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

FORM 10-Q

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

For the Quarterly Period Ended March 31, 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: 1-32001

APTOSE BIOSCIENCES INC.
(Exact Name of Registrant as Specified in Its Charter)

Canada	**98-1136802**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
251 Consumers Road, Suite 1105 **Toronto, Ontario, Canada**	**M2J 4R3**
(Address of principal executive offices)	(Zip Code)

647-479-9828
(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 exchange on which registered
Common Shares, no par value	APTO	Nasdaq Capital Market

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

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

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

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

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

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

As of May 14, 2024, the registrant had 16,309,393 common shares outstanding.

TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Report contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and “forward-looking information” within the meaning of applicable Canadian securities law, which we collectively refer to as “forward-looking statements”. Such forward-looking statements reflect our current beliefs and are based on information currently available to us. In some cases, forward-looking statements can be identified by terminology such as “may,” “would,” “could,, “will,” “should,” “expect,” “plan,” “intend,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “continue,” “hope,” “foresee” or the negative of these terms or other similar expressions concerning matters that are not historical facts.

Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements, including, among others:

- our lack of product revenues and net losses and a history of operating losses;
- our early stage of development, particularly the inherent risks and uncertainties associated with (i) developing new drug candidates generally, (ii) demonstrating the safety and efficacy of these drug candidates in clinical studies in humans, and (iii) obtaining regulatory approval to commercialize these drug candidates;
- our need to raise substantial additional capital in the future and our ability to raise such funds when needed and on acceptable terms;
- further equity financing, which may substantially dilute the interests of our existing shareholders;
- clinical studies and regulatory approvals of our drug candidates are subject to delays, and may not be completed or granted on expected timetables, if at all, and such delays may increase our costs and could substantially harm our business;
- our reliance on external contract research/manufacturing organizations for certain activities and if we are subject to quality, cost, or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, our business operations could suffer significant harm;
- clinical studies are long, expensive and uncertain processes and the U.S. Food and Drug Administration ("FDA"), or other similar foreign regulatory agencies that we are required to report to, may ultimately not approve any of our product candidates;
- our ability to comply with applicable governmental regulations and standards;
- our inability to achieve our projected development goals in the time frames we announce and expect;
- difficulties in enrolling patients for clinical trials may lead to delays or cancellations of our clinical trials;
- our reliance on third parties to conduct and monitor our preclinical studies;
- our ability to attract and retain key personnel, including key executives and scientists;
- any misconduct or improper activities by our employees;
- our exposure to exchange rate risk;
- our ability to commercialize our business attributed to negative results from clinical trials;
- the marketplace may not accept our products or product candidates due to the intense competition and technological change in the biotechnical and pharmaceuticals, and we may not be able to compete successfully against other companies in our industries and achieve profitability;
- our ability to obtain and maintain patent protection;
- our ability to afford substantial costs incurred with defending our intellectual property;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our business is subject to potential product liability and other claims;
- potential exposure to legal actions and potential need to take action against other entities;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- our ability to maintain adequate insurance at acceptable costs;

- our ability to find and enter into agreements with potential partners;
- extensive government regulation;
- data security incidents and privacy breaches could result in increased costs and reputational harm;
- our share price has been and is likely to continue to be volatile;
- future sales of our common shares (the "Common Shares") by us or by our existing shareholders could cause our share price to drop;
- changing global market and financial conditions;
- changes in an active trading market in our Common Shares;
- difficulties by non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence;
- potential adverse U.S. federal tax consequences for U.S. shareholders because we are a “passive foreign investment company”;
- our “smaller reporting company” status;
- any failures to maintain an effective system of internal controls may result in material misstatements of our financial statements, or cause us to fail to meet our reporting obligations or fail to prevent fraud;
- our ability to issue and sell Common Shares under the 2022 ATM Facility (as defined below);
- our broad discretion in how we use the proceeds of the sale of Common Shares; and
- our ability to expand our business through the acquisition of companies or businesses.

More detailed information about risk factors and their underlying assumptions are included in our Annual Report on Form 10-K for the year ended December 31, 2023, under Item 1A – Risk Factors. Except as required under applicable securities legislation, we undertake no obligation to publicly update or revise forward-looking statements, whether as a result of new information, future events or otherwise.

PART I—FINANCIAL INFORMATION

ITEM 1 – FINANCIAL STATEMENTS

Condensed Consolidated Interim Financial Statements

(Unaudited)

APTOSE BIOSCIENCES INC.

For the three months ended March 31, 2024 and 2023

APTOSE BIOSCIENCES INC.
Condensed Consolidated Interim Statements of Financial Position
(Expressed in thousands of US dollars)
(unaudited)

		March 31, 2024		December 31, 2023
Assets				
Current assets:				
Cash and cash equivalents	$	7,346	$	9,252
Investments		1,982		—
Prepaid expenses		1,819		2,042
Other current assets		674		600
Total current assets		11,821		11,894
Non-current assets:				
Property and equipment		125		152
Right-of-use assets, operating leases		850		943
Total non-current assets		975		1,095
Total assets	$	12,796	$	12,989
Liabilities and Shareholders' Equity				
Current liabilities:				
Accounts payable to related parties	$	—	$	2,554
Accounts payable		2,421		3,492
Accrued liabilities		9,319		8,829
Current portion of lease liability, operating leases		399		394
Total current liabilities		12,139		15,269
Non-current liabilities:				
Lease liability, operating leases		520		621
Total liabilities		12,659		15,890
Shareholders' equity:				
Share capital:				
Common shares, no par value, unlimited authorized shares, 15,717,701 and 7,942,363 shares issued and outstanding as of March 31, 2024 and December 31, 2023, respectively		450,485		444,806
Additional paid-in capital		79,146		72,146
Accumulated other comprehensive loss		(4,317)		(4,316)
Deficit		(525,177)		(515,537)
Total shareholders' equity		137		(2,901)
Total liabilities and shareholders' equity	$	12,796	$	12,989

The accompanying notes are an integral part of these condensed consolidated interim financial statements (unaudited).
Going concern, see Note 2.
Commitments, see Note 9.
Related party transactions, see Note 10.
Subsequent events, see Note 13.

APTOSE BIOSCIENCES INC.
Condensed Consolidated Interim Statements of Loss and Comprehensive Loss
(Expressed in thousands of US dollars, except for per common share data)
(unaudited)

	Three months ended March 31, 2024	Three months ended March 31, 2023
Revenue	$ —	$ —
Expenses:		
Research and development	6,445	8,811
General and administrative	3,315	5,285
Operating expenses	9,760	14,096
Other income/(expense):		
Interest income	121	422
Foreign exchange loss	(1)	(2)
Total other income	120	420
Net loss	$ (9,640)	$ (13,676)
Other comprehensive loss:		
Unrealized (loss) gain on available-for-sale securities	(1)	4
Total comprehensive loss	$ (9,641)	$ (13,672)
Basic and diluted loss per common share	$ (0.73)	$ (2.22)
Weighted average number of common shares outstanding used in the calculation of (in thousands)		
Basic and diluted loss per common share	13,133	6,171

The accompanying notes are an integral part of these condensed consolidated interim financial statements (unaudited).

APTOSE BIOSCIENCES INC.
Condensed Consolidated Interim Statements of Changes in Shareholders' Equity
(Expressed in thousands of US dollars, except for per common share data)
(unaudited)

	Common Shares				Accumulated other comprehensive loss		
	Shares (in thousands)		Amount	Additional paid-in capital		Deficit	Total
Balance, December 31, 2023	7,942	$	444,806	$ 72,146	$ (4,316)	$ (515,537)	$ (2,901)
Common shares and warrants issued under the Hanmi Subscription Agreement	2,105		2,043	1,659	—	—	3,702
Common shares and warrants issued in S-1 financing	5,649		3,595	4,532	—	—	8,127
Common shares issued under the 2023 Committed Equity Facility	10		23	—	—	—	23
Stock-based compensation	—		—	809	—	—	809
Common shares issued under the ESPP plan	11		18	—	—	—	18
Other comprehensive loss	—		—	—	(1)	—	(1)
Net loss	—		—	—	—	(9,640)	(9,640)
Balance, March 31, 2024	15,717	$	450,485	$ 79,146	$ (4,317)	$ (525,177)	$ 137
Balance, December 31, 2022	6,158	$	437,520	$ 68,869	$ (4,318)	$ (464,330)	$ 37,741
Common shares issued in exchange for RSUs	38		376	(376)	—	—	—
Common shares issued under the 2022 ATM Facility	3		34	—	—	—	34
Common shares issued under the ESPP plan	1		16	—	—	—	16
Stock-based compensation	—		—	1,874	—	—	1,874
Other comprehensive gain	—		—	—	4	—	4
Net loss	—		—	—	—	(13,676)	(13,676)
Balance, March 31, 2023	6,200	$	437,946	$ 70,367	$ (4,314)	$ (478,006)	$ 25,993

The accompanying notes are an integral part of these condensed consolidated interim financial statements (unaudited).

