UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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

OR

☐ **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: 001-39979

VOR BIOPHARMA INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**81-1591163**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
100 Cambridgepark Drive, Suite 101 Cambridge, Massachusetts	**02140**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (617) 655-6580

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	VOR	Nasdaq Global Select 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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

Number of shares of the registrant's Common Stock outstanding as of August 2, 2024 was 68,398,826.

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Note Regarding Company References

Throughout this Quarterly Report on Form 10-Q, the "Company," "Vor," "Vor Bio," "Vor Biopharma Inc.," "we," "us," and "our," except where the context requires otherwise, refer to Vor Biopharma Inc. and its consolidated subsidiary, and "our board of directors" refers to the board of directors of Vor Biopharma Inc.

Special Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management, are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "might," "intend," "target," "ongoing," "project," "estimate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions intended to identify statements about the future. These statements speak only as of the date of this Quarterly Report on Form 10-Q and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements include, without limitation, statements about:

- the timing, progress and results of our preclinical studies and clinical trials of our product candidates, including statements regarding the timing and pace of initiation, enrollment and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and plans with respect to our research and development programs;
- the timing and success of our in-house or third-party clinical manufacturing capabilities and efforts;
- the timing of any submission of filings for regulatory approval of, and our ability to obtain and maintain regulatory approvals for, our product candidates for any indication;
- our ability to identify patients with the diseases treated by our product candidates, and to enroll patients in trials;
- our expectations regarding the market acceptance and opportunity for and clinical utility of our product candidates, if approved for commercial use;
- our expectations regarding the scope of any approved indication for any product candidate;
- our ability to successfully commercialize our product candidates;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements, our need for or ability to obtain additional funding and our ability to continue as a going concern;
- our ability to establish or maintain collaborations or strategic relationships;
- our ability to identify, recruit and retain key personnel, including executive officers and members of management;
- our reliance upon intellectual property licensed from third parties and our ability to obtain such licenses on commercially reasonable terms or at all;
- our ability to protect and enforce our intellectual property position for our product candidates, and the scope of such protection;
- our financial performance;
- the period over which we estimate our existing cash, cash equivalents and marketable securities will be sufficient to fund our future operating expenses and capital expenditure requirements;
- our competitive position and the development of and projections relating to our competitors or our industry;
- the impact of laws and regulations; and
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act of 2012.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date of this Quarterly Report on Form 10-Q, and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. You should refer to the "Summary Risk Factors" and "Risk Factors" sections in our Annual Report on Form 10-K for the year ended December 31, 2023 for a discussion of material factors that could cause actual results or events to differ materially from the forward-looking statements that we make.

This Quarterly Report on Form 10-Q includes statistical and other industry and market data, which we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys, and studies conducted by third parties. Industry publications, studies, and surveys generally state that they have been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe that each of these studies and publications is reliable, we have not independently verified market and industry data from third-party sources. While we believe our internal company research is reliable and the market definitions are appropriate, neither such research nor these definitions have been verified by any independent source.

All brand names or trademarks appearing in this Quarterly Report on Form 10-Q, including Mylotarg, are the property of their respective owners.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited).

VOR BIOPHARMA INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

(in thousands, except share and per share amounts)	June 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 76,076	$ 31,360
Marketable securities	9,862	105,815
Prepaid expenses	4,046	3,153
Other current assets	272	475
Total current assets	90,256	140,803
Restricted cash equivalents	2,413	2,413
Property and equipment, net	8,291	10,050
Operating lease right-of-use assets	37,565	40,048
Other assets	3,063	4,812
Total assets	$ 141,588	$ 198,126
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,007	$ 815
Accrued liabilities	7,656	10,877
Operating lease liabilities	4,113	3,830
Other current liabilities	25	50
Total current liabilities	13,801	15,572
Long-term liabilities:		
Operating lease liabilities—non-current	29,707	31,830
Total liabilities	43,508	47,402
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized as of June 30, 2024 and December 31, 2023; 0 shares issued and outstanding as of June 30, 2024 and December 31, 2023	—	—
Common stock, $0.0001 par value; 400,000,000 shares authorized as of June 30, 2024 and December 31, 2023; 68,363,034, and 67,901,610 shares issued and 68,357,884 and 67,891,311 shares outstanding as of June 30, 2024 and December 31, 2023, respectively	7	7
Additional paid-in capital	496,866	490,874
Accumulated other comprehensive loss	(70)	(77)
Accumulated deficit	(398,723)	(340,080)
Total stockholders' equity	98,080	150,724
Total liabilities and stockholders' equity	$ 141,588	$ 198,126

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

VOR BIOPHARMA INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(UNAUDITED)

(in thousands, except share and per share amounts)	Three Months Ended June 30, 2024	Three Months Ended June 30, 2023	Six Months Ended June 30, 2024	Six Months Ended June 30, 2023
Operating expenses:				
Research and development	$ 21,823	$ 23,897	$ 46,145	$ 45,812
General and administrative	7,212	8,277	15,216	16,784
Total operating expenses	$ 29,035	$ 32,174	$ 61,361	$ 62,596
Loss from operations	$ (29,035)	$ (32,174)	$ (61,361)	$ (62,596)
Other income:				
Interest income	1,196	2,195	2,718	4,184
Total other income	1,196	2,195	2,718	4,184
Net loss	$ (27,839)	$ (29,979)	$ (58,643)	$ (58,412)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.41)	$ (0.45)	$ (0.86)	$ (0.88)
Weighted-average common shares outstanding, basic and diluted	68,299,170	67,033,150	68,165,068	66,651,547
Other comprehensive income (loss):				
Unrealized gain (loss) on available for sale marketable securities	17	(262)	7	334
Total other comprehensive income (loss)	17	(262)	7	334
Comprehensive loss	$ (27,822)	$ (30,241)	$ (58,636)	$ (58,078)

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

VOR BIOPHARMA INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(UNAUDITED)

