the total costs expected to be incurr Category 1 Program performance obligation. Prior to the Amendment described below, revenue associated with the research and preclinical devel Category 2 Programs performance obligation was recognized as the research and preclinical development services that were provided using an inp the costs incurred on Category 2 Programs and the total costs expected to be incurred to satisfy the performance obligation. The amount allocated each Category 1 Program option will be recognized on the date that Takeda exercises each respective option, or immediately as each option expire 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 "Amer discontinued the Category 2 component of the Takeda Collaboration. The Category 1 Programs under the Collaboration Agreement remain in effe the Amendment. Pursuant to the Amendment, Takeda agreed to pay the Company an additional $22.5 million as full payment for reimbursable Ca collaboration-budgeted research and preclinical expenses. The Company received this payment from Takeda related to the Category 2 component 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 Category 1 Programs. In July 2023, the joint steering committee that manages the Takeda Collaboration terminated C9 for ALS/FTD as a target u "C9 Target") and consequently Takeda and the Company's rights and obligations under the Takeda Collaboration were terminated with respect to 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 which represented the remainder of the deferred revenue for the C9 for ALS/FTD Category 1 Program as of June 30, 2023.

In December 2023, the joint steering committee that manages the Takeda Collaboration terminated the SCA3 Category 1 Program as a target unde consequently, Takeda and the Company's rights and obligations under the Takeda Collaboration were terminated with respect to the SCA3 Catego of the termination of the SCA3 Category 1 Program, the Company recognized $9.9 million in revenue during the three months ended December 3 represented the remainder of the deferred revenue for the SCA3 Category 1 Program as of September 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 posi non-clinical study of WVE-003 in non-human primates ("NHPs"). As a result of achieving the milestone, the Company recognized $7.0 million i previously recorded in deferred revenue, as it was fully constrained at the inception of the Takeda Collaboration.

During the three months ended June 30, 2024 and 2023, the Company recognized revenue of approximately $0.6 million and $1.3 million, respec Collaboration Agreement in the Company's consolidated statements of operations and comprehensive loss. During the six months ended June 30, Company recognized revenue of $0.8 million and $2.0 million, respectively, under the Takeda Collaboration Agreement. Through June 30, 2024, recognized revenue of $129.0 million under the Takeda Collaboration Agreement as collaboration revenue in the Company's consolidated statem comprehensive loss.

The aggregate amount of the transaction price allocated to the Company's unsatisfied and partially unsatisfied performance obligations and record of June 30, 2024 and December 31, 2023 was $70.5 million and $71.3 million, respectively, and all of the deferred revenue was included in curre Company expects to recognize revenue for the portion of the deferred revenue that relates to the research and development services for each rema as costs are incurred, over the remaining research term. The Company expects to recognize revenue for the portion of the deferred revenue that re for each remaining Category 1 Program option upon Takeda's exercise or termination of such option, or immediately as each option expires unexe

Net Loss Per Ordinary Share

	6 Months Ended Jun. 30, 2024
Earnings Per Share [Abstract]	
Net Loss Per Ordinary Share	**. NET LOSS PER ORDINARY SHARE**

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

As of June 30, 2024, there are 7,093,656 vested and exercisable pre-funded warrants ("Pre-Funded Warrants") outstanding to purchase ordinary sh of $0.0001 per share, provided that, unless and until the Company obtains shareholder approval for the issuance of the shares underlying the Pre-F 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 n shares beneficially owned by the holder (together with its affiliates) to exceed 19.99% of the number of our ordinary shares outstanding immediat the exercise, or (ii) the combined voting power of our securities beneficially owned by the holder (together with its affiliates) to exceed 19.99% o power of all of our securities then outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in acco the Pre-Funded Warrants. The Pre-Funded Warrants are included in the weighted-average shares outstanding used in the calculation of basic net lo 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-avera 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 sh ordinary share equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

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

	2024
Options to purchase ordinary shares	20,574,934
RSUs	660,750
Series A preferred shares	3,901,348

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

Income Taxes	6 Months Ended Jun. 30, 2024
Income Tax Disclosure [Abstract]	
Income Taxes	**. INCOME TAXES** During the three and six months ended June 30, 2024 and 2023, the Company recorded no income tax provision. The Company maintained a full valuation allowance for the three and six months ended June 30, 2024 and 2023 in all jurisdictions due to uncertainty regarding future taxable income.