APTOSE BIOSCIENCES INC.
Condensed Consolidated Interim Statements of Cash Flows
(Expressed in thousands of US dollars)
(unaudited)

	Three months ended March 31, 2024	Three months ended March 31, 2023
Cash flows used in operating activities:		
Net loss for the period	$ (9,640)	$ (13,676)
Items not involving cash:		
Stock-based compensation	809	1,874
Depreciation and amortization	16	28
Loss on disposal of property and equipment	10	—
Amortization of right-of-use assets	93	103
Interest on lease liabilities	19	25
Unrealized (gain)/loss on short-term investment	(1)	(4)
Accrued interest on investments	9	(5)
Changes in non-cash operating assets and liabilities:		
Prepaid expenses	246	256
Other current assets	(74)	95
Operating lease liabilities	(115)	(128)
Accounts payable to related parties	(2,554)	—
Accounts payable	(1,071)	(807)
Accrued liabilities	490	937
Cash used in operating activities	(11,763)	(11,302)
Cash flows from financing activities:		
Issuance of common shares under the S-1 Filing	8,127	—
Shares issuances to Hanmi under subscription agreement	3,702	—
Issuance of common shares under 2022 ATM Facility	—	34
Issuance of common shares under the ESPP plan	18	16
Cash from financing activities	11,847	50
Cash flows from/(used in) investing activities:		
Disposal of property and equipment, net of purchases	1	—
Maturity /(acquisition) of investments, net	(1,992)	(2,960)
Cash used in investing activities	(1,991)	(2,960)
Effect of exchange rate fluctuations on cash and cash equivalents	1	4
Decrease in cash and cash equivalents	$ (1,906)	$ (14,208)
Cash and cash equivalents, beginning of period	$ 9,252	$ 36,970
Cash and cash equivalents, end of period	$ 7,346	$ 22,762

The accompanying notes are an integral part of these condensed consolidated interim financial statements (unaudited).

1.Reporting entity:

Aptose Biosciences Inc. ("Aptose," "the Company," "we," "us," or "our") is a science-driven, clinical-stage biotechnology company committed to the development and commercialization of precision medicines addressing unmet clinical needs in oncology, with an initial focus on hematology. The Company's small molecule cancer therapeutics pipeline includes products designed to provide single agent efficacy and to enhance the efficacy of other anti-cancer therapies and regimens without overlapping toxicities. The Company's executive offices are located in San Diego, California, and our head office is located in Toronto, Canada.

We are advancing targeted agents to treat life-threatening hematologic cancers that, in most cases, are not elective for patients and require immediate treatment. We have two clinical-stage investigational products for hematological malignancies: tuspetinib, an oral, potent myeloid kinase inhibitor, and luxeptinib, an oral, dual lymphoid and myeloid kinase inhibitor.

Since our inception, we have financed our operations and technology acquisitions primarily from equity financing, proceeds from the exercise of warrants and stock options, and interest income on funds held for future investment. Our uses of cash for operating activities have primarily consisted of salaries and wages for our employees, facility and facility-related costs for our offices and laboratories, fees paid in connection with preclinical and clinical studies, licensing fees, drug manufacturing costs, laboratory supplies and materials, and professional fees.

Management recognizes that in order for us to meet our capital requirements, and continue to operate, additional financing will be necessary. We plan to raise additional funds to fund our business operations but there is no assurance that such additional funds will be available for us to finance our operations on acceptable terms, if at all. The Company's current cash, cash equivalents and investments will enable the support of operations through August 2024. These conditions raise substantial doubt about the Company's ability to continue as a going concern, see Note 2(a). The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Our ability to raise additional funds could be affected by adverse market conditions, the status of our product pipeline, possible delays in enrollment in our trial, and various other factors and we may be unable to raise capital when needed, or on terms favorable to us. If necessary funds are not available, we may have to delay, reduce the scope of, or eliminate some of our development programs, potentially delaying the time to market for any of our product candidates.

We do not expect to generate positive cash flow from operations for the foreseeable future due to the early stage of our clinical trials. It is expected that negative cash flow will continue until such time, if ever, that we receive regulatory approval to commercialize any of our products under development and/or royalty or milestone revenue from any such products exceeds expenses.

Our cash needs for the next twelve months include estimates of the number of patients and rate of enrollment of our clinical trials, the amount of drug product that we will require to support our clinical trials, and our general corporate overhead costs to support our operations, and our reliance on our manufacturers. We have based these estimates on assumptions and plans which may change and which could impact the magnitude and/or timing of operating expenses and our cash runway, See Note 2(a).

The Company's financial statements are prepared using generally accepted accounting principles in the United States of America applicable to a going concern which contemplates the realization of assets and liquidation of liabilities in the normal course of business. As of March 31, 2024, the Company had positive shareholder's equity of $0.1 million (December 31, 2023 negative shareholder's equity of $2.9 million); an accumulated deficit of approximately $525.2 million (December 31, 2023, $515.5 million); cash and cash equivalents and investment balances of approximately $9.3 million (December 31, 2023, $9.3 million); and negative working capital of approximately $0.3 million (December 31, 2023, negative working capital of $3.4 million). Management recognizes that in order to meet the capital requirements, and continue to operate, additional financing will be necessary. The Company plans to raise additional funds to fund our business operations through equity financing under the 2022 ATM Facility and other financing activities, as further described in Note 11 and Note 13. Management continues considering other options for raising capital including debt, equity, collaborations, and reorganization to reduce operational expenses. However, given the impact of the financial markets and the matter in Note 13, Subsequent events, that may impact the Company's ability to raise financing in the capital markets, the Company may be unable to access financing when needed. As such, there can be no assurance that the Company will be able to obtain additional liquidity when needed or under acceptable terms, if at all. These conditions raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. For information about financing events and the regulatory matter that may impact the Company's ability to raise financing in the capital markets which arose subsequent to March 31, 2024, see Note 13, Subsequent events.

On May 23, 2023, during the Aptose Annual and Special Meeting of Shareholders, our shareholders voted to approve special resolutions providing for an amendment to our articles of incorporation to effect a reverse share split of our outstanding Common Shares, at a ratio in the range of 1-for-10 to 1-for-20. Our Board of Directors then approved a ratio of 1-for-15 on May 23, 2023. On May 24, 2023, we filed articles of amendment under the *Canada Business Corporations Act* ("CBCA") to give effect to the reverse stock split (consolidation) of our Common Shares on the basis of one post-consolidation Common Share for each 15 pre-consolidation Common Shares (the "Reverse Stock Split"). The Common Shares commenced trading on a post-Reverse Stock Split basis at market open on Tuesday, June 6, 2023. All references in this report to historical Common Share prices, numbers of Common Shares, and earnings per share calculations have been presented to reflect the effect of the Reverse Stock Split.

2.Significant accounting policies:

a.Basis of presentation - Going concern

These unaudited condensed consolidated interim financial statements have been prepared in conformity with generally accepted accounting principles in the United States, or GAAP and the rules and regulations of the Securities and Exchange Commission, or SEC, related to quarterly reports filed on Form 10-Q, assuming the Company will continue as a going concern. The going concern assumption contemplates the realization of assets and satisfaction of liabilities in the normal course of business. However, substantial doubt about the Company's ability to continue as a going concern exists.

As of March 31, 2024, the Company had positive shareholder's equity of $0.1 million (December 31, 2023 negative shareholder's equity of $2.9 million); an accumulated deficit of approximately $525.2 million (December 31, 2023, $515.5 million); cash and cash equivalents and investment balances of approximately $9.3 million (December 31, 2023, $9.3 million); and negative working capital of approximately $0.3 million (December 31, 2023, negative working capital of $3.4 million). Management recognizes that in order to meet the capital requirements, and continue to operate, additional financing will be necessary. The Company is evaluating strategies to obtain the required additional funding for future operations. These strategies may include, but are not limited to, obtaining equity financing, debt financing, committed equity facilities or other financing instruments and restructuring of operations to decrease expenses. However, given the impact of the financial markets and the matter in Note 13, Subsequent events, the Company may be unable to access further equity when needed. As the Company is primarily pursuing one compound that is licensed from a related party with significant licensing payments who will have influence on the Company, other investors may not be willing to invest in the Company. As such, there can be no assurance that the Company will be able to obtain additional liquidity when needed or under acceptable terms, if at all. The Company's current cash, cash equivalents and investments will enable the support of operations through August 2024. The unaudited condensed consolidated interim financial statements do not reflect any adjustments to the carrying amounts and classification of assets, liabilities, and reported expenses that may be necessary if the Company were unable to continue as a going concern. Such adjustments may be material.

b.Basis of consolidation:

These condensed consolidated interim financial statements include the accounts of the Company and its subsidiaries. All intercompany transactions, balances, revenue, and expenses are eliminated on consolidation.

c.Significant accounting policies, estimates and judgments:

During the three months ended March 31, 2024, there have been no changes to our significant accounting policies as described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 filed with the SEC on March 26, 2024.

The preparation of the unaudited condensed consolidated interim financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities at the date of the unaudited condensed consolidated interim financial statements and reported amounts of revenue and expenses during the reporting period. Actual outcomes could differ from those estimates. The unaudited condensed consolidated interim financial statements include estimates, which, by their nature, are uncertain.

The impacts of such estimates are pervasive throughout the unaudited condensed consolidated interim financial statements and may require accounting adjustments based on future occurrences.

The estimates and underlying assumptions are reviewed on a regular basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised and in any future periods affected.

d.Recent Accounting Pronouncements

We have adopted no new accounting pronouncements during the three months ended March 31, 2024. There were various accounting standards and interpretations issued recently, none of which are expected to have a material impact on our financial position, operations or cash flows.

e.Foreign currency:

The functional and presentation currency of the Company is the US dollar.

f.Concentration of risk:

The Company is subject to credit risk from the Company's cash and cash equivalents and investments. The carrying amount of the financial assets represents the maximum credit exposure. The Company manages credit risk associated with its cash and cash equivalents and investments by maintaining minimum standards of R1-low or A-low investments and the Company invests only in highly rated corporations and treasury bills, which are capable of prompt liquidation.