(in thousands, except share amounts)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated other comprehensive loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2023	67,891,311	$ 7	$ 490,874	$ (77)	$ (340,080)	$ 150,724
Issuance of common stock upon vesting of RSUs, net of shares withheld for taxes, and exercise of stock options	184,998	—	(169)	—	—	(169)
Issuance of common stock from at-the-market sales agreement	139,462	—	213			213
Stock-based compensation expense	—	—	3,081	—	—	3,081
Other comprehensive loss				(10)		(10)
Net loss	—	—	—	—	(30,804)	(30,804)
Balance at March 31, 2024	68,215,771	$ 7	$ 493,999	$ (87)	$ (370,884)	$ 123,035
Issuance of shares upon vesting of RSUs, net of shares withheld for taxes, exercise of stock options, and issuance of common stock under ESPP	142,113	—	74	—	—	74
Stock-based compensation expense	—	—	2,793	—	—	2,793
Other comprehensive income	—	—	—	17	—	17
Net loss	—	—	—	—	(27,839)	(27,839)
Balance at June 30, 2024	68,357,884	$ 7	$ 496,866	$ (70)	$ (398,723)	$ 98,080

(in thousands, except share amounts)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated other comprehensive loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2022	65,996,138	$ 7	$ 473,587	$ (770)	$ (222,217)	$ 250,607
Issuance of common stock upon vesting of RSUs, net of shares withheld for taxes, and exercise of stock options	205,485	—	(340)	—	—	(340)
Issuance of common stock from at-the-market sales agreement	733,274	—	3,717	—	—	3,717
Stock-based compensation expense	—	—	4,068	—	—	4,068
Other comprehensive income	—	—	—	596	—	596
Net loss	—	—	—	—	(28,433)	(28,433)
Balance at March 31, 2023	66,934,897	$ 7	$ 481,032	$ (174)	$ (250,650)	$ 230,215
Issuance of shares upon vesting of RSUs, net of shares withheld for taxes, exercise of stock options, and issuance of common stock under ESPP	381,775	—	(317)	—	—	(317)
Issuance of common stock from open market sales agreement	116,888	—	555	—	—	555
Stock-based compensation expense	—	—	4,238	—	—	4,238
Other comprehensive loss	—	—	—	(262)	—	(262)
Net loss	—	—	—	—	(29,979)	(29,979)
Balance at June 30, 2023	67,433,560	$ 7	$ 485,508	$ (436)	$ (280,629)	$ 204,450

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

VOR BIOPHARMA INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

(in thousands)	Six Months Ended June 30, 2024	2023
Cash flows from operating activities		
Net loss	$ (58,643)	$ (58,412)
Adjustments to reconcile net loss to net cash used in operations:		
Depreciation expense	1,812	1,707
Non-cash lease expense	2,483	2,317
Stock-based compensation	5,874	8,306
Interest amortization on marketable securities	(1,126)	(2,447)
Changes in operating assets and liabilities:		
Operating lease liabilities	(1,840)	(1,729)
Prepaid expenses and other current assets	(690)	2,214
Accounts payable and accrued liabilities	(1,931)	19
Other assets	1,749	(343)
Net cash used in operating activities	(52,312)	(48,368)
Cash flow from investing activities		
Purchases of marketable securities	(9,914)	(58,370)
Proceeds from maturities of marketable securities	107,000	79,000
Purchases of property and equipment	(123)	(493)
Net cash provided by investing activities	96,963	20,137
Cash flow from financing activities		
Payment of issuance costs related to underwritten public offering and concurrent private placement	—	(717)
Proceeds from the issuance of common stock from at-the-market sales agreement, net of issuance costs	186	4,201
Repurchases of shares for tax withholdings upon vesting of restricted stock unit awards	(233)	(945)
Proceeds from stock option exercises and the issuance of shares under ESPP	112	198
Net cash provided by financing activities	65	2,737
Net increase (decrease) in cash, cash equivalents and restricted cash equivalents	44,716	(25,494)
Cash, cash equivalents and restricted cash equivalents, beginning of period	$ 33,773	$ 60,119
Cash, cash equivalents and restricted cash equivalents, end of period	$ 78,489	$ 34,625
Supplemental disclosure of non-cash activities		
Right-of-use assets obtained in exchange for lease obligations	$ —	$ 107
Financing costs associated with the sale of common stock included in accounts payable and accrued expenses	$ —	$ 24

A reconciliation of the cash, cash equivalents and restricted cash equivalents reported within the condensed consolidated balance sheets that sum to the total of the same amounts shown in the statements of cash flows is as follows:

(in thousands)	For the Six Months Ended June 30, 2024	2023
Cash and cash equivalents	$ 76,076	$ 32,212
Restricted cash equivalents	2,413	2,413
Total cash, cash equivalents and restricted cash equivalents as shown on the statements of cash flows	$ 78,489	$ 34,625

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

VOR BIOPHARMA INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. Nature of the Business

Vor Biopharma Inc. (the "Company") is a clinical-stage cell and genome engineering company that combines a novel patient engineering approach with targeted therapies to provide a single company solution for patients suffering from hematological malignancies. The Company's proprietary platform leverages its expertise in hematopoietic stem cell ("HSC") biology, genome engineering and targeted therapy development to genetically modify HSCs to remove surface targets expressed by cancer cells. The Company is headquartered in Cambridge, Massachusetts. The Company was incorporated on December 30, 2015.

Risks and Uncertainties

The Company is subject to a number of risks common to development stage companies in the biotechnology industry, including, but not limited to, risks of failure of preclinical studies and clinical trials, dependence on key personnel, protection of proprietary technology, reliance on third party organizations, risks of obtaining regulatory approval for any product candidate that it may develop, development by competitors of technological innovations, compliance with government regulations, adverse macroeconomic conditions and the need to obtain additional financing.

The Company anticipates that it will continue to incur significant operating losses for the next several years as it continues to develop its product candidates. As a result, the Company's continued operations are dependent on its ability to raise additional funding. If the Company is unable to obtain additional funding on a timely basis, it may be forced to significantly curtail, delay, or discontinue one or more of its planned research or development programs or be unable to expand its operations.

Liquidity and Capital Resources

As of June 30, 2024, the Company had $85.9 million of cash, cash equivalents and marketable securities and an accumulated deficit of $398.7 million. The Company anticipates that it will continue to incur significant operating losses for the next several years as it continues to develop its product candidates. As a result, the Company's continued operations are dependent on its ability to raise additional funding. Based on its current business plan and current capital resources, combined with the need to raise additional funding and the uncertainty regarding the availability of such additional funding, management has concluded that there is substantial doubt regarding the Company's ability to continue as a going concern within one year after the date these condensed consolidated financial statements are issued. Management's plans to alleviate the conditions that raise substantial doubt regarding the Company's ability to continue as a going concern include obtaining additional funding through equity or debt offerings and/or pursuant to collaboration or licensing arrangements. However, additional funding may not be available on terms acceptable to the Company or at all. The Company may also seek to reduce current spending requirements where necessary. Management has concluded the likelihood that its plans to successfully obtain sufficient additional funding from one or more of these sources, or adequately reduce expenditures, while reasonably possible, is less than probable.