Geographic Data	6 Months Ended Jun. 30, 2024
Geographic Data [Abstract]	
Geographic Data	

8. GEOGRAPHIC DATA

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

Related Party Transactions	6 Months Ended Jun. 30, 2024
Related Party Transactions [Abstract]	
Related Party Transactions	

9. 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 six months ended June 30, 2024, the Company made a payment of $5 thousand to SNBL. Through June 30, 2024, the Company has paid $1.4 million to SNBL for the aforementioned NHP contract research services.

Significant Accounting Policies (Policies)	6 Months Ended Jun. 30, 2024
Accounting Policies [Abstract]	
Unaudited Interim Financial Data	***Unaudited Interim Financial Data***
	The accompanying interim consolidated balance sheet as of June 30, 2024, the related interim consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2024 and 2023, the consolidated statements of Series A preferred shares and shareholders' equity (deficit) for the three months ended March 31 and June 30, 2024 and 2023, the consolidated statements of cash flows for the six months ended June 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 six months ended June 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 six months ended June 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.

Accrued Expenses and Other Current Liabilities (Tables)

6 Months Ended
Jun. 30, 2024

Payables and Accruals [Abstract]

Summary of Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

	June 30, 2024	December 31, 2023
	(in thousands)	
Accrued compensation	$ 7,435	$ 14,065
Accrued expenses related to CROs and CMOs	2,210	1,768
Accrued expenses and other current liabilities	1,032	995
Total accrued expenses and other current liabilities	$ 10,677	$ 16,828

Share-Based Compensation (Tables)

6 Months Ended Jun. 30, 2024

Share-Based Payment Arrangement [Abstract]

Summary of Options and RSUs Outstanding

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

	2024
Options to purchase ordinary shares	20,574,934
RSUs	660,750

Collaboration Agreements (Tables)

GSK Collaboration Agreement [Member]

Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]

Summary Of Allocation of The Total Transaction Price

6 Months Ended
Jun. 30, 2024

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

			Transaction Price Allocated
	Performance Obligations:		
AATD Collaboration	$	156,778	$
Discovery Research Collaboration		20,225	
GSK Collaboration Program		12,000	
Total	$	189,003	$

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

Net Loss Per Ordinary Share (Tables)

6 Months Ended
Jun. 30, 2024

Earnings Per Share [Abstract]

Anti-Dilutive Shares Excluded from Calculation of Diluted Net Loss Per Ordinary Share

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

	2024
Options to purchase ordinary shares	20,574,934
RSUs	660,750
Series A preferred shares	3,901,348

The Company - Additional Information (Detail) - USD ($) $ in Thousands	6 Months Ended			
	Jul. 01, 2024	Jun. 30, 2024	Jun. 30, 2023	Dec. 31, 2023
Collaborative Arrangement and Arrangement Other than Collaborative [Line Items]				
Cash and cash equivalents		$ 153,958		$ 200,351
Proceeds from issuance of ordinary share pursuant to the at-the-market equity program, net of offering costs		$ 547	$ 1,764	
Subsequent Event [Member]				
Collaborative Arrangement and Arrangement Other than Collaborative [Line Items]				
Proceeds from issuance of ordinary share pursuant to the at-the-market equity program, net of offering costs	$ 12,700			

Accrued Expenses and Other Current Liabilities - Summary of Accrued Expenses and Other Current Liabilities (Detail) - USD ($) $ in Thousands	Jun. 30, 2024	Dec. 31, 2023
Payables and Accruals [Abstract]		
Accrued compensation	$ 7,435	$ 14,065
Accrued expenses related to CROs and CMOs	2,210	1,768
Accrued expenses and other current liabilities	1,032	995
Total accrued expenses and other current liabilities	$ 10,677	$ 16,828

Share-Based Compensation - Additional Information (Detail) - shares	3 Months Ended			6 Months Ended			
	Dec. 13, 2022	Mar. 31, 2024	Mar. 31, 2023	Jun. 30, 2024	Aug. 31, 2023	Aug. 31, 2022	Aug. 10, 2021
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							
Options granted to employees				6,935,000			
Issuance of ordinary shares, shares	10,683,761						
Ordinary Shares [Member]							
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							
Number of shares issued		101,542	133,098				
Issuance of ordinary shares, shares		3,000,000					
Time-based RSUs [Member]							
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							
Shares granted to employees				106,300			
ESPP [Member]							
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							
Ordinary shares authorized for issuance				1,000,000	3,000,000		
Ordinary shares reserved for issuance				2,388,958			
Ordinary share purchase price at equal to fair market value percentage				85.00%			
Number of shares issued				101,542			
2021 Plan [Member]							
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							
Ordinary shares authorized for issuance					17,950,000	11,450,000	5,450,000
Ordinary shares available for future grant				1,866,279			
2014 Plan [Member] | Minimum [Member]							
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]							