3.Cash and cash equivalents:

Cash and cash equivalents as of March 31, 2024, consist of cash of $2,898 thousand (December 31, 2023 - $2,764 thousand), deposits in high interest savings accounts, money market funds and accounts with maturities of less than 90 days totaling of $4,448 thousand (December 31, 2023 - $6,488 thousand).

4.Prepaid expenses:

Prepaid expenses as of March 31, 2024 and December 31, 2023 are shown below. Other prepaid expenses primarily consist of subscriptions, software, conference deposits and deposits for general and administrative items.

	March 31, 2024	December 31, 2023
Prepaid research and development expenses	$ 852	$ 720
Prepaid insurance	610	882
Other prepaid operating expenses	357	440
Total	$ 1,819	$ 2,042

5.Right-of-use assets:

	March 31, 2024	December 31, 2023
Right-of-use assets, beginning of period	$ 3,124	$ 3,100
Additions to right-of-use assets	—	24
Right-of-use assets, end of period	3,124	3,124
Accumulated amortization	(2,274)	(2,181)
Right-of use assets, NBV	$ 850	$ 943

6.Investments:

Investments consisted of the following as of March 31, 2024 and December 31, 2023:

	March 31, 2024		
	Cost	Unrealized gain/(loss)	Market value
United States Treasury Bills	1,983	(1)	1,982
Total	$ 1,983	$ (1)	$ 1,982

	December 31, 2023		
	Cost	Unrealized gain/(loss)	Market value
United States Treasury Bills	$ —	$ —	$ —
Total	$ —	$ —	$ —

7.Fair value measurements and financial instruments:

The fair value hierarchy establishes three levels to classify the inputs to valuation techniques used to measure fair value.

Level 1 - inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;

Level 2 - inputs are quoted prices in markets that are not active, quoted prices for similar assets or liabilities in active markets, inputs other than quoted prices that are observable for the asset or liability, or inputs that are derived principally from or corroborated by observable market data or other means; and

Level 3 - inputs are unobservable (supported by little or no market activity).

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs.

The following table presents the fair value of Company's assets that are measured at fair value on a recurring basis for the periods presented:

	March 31, 2024	Level 1	Level 2	Level 3
Assets				
High interest savings account	$ 1,461	—	$ 1,461	—
United States Treasury Bills	4,969	—	4,969	—
Total	$ 6,430	—	$ 6,430	—

	December 31, 2023	Level 1	Level 2	Level 3
Assets				
High interest savings accounts	$ 2,002	—	$ 2,002	—
United States Treasury Bills	4,486	—	4,486	—
Total	$ 6,488	—	$ 6,488	—

8.Accrued liabilities:

Accrued liabilities as of March 31, 2024 and December 31, 2023 consisted of the following:

	March 31, 2024	December 31, 2023
Accrued personnel related costs	$ 1,144	$ 1,989
Accrued research and development expenses	8,052	6,527
Other accrued expenses	123	313
Total	$ 9,319	$ 8,829

9.Lease liability:

Aptose leases office space in San Diego, California and Toronto, Canada. The lease for the San Diego office space is scheduled to expire in May 31, 2026. We lease office space in Toronto, Ontario, Canada, with this lease scheduled to expire on June 30, 2024. The Company has not included any extension periods in calculating its right-to-use assets and lease liabilities. The Company also enters into leases for small office equipment.

Minimum payments, undiscounted, under our operating leases are as follows:

Years ending December 31,		
2024	$	344
2025		462
2026		197
Total	$	1,003

The following table presents the weighted average remaining term of the leases and the weighted average discount rate:

		March 31, 2024		December 31, 2023
Weighted-average remaining term – operating leases (years)		1.9		2.4
Weighted-average discount rate – operating leases		7.38 %		7.38 %
Lease liability, current portion	$	399	$	394
Lease liability, long-term portion		520		621
Total	$	919	$	1,015

Operating lease costs and operating cash flows from our operating leases are as follows:

	Three months ended March 31,			
		2024		2023
Operating lease cost	$	112	$	128
Operating cash flows from operating leases	$	115	$	128

10.Related party transactions:

Hanmi Pharmaceutical Co. Ltd.

On November 4, 2021, Aptose entered a licensing agreement with the South Korean company Hanmi Pharmaceutical Co. Ltd. ("Hanmi" and the "Hanmi Licensing Agreement") for the clinical and commercial development of tuspetinib. Under the terms of the Hanmi Licensing Agreement, Hanmi granted Aptose exclusive worldwide rights to tuspetinib for all indications. Hanmi received an upfront payment of $12.5 million, including $5 million in cash and $7.5 million in Common Shares. Aptose issued Hanmi 215,703 Common Shares in this upfront licensing payment. Hanmi will also receive up to $407.5 million in future milestone payments contingent upon achieving certain clinical, regulatory and sales milestones across several potential indications, as well as tiered royalties on net sales. The Hanmi milestone payments are based on the progression of research as outlined in Note 14, Collaborative Agreements, to the Annual report on Form 10-K for the year ended December 31, 2023. The term of the agreement will continue on a product-by-product and country-by-country basis until the expiration of the royalty period for such product in such country. The licenses to Aptose pursuant to the Hanmi Licensing Agreement will survive and become non-exclusive, perpetual, irrevocable and fully paid-up on a product-by-product and country-by-country basis, upon their natural expiration under the terms of the Hanmi Licensing Agreement.

In 2022, the Company and Hanmi also entered into a separate supply agreement for additional production of new drug substance ("API") and drug product to support further tuspetinib clinical development, for which the Company pays Hanmi per batch of production. Expenses related to this supply agreement have been recognized by the Company, amounting to nil and $0.6 million for the three months ended March 31, 2024 and 2023, respectively. Since inception to March 31, 2024, $7.1 million has been recognized for the period under the supply agreement.

The Company paid supply costs to Hanmi of $2.6 million and $1.6 million in the three months ended March 31, 2024 and 2023, respectively. Since inception to March 31, 2024, payments of $7.1 million have been made under the supply agreement. At March 31, 2024, the Company did not have either accounts payable or accrued liabilities related to the Hanmi supply agreement. At December 31, 2023, there was $2.6 million in accounts payable and nil in accrued liabilities.

See Note 11, Share capital, for share capital transactions with Hanmi.

11.Share capital:

The Company has authorized share capital of an unlimited number of Common Shares.

a.Equity issuances:

(i) Hanmi 2023 Investment

On August 10, 2023, the Company entered into a binding term sheet with Hanmi whereby Hanmi agreed at their sole discretion to invest, up to a maximum of $7 million in Aptose up to a total ownership of 19.99 percent of Aptose by Hanmi. On September 6, 2023, the Company entered into a subscription agreement with Hanmi, pursuant to which the Corporation agreed to sell 668,449 Common Shares to Hanmi for proceeds of $3 million.

(ii) January 2024 Public Offering and Private Placement

On January 31, 2024, the Company announced the closing of a $9.7 million public offering (the “Public Offering”) and a $4 million private placement (the “Private Placement”) with Hanmi Pharmaceutical. The Public Offering comprised 5,649,122 common shares of the Company (the “Common Shares”) and warrants at a combined offering price of US $1.71 per share. This included 736,842 Common Shares and warrants pursuant to a full exercise by the underwriter of its over-allotment option (the “Over-Allotment Option”). The Private Placement comprised 2,105,263 Common Shares of the Company sold at a price of $1.90, representing an 11% premium over the price of the Common Shares issued as part of the Public Offering. Nasdaq subsequently issued a letter to the Company regarding the value and the date of the Private Placement, as discussed in this note, below. Financing costs of approximately $1.4 million included underwriting costs of 7% and approximately $0.4 million in professional fees. The Company also issued Hanmi warrants to purchase Common Shares at an exercise price of US $1.71 per Warrant Share.

On February 29, 2024, the Company received a deficiency letter (the “2024 Deficiency Letter”) from the Nasdaq Listing Qualifications Department of Nasdaq notifying the Company that the Company’s January 2024 Private Placement of securities to Hanmi violated 5635(d) because the Company did not obtain shareholder approval prior to such issuance. Nasdaq stated that the Private Placement involved the issuance of greater than 20% of the issued and outstanding Common Shares of the Company at a discount to the Nasdaq official closing price on January 25, 2024, the date of the subscription agreement between the Company and Hanmi. The 2024 Deficiency Letter had no immediate effect on the listing of the Company’s Common Shares. In accordance with the Nasdaq Listing Rules, the Company was given forty-five (45) calendar days to submit a plan to regain compliance. See Note 13, Subsequent events.

(iii) 2023 Committed Equity Facility

On May 25, 2023, the Company and Keystone Capital Partners, LLC ("Keystone") entered into a committed equity facility, (the "2023 Committed Equity Facility"), which provides that subject to the terms and conditions set forth therein, we may sell to Keystone up to the lesser of (i) $25.0 million of the Common Shares and (ii) a number of Common Shares equal to 19.99% of the Common Shares outstanding immediately prior to the execution of the 2023 Committed Equity Facility Agreement. with Keystone which respect to the 2023 Committed Equity Facility (subject to certain exceptions) (the “Total Commitment”), from time to time during the 24-month term of the 2023 Committed Equity Facility. Additionally, on May 25, 2023, the Company entered into a Registration Rights Agreement with Keystone, pursuant to which the Company agreed to file a registration statement with the SEC covering the resale of Common Shares that are issued to Keystone under the 2023 Committed Equity Facility. This registration statement became effective on June 30, 2023 and the 2023 Committed Equity Facility commencement date was July 12, 2023 (the "Commencement Date").