If, for any reason, the Company utilizes its capital resources more quickly than anticipated or is unable to obtain additional funding on a timely basis, it may be required to revise its business plan and strategy. This may result in the Company significantly curtailing, delaying or discontinuing one or more of its research and development programs. As a result, the Company's business, financial condition, and results of operations could be materially affected. The accompanying condensed consolidated financial statements do not include any adjustments to the carrying amounts and classification of assets and liabilities that may be necessary if the Company were unable to continue as a going concern.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Certain comparative amounts have been reclassified to conform to the current period presentation, including the presentation of non-cash lease expense in the condensed consolidated statements of cash flows. Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") issued by the Financial Accounting Standards Board ("FASB").

Use of Estimates

The preparation of the condensed consolidated financial statements in conformity with GAAP requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the condensed consolidated financial statements and the reported amount of expenses during the reporting period. Actual results could differ from those estimates. Management considers many factors in selecting appropriate financial accounting policies in developing the estimates and assumptions that are used in the preparation of the condensed consolidated financial statements. Management must apply significant judgment in this process. Management's estimation process often may yield a range of potentially reasonable estimates and management must select an amount that falls within that range of reasonable estimates. Estimates are used in the following areas, among others: accrued expenses and research and development expenses.

Unaudited Interim Financial Information

The condensed consolidated financial statements of the Company included herein have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"). The unaudited condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany transactions and balances have been eliminated in consolidation. In the opinion of management, the information furnished reflects all adjustments, all of which are of a normal and recurring nature, necessary for a fair presentation of the results for the reported interim periods. The results of operations for interim periods are not necessarily indicative of results to be expected for the full year or any other interim period.

The accompanying condensed consolidated balance sheet as of December 31, 2023 has been derived from the Company's audited consolidated financial statements for the year ended December 31, 2023. Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to rules and regulations. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These unaudited interim condensed consolidated financial statements should be read in conjunction with the audited annual consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2023 (the "2023 Annual Report").

During the six months ended June 30, 2024, there have been no changes to the Company's significant accounting policies as described in the 2023 Annual Report.

3. Marketable Securities

The amortized cost and estimated fair value of marketable securities, by contractual maturity, are as follows:

	June 30, 2024			
(in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Maturing after one year through five years				
U.S. Treasuries	9,932	—	(70)	9,862
Total	$ 9,932	$ —	$ (70)	$ 9,862

	December 31, 2023			
(in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Maturing in one year or less				
U.S. Treasury Bill	$ 8,806	$ 6	$ —	$ 8,812
U.S. Treasuries	97,086	12	(95)	97,003
Total	$ 105,892	$ 18	$ (95)	$ 105,815

The following tables summarize the fair value and gross unrealized losses aggregated by category and the length of time that individual securities have been in an unrealized loss position:

	June 30, 2024					
	Less than twelve months		Greater than twelve months		Total	
(in thousands)	Fair value	Unrealized loss	Fair value	Unrealized loss	Fair value	Unrealized loss
U.S. Treasuries	9,862	(70)	—	—	9,862	(70)
Total	$ 9,862	$ (70)	$ —	$ —	$ 9,862	$ (70)

(in thousands)	December 31, 2023					
	Less than twelve months		Greater than twelve months		Total	
	Fair value	Unrealized loss	Fair value	Unrealized loss	Fair value	Unrealized loss
U.S. Treasuries	$ —	$ —	$ 53,447	$ (95)	$ 53,447	$ (95)
Total	$ —	$ —	$ 53,447	$ (95)	$ 53,447	$ (95)

The Company holds investment grade marketable securities considered to be in an unrealized loss position. Although these marketable securities are held at an unrealized loss position at June 30, 2024, the Company does not intend to sell the marketable securities prior to the value of the securities being recovered, and the Company has concluded that it is more likely than not that the marketable securities cost basis values will be recovered prior to sale of the securities and that there are no conditions or events that might require the Company to sell the securities before recovery of the cost basis occurs. Further, the Company did not record any impairments to marketable securities or reserves for credit losses related to its marketable debt securities during the periods presented.

4. Fair Value Measurements

The following tables present information about the Company's financial assets and liabilities measured at fair value on a recurring basis:

(in thousands)	June 30, 2024			
	Level 1	Level 2	Level 3	Total
Cash equivalents				
Money market funds	$ 75,890	$ —	$ —	$ 75,890
Marketable securities				
U.S. Treasuries	—	9,862	—	9,862
Total marketable securities	—	9,862	—	9,862
Restricted cash equivalents				
Money market funds	2,413	—	—	2,413
Total	$ 78,303	$ 9,862	$ —	$ 88,165

(in thousands)	December 31, 2023			
	Level 1	Level 2	Level 3	Total
Cash equivalents				
Money market funds	$ 31,164	$ —	$ —	$ 31,164
Marketable securities				
U.S. Treasury Bill	8,812	—	—	8,812
U.S. Treasuries	—	97,003	—	97,003
Total marketable securities	8,812	97,003	—	105,815
Restricted cash equivalents				
Money market funds	2,413	—	—	2,413
Total	$ 42,389	$ 97,003	$ —	$ 139,392

The fair value of the Company's cash equivalents and restricted cash equivalents is based on quoted market prices in active markets with no valuation adjustment. The fair value of marketable securities was determined based on observable market inputs. There were no transfers between levels during the six months ended June 30, 2024.

Prepaid expenses, accounts payable and accrued expenses are stated at their respective historical carrying values, which approximate fair value due to their short-term nature.

5. Property and Equipment, Net

Property and equipment, net consisted of the following:

(in thousands)	June 30, 2024	December 31, 2023
Laboratory equipment	$ 10,090	$ 10,028
Manufacturing equipment	7,065	6,936
Computer equipment	432	432
Furniture, fixtures and other	606	599
Construction in progress	—	146
Total	18,193	18,141
Less: Accumulated depreciation	(9,902)	(8,091)
Property and equipment, net	$ 8,291	$ 10,050

Depreciation expense for the three and six months ended June 30, 2024 was $0.9 million and $1.8 million, respectively, and for the three and six months ended June 30, 2023 was $0.9 million and $1.7 million, respectively.