Vesting period	1 year
Contractual life of options	5 years
2014 Plan [Member] | Minimum [Member] | Time-based RSUs [Member]	
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]	
Vesting period	1 year
2014 Plan [Member] | Maximum [Member]	
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]	
Vesting period	4 years
Contractual life of options	10 years
2014 Plan [Member] | Maximum [Member] | Time-based RSUs [Member]	
Share-based Compensation Arrangement By Share-based Payment Award [Line Items]	
Vesting period	4 years

Share-Based Compensation - Summary of Options and RSUs Outstanding (Detail) - shares	Jun. 30, 2024	Jun. 30, 2023
Share-Based Payment Arrangement [Abstract]		
Options to purchase ordinary shares	20,574,934	14,176,822
RSUs	660,750	626,465

Collaboration Agreements - Additional Information (Detail) $ / shares in Units, $ in Thousands	Jan. 27, 2023 USD ($)	Dec. 13, 2022 USD ($) $ / shares shares	Oct. 15, 2021 USD ($)	Apr. 02, 2018	1 Months Ended Apr. 30, 2018 USD ($) Target $ / shares shares	Feb. 28, 2018 USD ($)	3 Months Ended Jun. 30, 2024 USD ($)	Dec. 31, 2023 USD ($)	Sep. 30, 2023 USD ($)	Jun. 30, 2023 USD ($)	6 Months Ended Jun. 30, 2024 USD ($)	Jun. 30, 2023 USD ($)	12 Months Ended Dec. 31, 2023 USD ($)	19 Months Ended Jun. 30, 2024 USD ($)
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]														
Collaboration and license agreement, deferred revenue noncurrent							$ 9,582	$ 15,601			$ 9,582		$ 15,601	$ 9,582
Shares issued under equity agreement | shares		10,683,761												
Investment, Type [Extensible Enumeration]		G S K Equity Investment [Member]												
Purchase price per share | $ / shares		$ 4.68												
Net proceeds from sale of ordinary shares after deducting commissions and offering expenses											14,038	$ 0		
Collaboration revenue recognized							19,692			$ 22,106	32,230	35,035		
Collaboration and license agreement, deferred revenue current							137,138	150,059			137,138		150,059	137,138
Takeda [Member]														
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]														
Fund receivable for research and preclinical activities					$ 60,000									
Up-front consideration received					$ 110,000									
GSK Collaboration Agreement [Member]														
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]														
Upfront payment under collaboration agreement	$ 120,000	$ 120,000												
Collaborative arrangement initiation payment received							12,000							
Collaboration Agreement in Premium		15,400												
Collaboration and license agreement, deferred revenue noncurrent							9,600	15,600			9,600		15,600	9,600
Aggregate initiation payment		$ 12,000												

Acheivement of milestone included in current portion receivable			20,000			20,000	
Milestone payment						20,000	
Collaboration revenue recognized		19,100		20,800	31,400	33,100	97,700
Collaboration and license agreement, deferred revenue		76,200	94,300	76,200		94,300	76,200
Collaboration and license agreement, deferred revenue current		66,700	78,700	66,700		78,700	66,700
Collaboration And License Agreement [Member] | Category One Programs [Member]							
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]							
Percentage of global costs and potential profits sharing ratio	50.00%						
Collaboration And License Agreement [Member] | Takeda [Member]							
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]							
Upfront payment under collaboration agreement	$ 110,000						
Collaboration and license agreement month and year		2018-02					
Fund receivable for research and preclinical activities	$ 60,000						
Research term under collaboration and license agreement	4 years						
Collaboration agreement commencement date	Apr. 02, 2018						
Collaboration agreement termination period	180 days						
Collaboration And License Agreement [Member] | Takeda [Member] | Minimum [Member]							
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]							
Collaboration agreement, committed cash		$ 230,000					
Collaboration And License Agreement [Member] | Takeda [Member] | Category One Programs [Member]							
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]							