Upon entering into the 2023 Committed Equity Facility, the Company agreed to issue to Keystone an aggregate of 25,156 Common Shares (the “Commitment Shares”) as consideration for Keystone’s commitment to purchase Common Shares upon the Company’s direction under the 2023 Committed Equity Facility. The Company issued 7,547 Common Shares, or 30% of the Commitment Shares, on the date of the 2023 Committed Equity Facility Agreement. An additional 7,547 Common Shares, or 30% of the Commitment Shares, were issued to Keystone in October 2023. In the three months ended March 31, 2024, the Company's issuance of Common Shares to Keystone consisted of the 10,062 Commitment Shares issued in January 2024.

In the year ended December 31, 2023, the Company's issuance of Common Shares to Keystone comprised 720,494 Common shares sold to Keystone at an average price of $2.91 per Common share for cash proceeds of $2.1 million and 15,094 Commitment Shares. See Note 13, Subsequent events.

(iv) 2022 At-The-Market Facility ("ATM")

On December 9, 2022, the Company entered into an equity distribution agreement pursuant to which the Company may, from time to time, sell Common Shares having an aggregate offering value of up to $50 million through Jones Trading Institutional Services LLC ("Jones Trading") on Nasdaq (the "2022 ATM Facility"). During the three months ended March 31, 2023, the Company issued 3,095 shares under this 2022 ATM Facility at an average price of $11.32 per Common Share for gross proceeds of $35 thousand ($34 thousand net of share issuance costs). The Company did not issue shares under the 2022 ATM Facility in the three months ended March 31, 2024. Since inception to March 31, 2024, the Company has raised a total of $1.9 million of gross proceeds ($1.9 million net of share issuance costs) under the 2022 ATM Facility. Costs associated with the proceeds consisted of a 3% cash commission. See Note 13, Subsequent events.

b.Loss per share:

Loss per share is calculated using the weighted average number of Common Shares outstanding and is presented in the table below:

	Three months ended March 31,	
	2024	**2023**
Net loss	$ (9,640)	$ (13,676)
Weighted-average common shares – basic and diluted (in thousands)	13,133	6,171
Net loss per share – basic and diluted	$ (0.73)	$ (2.22)

The effects of any potential exercise of the Company’s stock options outstanding during the three-month periods ended March 31, 2024, and March 31, 2023 have been excluded from the calculation of diluted loss per share, since such securities would be anti-dilutive.

12.Stock-based compensation:

All references in this report to historical Common Share prices, numbers of Common Shares, and earnings per share calculations have been presented to reflect the effect of the Reverse Stock Split.

a.Stock option plan and employee stock purchase plan

Effective June 1, 2021, the Company adopted a new stock incentive plan (“New Incentive Plan”) and an employee stock purchase plan (“ESPP”).

The New Incentive Plan authorizes the Board of Directors to administer the New Incentive Plan to provide equity-based compensation in the form of stock options, stock appreciation rights, restricted stock, restricted stock units and dividend equivalents.

The Corporation currently maintains its existing Share Option Plan and 2015 Stock Incentive Plan (2015 SIP). Effective June 1, 2021 no further grants will be made under the Share Option Plan or 2015 SIP, though existing grants under the Share Option Plan will remain in effect in accordance with their terms.

The aggregate number of our Common Shares, no par value, that may be issued under all awards under the New Incentive Plan is (i) 691,400, plus (ii) any of our Common Shares subject to any outstanding award under our prior plans that, after June 1, 2021, are not purchased or are forfeited or reacquired by us, or otherwise not delivered to the participant due to termination, cancellation or cash settlement of such award subject to the share counting provisions of the New Incentive Plan.

Under both the Share Option Plan and the New Incentive Plan, the exercise price of each option equals the closing trading price of the Company’s stock on the day prior to the grant if the grant is made during the trading day or the closing trading price on the day of grant if the grant is issued after markets have closed. Vesting is provided for at the discretion of the Board of Directors and the expiration of options is to be no greater than ten years from the date of grant.

The Company uses the fair value-based method of accounting for employee awards granted under both plans. The Company calculates the fair value of each stock option grant using the Black-Scholes option pricing model at the grant date. The stock-based compensation cost of the options is recognized as stock-based compensation expense over the relevant vesting period of the stock options using an estimate of the number of options that will eventually vest.

The ESPP, which is administered by the Board of Directors, allows eligible employees of the Company to purchase Common Shares through accumulated payroll deductions up to a maximum 15% of eligible compensation. The ESPP is implemented in consecutive offering periods with a new offering period commencing on the first trading day on or after February 1 and August 1 each year, or on such other date as the Board of Directors will determine and continuing thereafter until terminated in accordance with the Plan. Unless the Board of Directors provides otherwise, the purchase price will be equal to eighty-five percent (85%) of the fair market value of a Common Share on the offering date or the exercise date, whichever is lower.

The maximum number of Common Shares which will be available for sale under the ESPP is 113,333 Common Shares. There were 10,891 and 1,438 Common Shares issued under the ESPP during the three months ended March 31, 2024 and March 31, 2023, respectively.

Stock option transactions for the three months ended March 31, 2024 and March 31, 2023 are summarized as follows:

		Three months ended March 31, 2024	
	Options (in thousands)	Weighted average exercise price	Weighted average remaining contractual life (years)
Outstanding, beginning of period	1,184	$ 44.78	—
Granted	408	2.00	—
Exercised	—	—	—
Forfeited	(87)	11.46	—
Outstanding, end of the period	1,505	$ 34.98	7.04
Exercisable, end of the period	896	$ 53.41	5.56
Vested and expected to vest, end of period	1,340	$ 36.76	7.03

		Three months ended March 31, 2023	
	Options (in thousands)	Weighted average exercise price	Weighted average remaining contractual life (years)
Outstanding, beginning of period	1,100	$ 52.20	—
Granted	215	8.40	—
Exercised	—	0.00	—
Forfeited	(59)	18.00	—
Outstanding, end of the period	1,256	$ 46.65	7.01
Exercisable, end of the period	733	$ 62.55	5.54
Vested and expected to vest, end of period	1,162	$ 48.30	6.84

As of March 31, 2024, there was $1.12 million of total unrecognized compensation cost related to non-vested stock options, which is expected to be recognized over an estimated weighted-average period of 1.73 years. As of March 31, 2024, total compensation cost not yet recognized related to grants under the ESPP was approximately $7 thousand, which is expected to be recognized over four months.

The following table presents the weighted average assumptions that were used in the Black-Scholes option pricing model to determine the fair value of stock options granted during the period, and the resulting weighted-average fair values:

	Three months ended March 31, 2024	Three months ended March 31, 2023
Risk-free interest rate	4.07 %	3.41 %
Expected dividend yield	—	—
Expected volatility	83.1 %	80.3 %
Expected life of options (years)	5 years	5 years
Grant date fair value	$ 1.36	$ 6.60

The Company uses historical data to estimate the expected dividend yield and expected volatility of its Common Shares in determining the fair value of stock options. The expected life of the options represents the estimated length of time the options are expected to remain outstanding.

The following table presents the vesting terms of options granted in the period:

	Three months ended March 31, 2024 Number of options (in thousands)	Three months ended March 31, 2023 Number of options (in thousands)
3-year vesting (50%-25%-25%)	20	48
4-year vesting (50%-16 2/3%-16 2/3%-16 2/3%)	388	167
Total stock options granted in the period	408	215

The Company has a stock incentive plan (SIP) pursuant to which the Board may grant stock-based awards comprised of restricted stock units or dividend equivalents to employees, officers, consultants, independent contractors, advisors and non-employee directors of the Company. Each restricted unit is automatically redeemed for one common share of the Company upon vesting. During the three-month period ended March 31, 2024, the Company granted nil (March 31, 2023 - 38,000) restricted stock units ("RSUs") with immediate vesting and an exercise price of $9.90. On February 6, 2023, all of these RSUs were redeemed for 38,000 Common Shares. The following table presents the vesting and redemption of the RSUs granted in the three months ended March 31, 2024 and 2023.

	Three months ended March 31, 2024		Three months ended March 31, 2023	
	Number of options (in thousands)	Weighted average grant date fair value	Number of options (in thousands)	Weighted average grant date fair value
Outstanding, beginning of period	—	$ —	—	$ —
Granted	—	—	38	9.90
Vested and redeemed	—	—	(38)	9.90
Outstanding, ending of period	—	$ —	—	$ —

b.Share-based payment expense

The Company recorded share-based payment expense related to stock options and RSUs as follows:

	Three months ended March 31, 2024	Three months ended March 31, 2023
Research and development	$ 328	$ 652
General and administrative	481	1,222
	$ 809	$ 1,874

13.Subsequent events

In April 2024, the Company issued 510,101 Common Shares to Keystone at an average price of $1.36 per Common Share for cash proceeds of $694,000. In April 2024, the Company's issuances of Common Shares to Keystone reached the Total Commitment of the Committed Equity Facility, i.e. 19.99% of the Common Shares outstanding immediately prior to the execution of the 2023 Committed Equity Facility Agreement.