6. Accrued Liabilities

Accrued liabilities consisted of the following:

(in thousands)	June 30, 2024	December 31, 2023
Employee-related expenses	$ 3,408	$ 5,962
Professional fees	791	1,245
Clinical expenses	1,999	1,495
Manufacturing expenses	564	842
Research and development expenses	665	1,059
Other	229	274
Total accrued liabilities	$ 7,656	$ 10,877

7. Stock-Based Compensation

2023 Inducement Plan

As of June 30, 2024, the Company had 3,045,937 shares of its common stock available for future issuance under the 2023 Inducement Plan.

2021 Equity Incentive Plan

As of June 30, 2024, the Company had 2,340,825 shares of its common stock available for future issuance under its 2021 Equity Incentive Plan.

Stock Options

The Company's stock options generally vest over 48 months with 25% vesting after one year followed by ratable monthly vesting over the remaining three years and have a contractual term of 10 years. The weighted-average assumptions used principally in determining the fair value of options granted were as follows:

	Six Months Ended June 30,	
	2024	2023
Expected term (in years)	5.9	6.0
Expected volatility	89.8%	81.9%
Risk-free interest rate	4.2%	3.7%
Dividend yield	—	—

During the six months ended June 30, 2024 and 2023, the Company granted stock options to purchase 1,722,725 shares and 2,108,219 shares of its common stock, respectively, with a weighted-average grant-date fair value of $1.74 and $3.76 per share,

respectively. As of June 30, 2024, total unrecognized compensation expense related to stock options was $11.0 million, which is expected to be recognized over a weighted-average period of 2.5 years.

As of June 30, 2024, options for 5,150 shares of Company common stock with a weighted-average exercise price of $4.90 were exercised and unvested. An immaterial amount of underlying proceeds from the unvested exercises is recorded in other current liabilities on the condensed consolidated balance sheet.

Restricted Stock Units

During the six months ended June 30, 2024 and 2023, the Company granted 1,119,149 restricted stock units and 645,360 restricted stock units, respectively, with a weighted-average grant date fair value of $2.38 and $5.55 per share, respectively. As of June 30, 2024, total unrecognized compensation expense related to restricted stock units was $4.6 million, which is expected to be recognized over a weighted-average period of 2.3 years.

Employee Stock Purchase Plan

As of June 30, 2024, the Company had 1,894,294 shares of its common stock available for issuance under its Employee Stock Purchase Plan ("ESPP").

During the six months ended June 30, 2024, the Company issued 74,326 shares with a weighted-average purchase price of $1.48 under the ESPP, which resulted in an immaterial amount of compensation expense. During the six months ended June 30, 2023, the Company issued 44,977 shares with a weighted-average purchase price of $3.76 under the ESPP, which resulted in an immaterial amount of compensation expense.

Stock-Based Compensation

Stock-based compensation expense was allocated as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Research and development	$ 1,272	$ 2,463	$ 2,677	$ 4,817
General and administrative	1,521	1,775	3,197	3,489
Total stock-based compensation expense	$ 2,793	$ 4,238	$ 5,874	$ 8,306

8. Leases

Cambridgepark Lease Amendments

On June 15, 2021, the Company entered into the first lease amendment ("First Lease Amendment") and second lease amendment ("Second Lease Amendment" and, together with the First Lease Amendment, the "Lease Amendments") with PPF Off 100 Cambridge Park Drive, LLC (the "Landlord"). The Lease Amendments amended the Company's lease agreement for its corporate office and laboratory facilities with the Landlord in Cambridge, Massachusetts to add additional leased space in the same building (the "Amended Cambridgepark Lease").

The First Lease Amendment and Second Lease Amendment commenced for accounting purposes on January 28, 2022 and April 29, 2022, respectively. The terms of the Lease Amendments are through September 2030 for approximately $8.4 million and $22.3 million in fixed payments for the First Lease Amendment and Second Lease Amendment, respectively. There are no options to extend the Lease Amendments.

Payments due associated with the Lease Amendments include fixed and variable payments. Variable payments relate to the Company's share of the Landlord's operating costs associated with the underlying assets and are recognized when the event on which those payments are assessed occurs. The Amended Cambridgepark Lease does not contain a residual value guarantee. The Lease Amendments term end dates are coterminous with the existing lease agreement. In conjunction with the Lease Amendments, the Company was required to increase its irrevocable standby letter of credit to $2.4 million for the benefit of the Landlord, which has been secured by money market investments and is presented as restricted cash equivalents.

For further information regarding the Company's Cambridgepark lease, please see Note 9 to the consolidated financial statements included in the 2023 Annual Report.

The elements of lease expense were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2024	2023	2024	2023
Operating lease cost	$ 1,951	$ 1,948	$ 3,902	$ 3,901
Variable lease cost	679	661	1,209	1,258
Total lease cost	$ 2,630	$ 2,609	$ 5,111	$ 5,159

Amounts reported in the condensed consolidated balance sheets and the weighted-average lease term and discount rate information were as follows:

(in thousands except weighted-average amounts)	June 30, 2024	December 31, 2023
Assets		
Operating lease right-of-use assets	$ 37,565	$ 40,048
Liabilities		
Operating lease liabilities, current	$ 4,113	$ 3,830
Operating lease liabilities, non-current	29,707	31,830
Total lease liabilities	$ 33,820	$ 35,660
Weighted-Average Lease Term and Discount Rate		
Weighted-average remaining lease term (years)	6.2	6.7
Weighted-average discount rate	8.2%	8.2%

The following table represents other lease activity:

	Six Months Ended June 30,	
(in thousands)	2024	2023
Other Information		
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows for operating leases	$ 3,258	$ 3,312
Right-of-use assets obtained in exchange for lease obligations	$ —	$ 107

9. Significant Agreements

Since December 31, 2023, there have been no material changes to the key terms of the Company's license agreements. For further information regarding the Company's existing license agreements, please see Note 10 to the consolidated financial statements included in the 2023 Annual Report.