Percentage of global costs and potential profits sharing ratio		50.00%						
Collaboration and License Agreement Date	Oct. 15, 2021							
Collaboration revenue recognized			600		$ 1,300	800	$ 2,000	129,000
Collaboration and license agreement, deferred revenue			$ 70,500	71,300		$ 70,500	$ 71,300	$ 70,500
Collaboration And License Agreement [Member] | Takeda [Member] | Category Two Programs [Member]								
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]								
Fund receivable for research and preclinical activities		$ 60,000						
Research term under collaboration and license agreement		4 years						
Maximum targets for preclinical programs | Target		6						
Option to reach maximum targets for preclinical programs						any one time		
Collaboration-budgeted research and preclinical expenses	$ 22,500							
Collaboration and Share Purchase Agreements [Member] | Takeda [Member]								
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]								
Shares issued under equity agreement | shares		1,096,892						
Purchase price per share | $ / shares		$ 54.70						
Net proceeds from sale of ordinary shares after deducting commissions and offering expenses		$ 60,000						
Equity investment agreement official closure month and year		2018-04						
C9-ALS/FTD Program [Member] | Takeda [Member]								
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]								
Revenue from termination of collaborative arrangement				$ 9,900	$ 28,000			
Collaborative Arrangement Transaction Statement Of Income Or Comprehensive Income Extensible Enumeration Not Disclosed Flag				true				

Developmental Milestone related to HD Category One Program, Which Pertained to Completion of New, Non-Clinical Study of WVE-003 in Non-Human Primates or NHPs [Member] | Takeda [Member]	
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]	
Revenue from termination of collaborative arrangement	$ 7,000

Collaboration Agreements - Summary Of Allocation of The Total Transaction Price (Details) - GSK Collaboration Agreement [Member] $ in Thousands	Jun. 30, 2024 USD ($)	
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]		
Transaction Price Allocated	$ 189,003	
Transaction Price Unsatisfied	91,321	[1]
AATD Collaboration [Member]		
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]		
Transaction Price Allocated	156,778	
Transaction Price Unsatisfied	62,230	[1]
Discovery Research Collaboration [Member]		
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]		
Transaction Price Allocated	20,225	
Transaction Price Unsatisfied	17,271	[1]
GSK Collaboration Program [Member]		
Collaborative Arrangements And Noncollaborative Arrangement Transactions [Line Items]		
Transaction Price Allocated	12,000	
Transaction Price Unsatisfied	$ 11,820	[1]

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

Net Loss Per Ordinary Share - Additional Information (Details) - Pre Funded Warrants [Member]	6 Months Ended Jun. 30, 2024 $ / shares shares
Class of Warrant or Right [Line Items]	
Pre-funded warrant outstanding | shares	7,093,656
Warrant Exercise Price Per Share | $ / shares	$ 0.0001
Minimum percentage of combined voting power of securities outstanding immediate effect of exercise	19.99%

Net Loss Per Ordinary Share - Anti-Dilutive Shares Excluded from Calculation of Diluted Net Loss Per Ordinary Share (Detail) - shares	6 Months Ended	
	Jun. 30, 2024	Jun. 30, 2023
Options to Purchase Ordinary Shares [Member]		
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]		
Anti-dilutive shares excluded from computation of diluted earnings	20,574,934	14,176,822
RSUs [Member]		
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]		
Anti-dilutive shares excluded from computation of diluted earnings	660,750	626,465
Series A Preferred Shares [Member]		
Antidilutive Securities Excluded from Computation of Earnings Per Share [Line Items]		
Anti-dilutive shares excluded from computation of diluted earnings	3,901,348	3,901,348

Income Taxes - Additional Information (Detail) - USD ($) $ in Thousands	3 Months Ended		6 Months Ended	
	Jun. 30, 2024	Jun. 30, 2023	Jun. 30, 2024	Jun. 30, 2023
Income Tax Disclosure [Abstract]				
Income tax provision	$ 0	$ 0	$ 0	$ 0

Related Party Transactions - Additional Information (Detail) - USD ($)	1 Months Ended		3 Months Ended	6 Months Ended	15 Months Ended
	Apr. 30, 2023	Oct. 31, 2022	Jun. 30, 2024	Jun. 30, 2024	Jun. 30, 2024
Scientific Advisor [Member] | Consulting Agreement [Member]					
Related Party Transaction [Line Items]					
Consulting agreement termination notice period				14 days	
Consulting service expenses				$ 13,000	
Scientific Advisor [Member] | Consulting Agreement [Member] | Service Period of October 1, 2022 Through December 31, 2024 [Member]					
Related Party Transaction [Line Items]					
Non-qualified share option granted for service		163,467			
Shin Nippon Biomedical Laboratories Ltd [Member]					
Related Party Transaction [Line Items]					
Contract research services	$ 2,800,000				
Payments related to contract research services.			$ 5,000	$ 5,000	$ 1,400,000