Subsequent to March 31, 2024, the Company issued 81,591 Common Shares under this 2022 ATM Facility at an average price of $1.22 for gross proceeds of $100 thousand ($97 thousand net of share issuance costs).

On April 2, 2024, the Company received a letter (the "Notification Letter") from Nasdaq stating that the Company was not in compliance with Nasdaq Listing Rule 5550(b)(1) (the "Rule") because the stockholders' equity of the Company as of December 31, 2023, as reported in the Company's Annual Report on Form 10-K, was below the minimum requirement of $2.5 million (the "Stockholders' Equity Requirement"). The Company's stockholder's equity as of March 31, 2024 was positive $0.1 million. As of the date of this report, the Company does not have a market value of listed securities of $35 million, or net income from continued operations of $500,000 in the most recently completed fiscal year or in two of the last three most recently completed fiscal years, the alternative quantitative standards for continued listing on the Nasdaq Capital Market. The Notification Letter received has no immediate effect on the Company's continued listing on the Nasdaq Capital Market, subject to the Company's compliance with the other continued listing requirements. Pursuant to Nasdaq's Listing Rules, the Company has 45 calendar days to submit a plan to evidence compliance with the Rule (a "Compliance Plan"). The Company intends to submit a Compliance Plan within the required time, although there can be no assurance that the Compliance Plan will be accepted by Nasdaq. If the Compliance Plan is accepted by Nasdaq, the Company will be granted an extension of up to 180 calendar days from April 2, 2024 to evidence compliance with the Rule. In the event the Compliance Plan is not accepted by Nasdaq, or in the event the Compliance Plan is accepted but the Company fails to evidence compliance within the extension period, the Company will have the right to a hearing before Nasdaq's Hearing Panel. The hearing request would stay any suspension or delisting action pending the conclusion of the hearing process and the expiration of any additional extension period granted by the panel following the hearing. The Company intends to submit the Compliance Plan on or before May 17, 2024, monitor its stockholders' equity and, if appropriate, consider further available options to evidence compliance with the Stockholders' Equity Requirement.

In response to the 2024 Deficiency Letter from Nasdaq received on February 29, 2024 regarding the Private Placement with Hanmi, the Company submitted a plan to regain compliance on April 15, 2024. On April 25, 2024, the Company received a letter (the "April Letter") from the Listing Qualifications Department (the "Staff") of Nasdaq notifying the Company of the Staff's determination that the Company had regained compliance with Nasdaq Listing Rule 5635(d) and the Staff has determined that the matter is now closed. Pursuant to the Company's plan to regain compliance, on April 26, 2024, the Company announced that it had amended the warrant agreement with Hanmi to prohibit the exercise of the Hanmi warrants in excess of the Nasdaq 19.99% limitation (the "Nasdaq 19.99% cap"), unless shareholder approval is first obtained to exceed the Nasdaq 19.99% Cap.

On April 29, 2024, the Company entered into (a) a Second Amended and Restated Executive Employment Agreement with its Chairman, President, and Chief Executive Officer, Dr. William G. Rice (the "Rice Amendment"); (b) an Amended and Restated Executive Employment Agreement with its Senior Vice President and Chief Medical Officer, Dr. Rafael Bejar (the "Bejar Amendment"); and (c) an Amended and Restated Executive Employment Agreement with its Senior Vice President, Chief Financial Officer, Chief Business Officer, and Corporate Secretary, Mr. Fletcher Payne (the "Payne Amendment"), each of which amended the compensation agreements currently in place with such individuals to harmonize the change of control provisions in the compensation agreements of such individuals.

The Rice Amendment updated the terms of the severance paid to Mr. Rice in connection with a change of control and its potential tax consequences. The amendment also clarified Mr. Rice's job description and compensation package. Mr. Rice's annual base salary increased to $648,960 as of January 1, 2024. Mr. Rice is entitled to receive an annual bonus of up to 55% of his current base salary and an annual automobile allowance of $18,000. All other terms of Mr. Rice's employment agreement remain in full force and effect.

The Bejar Amendment increased Mr. Bejar's annual base salary to $509,600 as of January 1, 2024 and updated the terms of the severance paid to Mr. Bejar in connection with a change of control. The amendment also added the title of Senior Vice President to Mr. Bejar's position, and added a provision requiring Mr. Bejar's cooperation in any internal investigation, any administrative, regulatory or judicial investigation or proceeding, or any dispute with a third party. All other terms of Mr. Bejar's employment agreement remain in full force and effect.

The Payne Amendment increased Mr. Payne's annual base salary to $479,440 as of January 1, 2024 and updated the terms of the severance paid to Mr. Payne in connection with a change of control. The amendment also added the titles of Chief Business Officer and Corporate Secretary to Mr. Payne's position. All other terms of Mr. Payne's employment agreement remain in full force and effect.

ITEM 2 – **MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

This Quarterly Report on Form 10-Q contains certain 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, and is subject to the safe harbor created by those sections. For more information, see "*Cautionary Note Regarding Forward-Looking Statements.*" *When reviewing the discussion below, you should keep in mind the substantial risks and uncertainties that impact our business. In particular, we encourage you to review the risks and uncertainties described in* "*Risk Factors*" *in our Annual Report on Form 10-K for the year ended December 31, 2023. These risks and uncertainties could cause actual results to differ materially from those projected or implied by our forward-looking statements contained in this report. These forward-looking statements are made as of the date of this management's discussion and analysis, and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law.*

The following discussion should be read in conjunction with our condensed consolidated financial statements and accompanying notes thereto contained in this Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, and with our audited consolidated financial statements and accompanying notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2023.

All amounts are expressed in United States dollars unless otherwise stated.

OVERVIEW

Aptose Biosciences Inc. ("Aptose," the "Company," "we," "us," or "our") is a science-driven clinical stage biotechnology company committed to the development and commercialization of precision medicines addressing unmet clinical needs in oncology, with an initial focus on hematology. The Company's small molecule cancer therapeutics pipeline includes products designed to provide single agent efficacy and to enhance the efficacy of other anti-cancer therapies and regimens without overlapping toxicities. The Company's executive offices are located in San Diego, California, and our head office is located in Toronto, Canada.

Aptose Programs

Tuspetinib, ("Tuspetinib" or "TUS"), Aptose's lead program, is being developed for frontline combination therapy in newly diagnosed acute myeloid leukemia ("AML") patients to unlock the most significant patient impact and greatest commercial opportunity. AML is a highly aggressive cancer of the bone marrow and blood, and there is a tremendous unmet need for a therapy that can extend survival of newly diagnosed AML patients and improve their quality of life. Newly diagnosed AML patients typically fail all frontline (1L) therapies, and responses to subsequent salvage therapies in the relapsed or refractory (R/R) setting are limited, highlighting the need for a more effective triple drug ("triplet") combination therapy to increase survival in the frontline setting.

Current standard of care treatment in the 1L setting for many newly diagnosed AML patients includes a doublet combination of venetoclax and a hypomethylating agent (VEN+HMA). Exploratory triplet therapies using current agents added to VEN+HMA have achieved notable response rates but are inadequate because of toxicities and the limited activity across subpopulations of AML patients. In contrast, tuspetinib is a convenient, orally administered, once-daily kinase inhibitor that targets select kinases operative in AML and exerts broad activity across AML populations with adverse genetics. However, tuspetinib avoids kinases that typically cause toxicities associated with other kinase inhibitors and has demonstrated an excellent safety profile. These properties position tuspetinib as an ideal agent for addition to the VEN+HMA backbone therapy to create a superior triplet (TUS+VEN+HMA) frontline therapy to treat newly diagnosed AML.

The goal for the tuspetinib program is to rapidly move the TUS+VEN+HMA triplet into newly diagnosed AML patients, and a triplet pilot study in newly diagnosed AML patients is planned to begin the summer of 2024 and deliver important clinical data (CR and MRD negativity rates, safety, and survival) over the following 6 to 12 months. It was essential to understand the safety, tolerability, and response activities of tuspetinib as a single agent and as the TUS+VEN doublet combination before advancing to the TUS+VEN+HMA triplet. We therefore performed a clinical trial of TUS single agent in patients with relapsed or refractory (R/R) AML and then performed a trial with the TUS+VEN doublet therapy in R/R AML patients and are now prepared to move into the TUS+VEN+HMA triplet pilot study in newly diagnosed AML patients.

To be precise, we have now completed a dose escalation and dose exploration international Phase 1/2 clinical trial to assess the safety, tolerability, pharmacokinetics, pharmacodynamic responses, and efficacy of TUS single agent in patients with R/R AML. Significant bone marrow blast reductions and clinical responses without dose limiting toxicities were achieved at four dose levels across a broad diversity of mutationally-defined AML populations and with a highly favorable safety profile. Tuspetinib to date has demonstrated a favorable safety profile and has caused no drug-related QTc prolongations, liver or kidney toxicities, muscle damage, or differentiation syndrome, and no myelosuppression with continuous dosing of patients in remission. At a dose of 80 mg, tuspetinib demonstrated notable response rates in R/R AML patients that had never been treated with venetoclax (VEN-naive AML): CR/CRh=36% among all-comers, CR/CRh=50% among patients with mutated FLT3, and CR/CRh=25% in patients with wildtype FLT3.