10. Net Loss Per Share

The following table sets forth the computation of the Company's basic and diluted net loss per share for the three and six months ended June 30, 2024 and 2023:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share and per share amounts)	2024	2023	2024	2023
Numerator:				
Net loss attributable to common stockholders	$ (27,839)	$ (29,979)	$ (58,643)	$ (58,412)
Denominator:				
Weighted-average number of common shares outstanding, basic and diluted	68,299,170	67,033,150	68,165,068	66,651,547
Net loss per share attributable to common stockholders, basic and diluted	$ (0.41)	$ (0.45)	$ (0.86)	$ (0.88)

The Company's potentially dilutive securities were stock options, unvested restricted stock and restricted stock units. Based on the amounts outstanding as of June 30, 2024 and 2023, the Company excluded the following potential common shares from the

computation of diluted net loss per share attributable to common stockholders because including them would have had an anti-dilutive effect:

	As of June 30,	
	2024	2023
Options to purchase common stock	9,365,552	8,368,063
Unvested restricted stock	5,150	30,704
Restricted stock units	1,643,576	1,324,361

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

You should read the following discussion and analysis of our financial condition and results of operations together with the unaudited condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q and with the consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2023 (the "2023 Annual Report"). Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report, 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 section titled "Risk Factors" in our 2023 Annual Report and in other reports we have filed or may file with the SEC, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Vor Bio is a clinical-stage company harnessing the power of cell and genome engineering to develop potentially transformative therapies in acute myeloid leukemia ("AML"), a devastating disease with few treatment options. AML is the most common type of acute leukemia in adults and one of the deadliest and most aggressive blood cancers, affecting approximately 20,000 newly diagnosed patients each year in the United States.

Leveraging our expertise in HSC biology and genome engineering, we genetically modify HSCs to remove surface targets and then provide these cells as hematopoietic cell transplants ("HCTs") to patients. Once these cells engraft into bone marrow, the patient's healthy cells are shielded because they no longer express the surface target, leaving only the cancerous cells exposed. We believe this will unlock the potential of targeted therapies to selectively destroy cancerous cells while shielding healthy cells. As a result, our shielded transplants are designed to limit the on-target toxicities associated with these targeted therapies, thereby enhancing their utility, and broadening their applicability. We intend to pair our shielded transplants with targeted therapeutics such as antibody drug conjugates ("ADCs") or VCAR33^{ALLO}, a chimeric antigen receptor ("CAR")-T therapy designed to target CD33, to bring potentially transformative outcomes to patients and establish a new standard of care Treatment System in AML.

We are developing trem-cel, a shielded transplant, which we believe has the potential to transform the treatment for AML and other blood cancers. Trem-cel is created by genetically modifying healthy donor HSCs in order to remove the CD33 surface target. We intend to develop trem-cel as a HCT product candidate to replace the standard of care in transplant settings. We are actively enrolling and treating patients in VBP101, our first-in-human Phase 1/2a trial of trem-cel in combination with Mylotarg. We released clinical data for this trial most recently in December 2023. The data showed that primary neutrophil engraftment occurred in all eight patients treated with trem-cel. Three out of three patients treated with Mylotarg experienced hematologic protection from deep cytopenias through repeat doses, suggesting that trem-cel transplants shielded patients' healthy cells from the on-target toxicity typically seen with Mylotarg treatment. We expect to release additional engraftment and hematologic protection data and additional Mylotarg pharmacokinetic analyses in the second half of 2024. If successful, this trial will provide important validating evidence of the potential of trem-cel and our broader approach.

VCAR33^{ALLO} is manufactured from lymphocytes collected from the patient's original transplant donor, generating a CAR-T cell product that is exactly matched to the recipient's engrafted blood system. By using healthy transplant donor cells as the starting material to produce VCAR33^{ALLO}, the CAR-T cells have a more stem-like phenotype, leading to greater potential for expansion, persistence, and anti-leukemia activity compared to a product derived from a patient's own lymphocytes. In January 2024 we dosed the first patient with VCAR33^{ALLO} in VBP301 and have treated multiple additional patients through the first half of 2024. We expect to report initial data in the second half of 2024.

We believe that the combination of trem-cel followed by treatment with VCAR33^{ALLO} in the post-transplant setting, which we refer to as the trem-cel + VCAR33 Treatment System, may transform patient outcomes and offer the potential for cures for patients that have limited treatment options. The trem-cel + VCAR33 Treatment System would utilize the same healthy donor allogenic cell source for both trem-cel and VCAR33^{ALLO}. We plan to collect initial data on trem-cel from the VBP101 clinical trial and initial clinical data from the VCAR33^{ALLO} program prior to IND submission for the trem-cel + VCAR33 Treatment System. However, the VBP301 protocol allows for patients who have received a trem-cel transplant on the VBP101 study to enroll in VBP301 and receive VCAR33^{ALLO}. This may provide valuable early insights into the potential of the trem-cel + VCAR33 Treatment System to enable a more potent therapy and durable responses post-transplant.

We operate an in-house clinical manufacturing facility in Cambridge, Massachusetts to support development of our shielded transplants and CAR-T therapeutic candidates for patients with blood cancers. While this facility is now operational, we continue to rely on third-party contract manufacturers for our required raw materials, manufacturing devices, active pharmaceutical ingredients and finished product for our research and clinical manufacturing. Since our inception in December 2015, we have devoted

substantially all of our resources to raising capital, organizing and staffing our company, business and scientific planning, conducting discovery and research activities, acquiring or discovering product candidates, establishing and protecting our intellectual property portfolio, developing and progressing our product candidates and preparing for clinical trials, establishing arrangements with third parties for the manufacture of our product candidates and component materials, building out our internal clinical manufacturing facility, and providing general and administrative support for these operations. We do not have any product candidates approved for sale and have not generated any revenue from product sales. Through June 30, 2024, we funded our operations primarily through the sale of equity securities and debt financings and have received aggregate net proceeds from these transactions of approximately $464.3 million.

We have incurred significant operating losses since inception, including net losses of $27.8 million and $58.6 million, respectively, for the three and six months ended June 30, 2024, and $117.9 million for the year ended December 31, 2023. As of June 30, 2024, we had an accumulated deficit of $398.7 million.

As of June 30, 2024, we had cash, cash equivalents and marketable securities of $85.9 million. We expect that our cash, cash equivalents and marketable securities at June 30, 2024 will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2025.

Critical Accounting Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with United States generally accepted accounting principles. The preparation of our condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, costs, and expenses, and the disclosure of contingent assets and liabilities in our condensed consolidated financial statements. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the condensed consolidated financial statements prospectively from the date of change in estimates. There have been no material changes to our critical accounting estimates from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2023 Annual Report.

Financial Operations Overview

Revenue

We have not generated any revenue since our inception and do not expect to generate any revenue from the sale of products in the near future, if at all. If our development efforts for our product candidates are successful and result in marketing approval, or if we enter into collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from such agreements.

Expenses

Research and Development Expenses

Research and development expenses consist primarily of external and internal expenses incurred in connection with our research and development activities, including our drug discovery efforts and the development of our product candidates. External expenses include:

- research and development expenses incurred under agreements with CROs and other scientific development services;
- costs of consultants, including their fees and related travel expenses;
- costs related to compliance with quality and regulatory requirements;
- costs of laboratory supplies and acquiring and developing preclinical and clinical trial materials, including expenses associated with our CMOs; and
- payments made under third party licensing agreements.

Internal expenses include:

- personnel-related expenses, including salaries, bonuses, benefits and stock-based compensation expenses, for employees involved in research and development activities; and
- facilities, depreciation and other allocated expenses, which include direct and allocated expenses for rent, insurance, and other internal operating costs, and internal manufacturing expenses.

We expense 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 condensed consolidated financial statements as prepaid expenses or accrued research and development expenses. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized, even when there is no alternative future use for the research and development. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

A significant portion of our research and development costs have been external costs, which we track by stage of development, preclinical or clinical. However we do not track our internal research and development expenses on a program specific basis because these costs are deployed across multiple projects and, as such, are not separately classified.

Research and development activities are central to our business model. We expect that our research and development expenses will increase significantly for the foreseeable future as we continue to identify and develop product candidates, particularly as more of our product candidates move into clinical development and later stages of clinical development.

The successful development of our product candidates in the future is highly uncertain. Therefore, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development and commercialization of any of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from the sale of our product candidates, if approved. This is due to the numerous risks and uncertainties associated with developing product candidates, many of which are outside of our control, including the uncertainty of:

- the timing and progress of preclinical and clinical development activities;
- the number and scope of preclinical and clinical programs we decide to pursue;
- our ability to maintain our current research and development programs and to establish new ones;
- establishing an appropriate safety profile with IND-enabling studies;
- the number of sites and patients included in the clinical trials;
- the countries in which the clinical trials are conducted;
- per patient trial costs;
- successful patient enrollment in, and the initiation of, clinical trials, as well as drop out or discontinuation rates or complications with donors;
- the successful completion of clinical trials with safety, tolerability and efficacy profiles that are satisfactory to the FDA or any comparable foreign regulatory authority;
- the number of trials required for regulatory approval;
- the timing, receipt and terms of any regulatory approvals from applicable regulatory authorities;
- our ability to establish new licensing or collaboration arrangements;
- the performance of our current and future collaborators, if any;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- significant and changing government regulation and regulatory guidance;
- the impact of any business interruptions to our operations or to those of the third parties with whom we work;
- obtaining, maintaining, defending and enforcing patent claims and other intellectual property rights;
- launching commercial sales of our product candidates, if approved, whether alone or in collaboration with others; and
- maintaining a continued acceptable safety profile of the product candidates following approval.

Any changes in the outcome of any of these variables could mean a significant change in the costs and timing associated with the development of our product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related costs, including salaries, bonuses, benefits and stock-based compensation expenses for employees involved in our executive, finance, corporate, business development and administrative functions, as well as expenses for outside professional services, including legal, audit, accounting and tax-related services and other consulting fees, facility-related expenses, which include depreciation costs and other allocated expenses for rent and maintenance of facilities, insurance costs, recruiting costs, travel expenses and other general administrative expenses.

We expect that our general and administrative expenses will increase as our business expands and we hire additional personnel to support our continued research and development activities, including our clinical programs.

Other Income

Interest Income

Interest income consists of interest income earned on our cash, cash equivalents and marketable securities held in financial institutions.

Results of Operations

Comparison of Three and Six Months Ended June 30, 2024 and 2023

The following table summarizes our results of operations for the periods indicated (amounts in thousands):

	Three Months Ended June 30,		
	2024	2023	Change
Operating expenses:			
Research and development	$ 21,823	$ 23,897	$ (2,074)
General and administrative	7,212	8,277	(1,065)
Total operating expenses	29,035	32,174	(3,139)
Loss from operations	(29,035)	(32,174)	3,139
Other income:			
Interest income	1,196	2,195	(999)
Total other income	1,196	2,195	(999)
Net loss	$ (27,839)	$ (29,979)	$ 2,140

	Six Months Ended June 30,		
	2024	2023	Change
Operating expenses:			
Research and development	$ 46,145	$ 45,812	$ 333
General and administrative	15,216	16,784	(1,568)
Total operating expenses	61,361	62,596	(1,235)
Loss from operations	(61,361)	(62,596)	1,235
Other income:			
Interest income	2,718	4,184	(1,466)
Total other income	2,718	4,184	(1,466)
Net loss	$ (58,643)	$ (58,412)	$ (231)

Research and Development Expenses

The following table summarizes our research and development expenses incurred for the periods indicated (amounts in thousands):

	Three Months Ended June 30,		
	2024	2023	Change
External expenses	$ 7,552	$ 10,762	$ (3,210)
Internal expenses:			
Personnel expenses (including stock-based compensation)	9,224	9,375	(151)
Manufacturing, facilities, and other expenses	5,047	3,760	1,287
Total research and development expenses	$ 21,823	$ 23,897	$ (2,074)

	Six Months Ended June 30,		
	2024	2023	Change
External expenses	$ 16,593	$ 20,018	$ (3,425)
Internal expenses:			
Personnel expenses (including stock-based compensation)	19,793	18,423	1,370
Manufacturing, facilities, and other expenses	9,759	7,371	2,388
Total research and development expenses	$ 46,145	$ 45,812	$ 333

Research and development expenses were $21.8 million for the three months ended June 30, 2024, compared to $23.9 million for the three months ended June 30, 2023. The decrease of $2.1 million was due to timing of purchases of manufacturing starting materials for our VCAR33^{ALLO} program and a decrease in preclinical expenses, offset in part by an increase in clinical trial costs to support our trem-cel and VCAR33^{ALLO} programs.