Following completion of the single agent dose escalation and exploration trial, tuspetinib advanced into the APTIVATE expansion trial of the Phase 1/2 program to evaluate the TUS+VEN doublet in R/R AML patient populations. The TUS+VEN doublet combination therapy maintained a favorable safety profile: no new or unexpected safety signals were observed, and there were no reported drug-related adverse events of QTc prolongation, differentiation syndrome, or deaths. The TUS+VEN doublet combination also achieved significant bone marrow reductions and clinical responses in heavily pretreated R/R AML patients, including those with mutated TP53, mutated NKRAS, wildtype or mutated FLT3, and those who failed prior therapy with venetoclax ("Prior-VEN") or FLT3 inhibitors ("Prior-FLT3i").

Collectively, the clinical safety and efficacy data with TUS single agent and TUS+VEN doublet in R/R AML patients position tuspetinib for development as the TUS+VEN+HMA triplet in newly diagnosed AML patients. Newly diagnosed AML patients are VEN-naïve, FLT3i-naïve, and HMA-naïve – this patient population is expected to be highly responsive to a tuspetinib-containing triplet therapy. Based on the safety and efficacy profile of tuspetinib, we believe that tuspetinib as part of the TUS+VEN+HMA triplet, if approved, could establish a new standard of care therapy for newly diagnosed patients with mutated or unmutated FLT3 and in patients with other adverse genetics. These beliefs related to the potential patient treatment and commercial opportunities are based on management's current assumptions and estimates, which are subject to change, and there can be no assurance that tuspetinib will ever be approved or successfully commercialized and, if approved and commercialized, that it will ever generate significant revenues. See our "Risk Factors – "We are an early-stage development company with no revenues from product sales." and "We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability." in our Annual Report on Form 10-K filed with the SEC on March 26, 2024.

Luxeptinib ("LUX") is an orally administered, highly potent kinase inhibitor that selectively targets defined clusters of kinases that are operative in hematologic malignancies. LUX has demonstrated clinical activity in R/R AML and in R/R B-cell cancer patients but was not consistently achieving the desired exposure levels to drive responses. Absorption of the original G1 formulation hindered the effectiveness of luxeptinib, so a new G3 formulation was developed. Clinical evaluation of the G3 formulation has been completed in a single dose bioavailability study across five dose levels and then with continuous dosing using two different dose levels. The G3 formulation achieved our desired plasma exposure benchmark, with approximately 10-fold better absorption, and better tolerability than the original formulation. We are seeking alternative development paths and collaborations for LUX.

PROGRAM UPDATES

Tuspetinib

Indication and Clinical Trials:

Tuspetinib is an oral, highly potent, small molecule inhibitor of kinases operative in myeloid malignancies and known to be involved in tumor proliferation, resistance to therapy and differentiation. Preclinical *in vitro* and *in vivo* studies suggest that Tuspetinib may be an effective monotherapy and combination therapy in patients with hematologic malignancies including AML. An international Phase 1/2 clinical trial in patients with relapsed or refractory AML is ongoing. The dose escalation portion of this study to date has observed evidence of robust clinical activity, including multiple complete responses in R/R AML patients with various disease genotypes, and no toxicity trends that should prevent further dose escalation.

The FDA granted orphan drug designation to tuspetinib for the treatment of patients with AML in October 2018. Orphan drug designation is granted by the FDA to encourage companies to develop therapies for the treatment of diseases that affect fewer than 200,000 individuals in the United States. Orphan drug status provides research and development tax credits, an opportunity to obtain grant funding, exemption from FDA application fees and other benefits. The orphan drug designation also provides us with seven additional years of marketing exclusivity in this indication.

Manufacturing:

Following the Tuspetinib licensing agreement between Aptose and Hanmi on November 4, 2021 (the "Tuspetinib Licensing Agreement"), Aptose received from Hanmi an existing inventory of drug product expected to support continuation of the current Phase 1/2 study. The Company and Hanmi also entered into a separate supply agreement in 2022 for additional production of new drug substance and drug product to support further clinical development. Additional batches of API and drug product have been produced by other companies during 2022 and 2023.

Program Updates at Recent Scientific Forums:

On December 9, 2023, Aptose featured tuspetinib in an oral presentation at the 65th American Society of Hematology (ASH) Annual Meeting and Exposition and announced that a growing body of clinical data for Aptose's lead compound tuspetinib, demonstrates significant benefit as a single agent and in combination with venetoclax in patients with R/R AML in the ongoing APTIVATE Phase 1/2 study. Data were presented in an oral presentation by lead investigator Naval G. Daver, M.D., Professor, Director Leukemia Research Alliance Program, Department of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, TX.

Dr. Daver reported data from more than 100 relapsed/refractory patients from multiple international clinical sites, who had failed prior therapy and then were treated with TUS as a single agent or TUS+VEN. Both TUS and TUS+VEN delivered multiple composite complete remissions (CRc) in this very ill AML population, while maintaining a favorable safety profile across all treated patients. The data demonstrated tuspetinib is active and well tolerated in one of the most challenging and heterogeneous disease settings in oncology – relapsed and refractory AML. Tuspetinib demonstrated broad activity, including activity in patients with FLT3 wild-type AML (accounting for more than 70% of the AML population), FLT3 mutated AML, NPM1 mutated AML, as well as in patients with mutations historically associated with resistance to targeted therapy. Most notably, TUS targets VEN resistance mechanisms, enabling TUS+VEN uniquely to treat the very ill prior-VEN AML population, including both FLT3 mutant and FLT3 wildtype disease. From a broader perspective, the growing body of antileukemic activity, and continued favorable safety profile, support advancement of tuspetinib in a TUS+VEN+HMA triplet for the treatment of frontline newly diagnosed AML patients."

Dr. Daver also pointed out that while patients on the TUS+VEN therapy are early in their treatment cycles, most achieving a response remained on treatment and that responses have begun to mature as dosing continues. Highlights of Dr. Daver's ASH oral presentation include:

•As a single agent at therapeutic doses of 80-160 mg in 68 evaluable patients, TUS was more active in VEN-naive patients, with an overall CRc rate of 29% (8/28). This included a 42% CRc rate (5/12) in FLT3-mutated patients and a 19% CRc rate (3/16) in FLT3-unmutated, or wildtype, AML patients. Responses and blood counts improved with continuous dosing, many patients bridged to an allogeneic stem cell transplant ("HSCT"), durability was observed when HSCT was not performed, and 80 mg was selected as the RP2D. Overall, tuspetinib showed a favorable safety profile with only mild adverse events ("AEs") and no dose-limiting toxicities ("DLTs") up to 160 mg per day, and no drug discontinuations from drug-related toxicity.

•In the TUS+VEN doublet study, 49 patients were dosed with 80 mg of tuspetinib and 200 mg of venetoclax, with 36 evaluable (and 13 patients too early to assess). Patients were heavily exposed to Prior-VEN and Prior-FLT3 inhibitor treatment. TUS+VEN was active in both VEN-naive and prior Prior-VEN R/R AML patients. TUS demonstrated compelling composite complete remission (CRc) rates. Among all evaluable patients, TUS+VEN demonstrated a CRc rate of 25% (9/36); 43% (3/7) in VEN-naive patients, and 21% (6/29) in Prior-VEN patients. Among FLT3 wildtype patients, TUS+VEN demonstrated an overall CRc rate of 20% (5/25); 33% (2/6) in VEN-naive patients, and 16% (3/19) in Prior-VEN patients. Among FLT3 mutant patients, TUS+VEN demonstrated an overall CRc rate of 36% (4/11); a complete response in a VEN-naive patient (1/1); a 30% (3/10) in Prior-VEN patients; and 44% (4/9) in patients treated prior with a FLT3 inhibitor.

On October 29, 2023, Aptose presented two posters related to the clinical and preclinical activity of tuspetinib at the European School of Haematology 6th International Conference: Acute Myeloid Leukemia "Molecular and Translational": Advances in Biology and Treatment, held October 29-31, 2023, in Estoril, Portugal. Clinical findings included 1) data from the APTO-TUS-HV01 clinical trial (the "Food Effect Study") evaluating the pharmacokinetic (PK) properties of tuspetinib in healthy human volunteers in which tuspetinib was administered with our without food, and 2) from an international Phase 1/2 study of tuspetinib as a single agent (TUS) and in combination with venetoclax in patients with R/R AML from across clinical centers in the United States, South Korea, Spain, Australia and other sites. Data from the Food Effect Study in healthy human volunteers demonstrated tuspetinib can be administered with or without food and foresee no clinically meaningful difference in exposure. This is an important finding for patient convenience, as venetoclax is dosed with food and tuspetinib can now be co-administered with venetoclax rather than in staggered dosing. Findings from the Phase 1/2 clinical trial demonstrated tuspetinib as a single agent was well-tolerated and highly active among R/R AML patients with a diversity of adverse genotypes and delivered a 42% CR/CRh cross-evaluable venetoclax (VEN) naive patients at the 80mg daily RP2D. The TUS+VEN doublet has been well tolerated in the APTIVATE international Phase 1/2 expansion trial in R/R AML patients and achieved multiple responses in patients who previously failed venetoclax ("Prior-VEN failure AML"), including Prior-VEN failure patients who also previously failed FLT3 inhibitors, all of whom represent emerging populations of high unmet medical need. Notably, tuspetinib targets venetoclax resistance mechanisms that may re-sensitize Prior-VEN failure patients to venetoclax.

Separate from the clinical studies, the preclinical study (entitled: "Tuspetinib Oral Myeloid Kinase Inhibitor Creates Synthetic Lethal Vulnerability to Venetoclax") presented by Aptose during the ESH Conference investigated the effects of tuspetinib on key elements of the phosphokinome and apoptotic proteome in both parental and TUS-resistant AML cells. In parental cells, tuspetinib inhibits key oncogenic signaling pathways and shifts the balance of pro- and anti-apoptotic proteins in favor of apoptosis, suggesting that it may generate vulnerability to venetoclax. In addition, acquired resistance in the AML cells to tuspetinib generated a synthetic lethal vulnerability to venetoclax of unusually high magnitude. Concurrent administration of TUS+VEN therefore may discourage the emergence of resistance to tuspetinib during treatment.

In conjunction with poster presentations at the ESH Conference, on October 30, 2023, Aptose held a "Clinical Update and KOL Data Review of AML Drug Tuspetinib" that was webcast and featured Dr. Naval Daver, MD, Professor, Director Leukemia Research Alliance Program, Department of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, Texas. Dr. Daver is the lead investigator on Aptose's APTIVATE trial and is recognized for significant achievements in the development of novel AML treatments, including several combination therapies. Aptose presented data in 49 patients who received the TUS+VEN doublet, showing an overall response rate ("ORR") of 48% among all patients that had achieved an evaluable stage, as well as a 44% ORR among Prior-VEN failure AML patients, including FLT3-unmutated ("wildtype") patients (43% ORR) and FLT3-mutated patients (60% ORR), some of whom also had failed prior therapy with FLT3 inhibitors. The TUS+VEN doublet was well tolerated with no unexpected safety signals. The TUS+VEN doublet may serve the Prior-VEN failure R/R AML patients that represent a rapidly growing population that is highly refractory to any salvage therapy. The compelling data with the TUS+VEN doublet in R/R AML patients suggest a TUS+VEN+HMA triplet may also serve the needs of frontline (1L) newly diagnosed AML patients.

Concurrent with the European Hematology Association (EHA) Annual Congress held June 8-11, 2023, Aptose held an interim clinical update webcast on June 10, 2023, to present highlights from the ongoing clinical development of tuspetinib. Aptose reported completion of the tuspetinib dose escalation and dose exploration Phase 1/2 trial in 77 R/R AML patients, tuspetinib demonstrated a favorable safety profile, and tuspetinib delivered monotherapy responses across four dose levels with no dose-limiting toxicity in mutationally diverse and difficult to treat R/R AML populations, including patients with highly adverse mutations that typically do not respond to monotherapy or combination therapy: TP53-mutated patients with a CR/CRh = 20% and RAS-mutated patients with a CR/CRh = 22%. Aptose also reported completion of a successful End of Phase 1 Meeting with the US FDA for tuspetinib, that a monotherapy RP2D was selected as 80mg daily, and that all development paths remain open, including the single arm accelerated path. Following completion of the dose escalation and dose exploration phases of the Phase 1/2 clinical program, Aptose focused attention on the tuspetinib APTIVATE expansion trial. The APTIVATE trial is designed to identify patient populations sensitive to tuspetinib monotherapy that may serve as development paths for single arm accelerated approval and to use the TUS+VEN doublet in R/R AML patients and identify patient populations of unmet need that are sensitive to the TUS+VEN doublet and can serve as development paths for accelerated and full approvals. We reported that patient enrollment in the APTIVATE expansion trial has been brisk and preliminary CR activity had already been reported in patients receiving the TUS+VEN doublet who previously failed therapy with venetoclax. During the interim clinical update webcast Aptose also reviewed clinical findings with the new G3 formulation of luxeptinib. Aptose disclosed that continuous dosing with 50mg of the G3 formulation achieves roughly an equivalent pharmacokinetic profile as 900mg original G1 formulation, and that dose escalation with the G3 formulation was anticipated.

On March 23, 2023, Aptose announced the APTIVATE Phase 1/2 expansion trial with tuspetinib had been initiated and already had treated several R/R AML patients in the monotherapy arm, and that patient enrollment had been initiated in the doublet combination treatment arm of the APTIVATE trial with the TUS+VEN doublet. Since then, patients have continued to enroll and receive tuspetinib on the monotherapy arm. Plus, enrollment and dosing of patients on the TUS+VEN doublet arm have been brisk. Clinical investigator interest for tuspetinib is evident, and early signs of antileukemic activity during the APTIVATE trial have fueled the level of excitement for the trial.

Clinical responses to monotherapy with tuspetinib have been observed in a broad range of mutationally defined populations, including those with mutated forms of NPM1, MLL, TP53, DNMT3A, RUNX1, wild-type FLT3, ITD or TKD mutated FLT3, various splicing factors, and other genes. In the March 23, 2023, announcement, Aptose also highlighted an unexpected observation of a 29% CR/CRh response rate with tuspetinib monotherapy in R/R AML patients having mutations in the RAS gene or other genes in the RAS pathway. Responses in RAS-mutated patients are important because the RAS pathway is often mutated in response to therapy by other agents as the AML cells mutate toward resistance to those other agents. Collectively, these observations of broad clinical activity of tuspetinib, along with its favorable safety profile, position tuspetinib for potential accelerated development paths, as well as for doublet, triplet and maintenance therapy indications.

On January 30, 2023, Aptose announced dosing of patients in the APTIVATE Phase 1/2 clinical trial of tuspetinib, and that another clinical response has been achieved by a R/R AML patient receiving 40 mg tuspetinib once daily orally in the original dose exploration trial, the second response at the recently launched low-dose 40 mg cohort. In addition, Aptose elucidated a rationale for the superior safety profile of tuspetinib. While several kinase inhibitors require high exposures that exert near complete suppression of a single target to elicit responses, those agents often cause additional toxicity because they also cause extensive inhibition of that target in normal cells. In contrast, tuspetinib simultaneously suppresses a small suite of kinase-driven pathways critical for leukemogenesis. Consequently, tuspetinib achieves clinical responses at lower exposures with less overall suppression of each pathway, thereby avoiding many of the toxicities observed with competing agents.

On March 26, 2024 Aptose announced that more than 170 patients to date received TUS alone or in combination with the BCL-2 inhibitor venetoclax (VEN) during the Phase 1/2 clinical program in the very ill relapsed or refractory (R/R) AML patient population. At the single agent 80 mg dose, TUS achieved a favorable safety profile and an impressive response rate among patients who were naive to VEN. The safety profile of TUS remained favorable when TUS was combined with VEN in R/R AML patients, and responses were achieved in both patients naive to VEN and those who failed prior therapy with VEN. TUS avoids many typical toxicities observed with other agents and achieves broad activity across AML patients with a diversity of adverse genetics. Tuspetinib is now being advanced to a triplet combination therapy of tuspetinib, venetoclax and a hypomethylating agent (TUS/VEN/HMA) for the frontline treatment of newly diagnosed AML patients ineligible for induction chemotherapy.

Luxeptinib

Indication and Clinical Trials:

Luxeptinib is an oral, highly potent kinase inhibitor that selectively targets defined kinases operative in myeloid and lymphoid hematologic malignancies. This small molecule has been evaluated in a Phase 1a/b study for the treatment of patients having R/R B-cell leukemias and lymphomas and in a Phase 1a/b study for the treatment of patients with R/R AML or hr-MDS. These clinical studies demonstrated tumor shrinkage among B-cell cancer patients, including a CR in a diffuse large B-cell lymphoma patient that was determined via biopsy analysis at the end of Cycle 22 with 900mg BID dosing of the original G1 formulation. Likewise, an MRD-negative CR in one R/R AML patient occurred with 450mg BID dosing of the original G1 formulation. Because absorption of the original G1 formulation hampered effectiveness of luxeptinib, a new G3 formulation was developed. Enrollment of patients in the B-cell malignancy trial and the AML trial have been completed, and clinical evaluation of the G3 formulation has been completed. The G3 formulation was determined to deliver superior plasma exposure levels relative to the original G1 formulation, and any future trial with luxeptinib should use the G3 formulation. Regarding potential next steps with luxeptinib, recent therapeutic strategies with CLL B-cell cancer patients typically involve therapy with certain BTK inhibitors in combination with venetoclax (VEN). Drug resistance has begun to emerge in a molecularly defined subgroup of these patients, and the drug resistance has been correlated with mutations in the FLT3 receptor. Although FLT3 mutations are typically associated with AML patients, these R/R CLL prior-BTKi/Prior-VEN/FLT3-mutated patients are difficult to treat and represent a potential commercial market of approximately $200 million by 2039. The Dana Farber Cancer Institute identified this emerging patient population and has requested luxeptinib be tested as part of an investigator sponsored trial in combination with VEN in the R/R CLL prior-BTKi/Prior-VEN/FLT3-mutated patients. Non-clinical studies are underway to position LUX+VEN for the treatment of these patients, and efforts are underway to identify sources of capital to support such a trial to develop LUX for a molecularly defined CLL subpopulation with a high unmet medical need.