Research and development expenses were $46.1 million for the six months ended June 30, 2024, compared to $45.8 million for the six months ended June 30, 2023. The increase of $0.3 million was primarily attributable to an increase in personnel-related costs driven by additional headcount to support our clinical and manufacturing activities and an increase in clinical trial costs to support our trem-cel and VCAR33^{ALLO} programs, offset in part by a decrease in preclinical expenses.

General and Administrative Expenses

General and administrative expenses were $7.2 million for the three months ended June 30, 2024, compared to $8.3 million for the three months ended June 30, 2023. The decrease of $1.1 million was primarily due to a decrease in consulting and legal expenses, partially offset by an increase in personnel costs.

General and administrative expenses were $15.2 million for the six months ended June 30, 2024, compared to $16.8 million for the six months ended June 30, 2023. The decrease of $1.6 million was primarily due to a decrease in consulting and legal expenses, partially offset by an increase in personnel costs.

Other Income

Other income decreased by $1.0 million during the three months ended June 30, 2024, compared to the three months ended June 30, 2023. Other income decreased by $1.5 million for the six months ended June 30, 2024, compared to the six months ended June 30, 2023. The decrease in other income in both periods was due to decreases in interest earned from our cash, cash equivalents and marketable securities as the Company held lower balances of cash, cash equivalents and marketable securities.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have not recognized any revenue and have incurred operating losses and negative cash flows from our operations. We have not yet commercialized any product and we do not expect to generate revenue from sales of any products for several years, if at all. We have funded our operations primarily through the sale of equity securities and have received aggregate net proceeds from financing transactions of approximately $464.3 million as of June 30, 2024.

In order to fund our future operations, including our planned clinical trials, on March 14, 2022, we filed a universal shelf registration statement (the “Shelf Registration Statement”), to provide for aggregate offerings of up to $350.0 million of common stock, preferred stock, debt securities, warrants or any combination thereof. As of June 30, 2024, $274.5 million remains available under this Shelf Registration Statement, including $119.8 million reserved for at-the market offerings discussed below.

At-the-Market Sales Agreement

In December 2022, we entered into a Sales Agreement with Stifel, Nicolaus & Company, Incorporated ("Stifel") as the agent (the "Stifel ATM Facility"). Pursuant to the Stifel ATM Facility, we may offer and sell shares of common stock with an aggregate value of up to $125.0 million. We will pay Stifel a commission of up to 3.0% of the gross proceeds of any common stock sold through Stifel. We sold 139,462 shares of our common stock under the Stifel ATM Facility during the six months ended June 30, 2024 at a weighted-average price per share of $2.11 for aggregate net proceeds of $0.3 million, after deducting commissions. As of June 30, 2024, $119.8 million remained available to be sold under the Stifel ATM Facility.

Cash Requirements

As of June 30, 2024, there were no material changes in our short-term and long-term cash requirements from those disclosed in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our 2023 Annual Report.

As of June 30, 2024, we had cash, cash equivalents and marketable securities of $85.9 million. We will need to raise additional capital to fund our planned future operations. However, we cannot guarantee that we will be able to obtain sufficient additional funding or that if we do obtain additional funding, that such funding will be obtainable on terms satisfactory to us.

Based on our current business plan and current capital resources, management has concluded that there is substantial doubt regarding our ability to continue as a going concern. We expect that our existing cash, cash equivalents and marketable securities at June 30, 2024 will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2025. We have based this estimate on assumptions that may prove to be wrong and we could exhaust our capital resources sooner than we expect.

We expect our expenses to increase substantially if, and as, we:

- continue research and preclinical and clinical development of our product candidates, including in particular the expenses associated with our clinical trials;
- incur both internal and third party manufacturing costs to support our preclinical studies and clinical trials of our product candidates and, if approved, their commercialization;
- seek to identify and develop additional product candidates;
- make investments in our platform, including the continuing costs of developing and maintaining our internal manufacturing capabilities;
- seek regulatory and marketing approvals for our product candidates;
- establish a sales, marketing and distribution infrastructure to commercialize any approved product candidates;
- adapt our regulatory compliance efforts to incorporate requirements to applicable marketed products;
- acquire or in-license products, product candidates, technologies;
- maintain, expand, enforce, defend and protect our intellectual property;
- hire additional clinical, quality control, manufacturing and other scientific personnel;
- add operational, financial and management information systems and personnel;
- expand our office, laboratory and manufacturing facility; and
- experience any delays or encounter any issues with any of the above.

Developing pharmaceutical products, including conducting preclinical studies 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 for any product candidates or generate revenue from the sale of any product candidate for which we may obtain marketing approval. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for at least several years, if ever.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through the public or private sale of our equity, government or private party grants, debt financings or other capital sources, including potential collaborations with other companies or other strategic transactions. To the extent that we raise additional capital through the sale of our equity or convertible debt securities, including through the use of the Stifel ATM Facility, the ownership interest of our

shareholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt financing and 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. If we are unable to obtain additional funding, we could be forced to delay, reduce or eliminate some or all of our research and development programs, product portfolio expansion or any commercialization efforts, which could adversely affect our business prospects, or we may be unable to continue operations. If we raise funds through strategic collaborations or other similar arrangements with third parties, we may have to relinquish valuable rights to our platform technology, future revenue streams, research programs or product candidates or may have to grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. Our ability to raise additional funds may be adversely impacted by worsening global economic conditions and disruptions to and volatility in the credit and financial markets in the United States and worldwide resulting from geopolitical tensions and adverse macroeconomic conditions or otherwise. Because of the numerous risks and uncertainties associated with product development, we cannot predict the timing or amount of increased expenses, and there is no assurance that we will ever be profitable or generate positive cash flow from operating activities.

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements that, have or are reasonably likely to have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, cash requirements or capital resources.

Cash Flows

The following table provides information regarding our cash flows for the periods presented (in thousands):

	Six Months Ended June 30,	
	2024	2023
Net cash used in operating activities	$ (52,312)	$ (48,368)
Net cash provided by investing activities	96,963	20,137
Net cash provided by financing activities	65	2,737
Net increase (decrease) in cash, cash equivalents and restricted cash equivalents	$ 44,716	$ (25,494)

Operating Activities

Net cash used in operating activities was $52.3 million for the six months ended June 30, 2024, reflecting a net loss of $58.6 million and net cash used of $2.7 million for operating assets and liabilities, which were offset by non-cash charges of $9.0 million. The non-cash charges primarily consisted of stock-based compensation expense of $5.9 million, non-cash lease expense of $2.5 million and depreciation expense of $1.8 million, offset by $1.1 million of non-cash interest earned on marketable securities.

Net cash used in operating activities was $48.4 million for the six months ended June 30, 2023, reflecting a net loss of $58.4 million and net cash used of $0.2 million for operating assets and liabilities, which were offset by non-cash charges of $9.9 million. The non-cash charges primarily consisted of stock-based compensation expense of $8.3 million, non-cash lease expense of $2.3 million and depreciation expense of $1.7 million, offset by $2.4 million of non-cash interest earned on marketable securities.

The $3.9 million increase in net cash used in operating activities for the six months ended June 30, 2024 compared to the six months ended June 30, 2023 was primarily due to a decrease in stock-based compensation expense and differences in the timing of payments for costs incurred during each respective period.

Investing Activities

Net cash provided by investing activities was $97.0 million for the six months ended June 30, 2024, which consisted of proceeds of $107.0 million from the maturity of marketable securities, offset by purchases of $9.9 million of marketable securities and $0.1 million of property and equipment. Net cash provided by investing activities was $20.1 million for the six months ended June 30, 2023, which consisted of purchases of $58.4 million of marketable securities and $0.5 million of property and equipment offset by proceeds of $79.0 million from the maturity of marketable securities.

Financing Activities

Net cash provided by financing activities was $0.1 million for the six months ended June 30, 2024, which consisted of proceeds from the issuance of common stock under the Stifel ATM Facility of $0.2 million and proceeds from exercise of stock options and issuance of shares under the ESPP of $0.1 million, offset by $0.2 million of taxes paid related to net share settlement of equity awards. Net cash provided by financing activities was $2.7 million for the six months ended June 30, 2023, which consisted of proceeds from the issuance of common stock under the Stifel ATM Facility of $4.2 million, and proceeds from stock option exercises and purchases of common stock under the ESPP of $0.2 million offset by the payment of $0.7 million of issuance costs related to the underwritten public offering under our Shelf Registration Statement and concurrent private placement that closed in December 2022, and $0.9 million of taxes paid related to net share settlement of equity awards.

Contractual Obligations and Other Commitments

Contractual obligations relate to future minimum lease payments for existing non-cancellable leases primarily relating to corporate office and laboratory real estate, with terms expiring through February 2030. During the six months ended June 30, 2024, there were no significant changes in contractual obligations and commitments from that described under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations—Contractual Obligations and Other Commitments" in our 2023 Annual Report.

Other commitments include license and collaboration agreements we have entered into with certain parties. Such arrangements require ongoing payments, including payments upon the achievement of certain development, regulatory and commercial milestones, receipt of sublicense income, as well as royalties on commercial sales. Payments under these arrangements are expensed as incurred.

We also have agreements with certain vendors for various services, including services related to clinical operations and support, which we are not contractually able to terminate for convenience and avoid any and all future obligations to the vendors. Under such agreements, we are contractually obligated to make certain payments to vendors to reimburse them for their unrecoverable outlays incurred prior to cancellation. The exact amounts of such obligations are dependent on the timing of termination and the exact terms of the relevant agreement and cannot be reasonably estimated. We do not include these payments in this summary as they are not fixed and estimable.

Recent Accounting Pronouncements

There are no new significant recent accounting pronouncements which may materially impact our financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company as defined by Item 10 of Regulation S-K and are not required to provide the information otherwise required under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer who serves as principal executive officer and principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and our 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 Chief Executive Officer, who serves as principal executive officer and principal financial officer, concluded that our disclosure controls and procedures as of such date 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 (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter 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. From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

Item 1A. Risk Factors.

There have been no material changes to the risk factors disclosed in “Part I. Item 1A. Risk Factors” in our 2023 Annual Report.

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

None.

Item 5. Other Information

During the quarter ended June 30, 2024, no director or officer, as defined in Rule 16a-1(f), adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," each as defined in Regulation S-K Item 408.

Item 6. Exhibits.

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit Number	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-39979	3.1	February 9, 2021	
3.2	Amended and Restated Bylaws of the Registrant	8-K	001-39979	3.2	February 9, 2021	
4.1	Form of Common Stock Certificate of the Registrant	S-1/A	333-252175	4.1	February 1, 2021	
4.2	Amended and Restated Investors' Rights Agreement, by and among the Registrant and certain of its stockholders, dated June 30, 2020	S-1/A	333-252175	4.2	February 1, 2021	
10.1	Amended and Restated Equity Incentive Plan	8-K	001-39979	10.1	May 28, 2024	
31.1	Certification of Principal Executive and Financial Officer pursuant to Rules 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1†	Certification of Principal Executive and Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	Inline XBRL Instance Document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, formatted in Inline XBRL.					

† The certifications furnished in Exhibit 32.1 hereto are deemed to be furnished with this Quarterly Report on Form 10-Q and will not be deemed to be "filed" for purposes of Section 18 of the Exchange Act. Such certifications will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Registrant specifically incorporates it by reference.

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.

VOR BIOPHARMA INC.

Date: August 8, 2024

By: /s/ Robert Ang
Robert Ang
President and Chief Executive Officer (Principal Executive Officer and Principal Financial Officer)

Date: August 8, 2024

By: /s/ Amy Quinlan
Amy Quinlan
Vice President, Finance (Principal Accounting Officer)

Exhibit 31.1

CERTIFICATIONS

I, Robert Ang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vor Biopharma Inc.;

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. I am 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 my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me 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 my 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 my 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. I have disclosed, based on my 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.

Date: August 9, 2024

By: /s/ Robert Ang
Robert Ang
President and Chief Executive Officer
(*Principal Executive Officer and Principal Financial Officer)*

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Vor Biopharma Inc. (the "Company") for the period ended March 31, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 8, 2024

By: /s/ Robert Ang
Robert Ang
President and Chief Executive Officer (Principal Executive Officer and Principal Financial Officer)

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Vor Biopharma Inc. 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 this Form 10-Q), irrespective of any general incorporation language contained in such filing.