During the fourth quarter of 2022, we completed dosing of the first, second, third, fourth, fifth, and sixth dose levels (150 mg, 300 mg, 450 mg, 600 mg, 750 mg, and 900 mg BID, respectively) of the original G1 formulation in the Phase 1 a/b trial in patients with B-cell leukemias and lymphomas. Among enrolled patients at that time with an array of B-cell malignancies, we had observed inhibition of phospho-BTK and “on-target” lymphocytosis in patients with classic CLL and modest tumor reductions in patients with different tumor types, indicating target engagement and pharmacologic activity of luxeptinib. During the ASH Annual Meeting in December 2022, we announced that a CR was achieved with a diffuse large B-cell lymphoma patient at the 900 mg dose level of the original G1 formulation, demonstrating luxeptinib is active in certain B-cell malignancies.

As part of the ongoing dose escalation of the current formulation of luxeptinib in patients with B-cell malignancies and AML, Aptose has made significant progress in the development of a G3 formulation that could reduce total API administered, reduce pill burden, improve absorption, and increase exposure. Aptose began testing this new G3 formulation of luxeptinib as a single dose with 72-hour pharmacokinetics ("PK") analysis in the ongoing studies in patients with hematologic malignancies in the first half of fiscal 2022. On March 22, 2022, we announced that the preliminary PK findings with the G3 formulation were encouraging, and the exploration of the G3 formulation was ongoing.

Exploration of the PK properties of single dose administration of 10mg, 20mg, 50mg, 100mg, and 200mg dose levels with the G3 formulation have been completed. On September 12, 2022 we announced that initial PK modeling studies predict up to an 18-fold improvement in plasma steady-state exposure by the G3 formulation relative to the original formulation, and that Aptose plans to move forward with the development of the G3 formulation in AML patients under continuous dosing conditions to determine if G3 can deliver desired exposures and clinical responses while continuing to demonstrate a favorable safety profile.

On March 23, 2023, Aptose announced that during the fourth quarter of 2022, continuous dosing had been initiated with the new G3 formulation of luxeptinib in the ongoing Phase 1 a/b clinical trial in patients with R/R AML. Initial PK data from continuous dosing of the 50 mg G3 formulation show plasma exposure levels roughly equivalent to the 900mg dose (18-fold greater dose) of the original G1 formulation. Aptose will be reviewing all data with the data monitoring committee and will make the determination to escalate and at what dose.

Concurrent with the EHA Annual Congress held June 8-11, 2023, Aptose held an interim clinical update webcast on June 10, 2023. During the update, Aptose reviewed clinical findings with the new G3 formulation of luxeptinib. Aptose confirmed that continuous dosing with 50mg of the G3 formulation in multiple patients achieves roughly an equivalent pharmacokinetic profile as 900mg original G1 formulation, and that dose escalation with the G3 formulation was anticipated.

Research on luxeptinib continues, and a non-clinical article was published during the first quarter of 2023 in *PLoS One*, a highly respected online scientific publication. Titled, “Luxeptinib interferes with LYN-mediated activation of SYK and modulates BCR signaling in lymphoma,” the article helps elucidate the mechanism by which luxeptinib suppresses the B-cell receptor pathway in a manner distinct from the BTK inhibitor ibrutinib. Luxeptinib was more effective than ibrutinib at reducing both steady state and anti-IgM-induced phosphorylation of the LYN and SYK kinases upstream of BTK where ibrutinib has little or no effect, suggesting luxeptinib can play a role in B-cell malignancies and inflammatory diseases distinct from ibrutinib and other BTK inhibitors.

In a separate line of non-clinical research with luxeptinib, a group from the University of Texas MD Anderson Cancer Center led by Dr. Michael Andreeff published an article in June 2023 in the journal *Haematologica*. The article was entitled “Concomitant targeting of FLT3 and BTK overcomes FLT3 inhibitor resistance in acute myeloid leukemia through the inhibition of autophagy,” and the findings highlight the potential for co-targeting of FLT3/BTK/aurora kinases by luxeptinib to overcome resistance to certain FLT3 targeted therapies in AML, which is urgently needed.

On March 26, 2024, Aptose announced that during 2023 and early 2024, clinical evaluation of the new G3 formulation of LUX was completed. The G3 formulation was tested in a single dose bioavailability study in 20 patients, including both B-cell cancer and AML patients, and across 5 dose levels (10mg to 200mg). The G3 formulation then was evaluated in R/R AML patients with continuous dosing using two different dose levels (50mg BID and 200mg BID) in a total of 11 patients. Data demonstrated the G3 formulation dosed at 200mg twice daily can achieve 2-3uM steady state plasma levels, with approximately 10-fold better absorption and better tolerability than the original G1 formulation. Thus, the G3 formulation achieved the desired plasma exposure benchmark and can serve as the formulation of choice for future studies with LUX. Aptose is exploring alternative development paths and collaborations to advance LUX as a single agent or in combination with VEN to treat defined R/R patient populations of high unmet need.

Other corporate matters

On April 2, 2024, the Company received the Notification Letter from Nasdaq stating that the Company was not in compliance with Nasdaq Listing Rule 5550(b)(1) (the “Rule”) because the stockholders’ equity of the Company as of December 31, 2023, as reported in the Company’s Annual Report on Form 10-K, was below the minimum requirement of $2.5 million (the "Stockholders’ Equity Requirement"). As of the date of this report, the Company does not have a market value of listed securities of $35 million, or net income from continued operations of $500 thousand in the most recently completed fiscal year or in two of the last three most recently completed fiscal years, the alternative quantitative standards for continued listing on the Nasdaq. The Notification Letter received has no immediate effect on the Company's continued listing on the Nasdaq, subject to the Company's compliance with the other continued listing requirements. Pursuant to Nasdaq’s Listing Rules, the Company has 45 calendar days to submit a plan to evidence compliance with the Rule (a “Compliance Plan”). The Company intends to submit a Compliance Plan within the required time, although there can be no assurance that the Compliance Plan will be accepted by Nasdaq. If the Compliance Plan is accepted by Nasdaq, the Company will be granted an extension of up to 180 calendar days from April 2, 2024 to evidence compliance with the Rule. In the event the Compliance Plan is not accepted by Nasdaq, or in the event the Compliance Plan is accepted but the Company fails to evidence compliance within the extension period, the Company will have the right to a hearing before Nasdaq’s Hearing Panel. The hearing request would stay any suspension or delisting action pending the conclusion of the hearing process and the expiration of any additional extension period granted by the panel following the hearing. The Company intends to submit the Compliance Plan on or before May 17, 2024, monitor its stockholders’ equity and, if appropriate, consider further available options to evidence compliance with the Stockholders’ Equity Requirement.

On February 29, 2024, the Company received the 2024 Deficiency Letter from the Nasdaq Listing Qualifications Department of Nasdaq notifying the Company that the Company's January 2024 Private Placement of securities to Hanmi violated 5635(d) because the Company did not obtain shareholder approval prior to such issuance. Nasdaq stated that the Private Placement involved the issuance of greater than 20% of the issued and outstanding Common Shares of the Company at a discount to the Nasdaq official closing price on January 25, 2024, the date of the subscription agreement between the Company and Hanmi. The 2024 Deficiency Letter has no immediate effect on the listing of the Company's Common Shares. In accordance with the Nasdaq Listing Rules, the Company was given forty-five (45) calendar days to submit a plan to regain compliance. The Company submitted a plan to regain compliance on April 15, 2024. On April 25, 2024, the Company received a letter from the Listing Qualifications Department (the "Staff") of Nasdaq notifying the Company of the Staff's determination that the Company had regained compliance with Nasdaq Listing Rule 5635(d) and the Staff has determined that the matter is now closed. Pursuant to the Company's plan to regain compliance, on April 26, 2024, the Company announced that it had amended the warrant agreement with Hanmi to prohibit the exercise of the Hanmi warrants in excess of the Nasdaq 19.99% limitation (the "Nasdaq 19.99% cap"), unless shareholder approval is first obtained to exceed the Nasdaq 19.99% Cap.

On May 23, 2023, our shareholders voted to approve special resolutions providing for an amendment to our articles of incorporation to effect the Reverse Stock Split at a ratio in the range of 1-for-10 to 1-for-20. Our Board of Directors then approved a ratio of 1-for-15 on May 23, 2023. On May 24, 2023, we filed articles of amendment under the CBCA to give effect to the reverse stock split (consolidation) of our Common Shares on the basis of one post-consolidation Common Share for each 15 pre-consolidation Common Shares. The Common Shares commenced trading on a post-Reverse Stock Split basis at market open on Tuesday, June 6, 2023. The Reverse Share Split was primarily intended to bring us into compliance with the minimum bid price requirement for maintaining the listing of the Common Shares on Nasdaq and to make the bid price more attractive to investors. On June 21, 2023, Nasdaq confirmed that we had regained compliance with the minimum bid price requirement. All references in this report to historical Common Share prices, numbers of Common Shares, and earnings per share calculations have been presented to reflect the effect of the Reverse Stock Split.

LIQUIDITY AND CAPITAL RESOURCES

Aptose is an early-stage development company, and we currently do not generate any revenues from our drug candidates. The continuation of our research and development activities and the commercialization of the targeted therapeutic products are dependent upon our ability to successfully finance and complete our research and development programs through a combination of equity financing and payments from strategic partners.

Sources of liquidity:

The following table presents our cash and cash equivalents, investments, working capital and stockholders' equity as of March 31, 2024 and December 31, 2023.

(in thousands)	Balances at March 31, 2024	Balances at December 31, 2023
Cash and cash equivalents	$ 7,346	$ 9,252
Investments	1,982	—
Total	$ 9,328	$ 9,252
Working capital	$ (318)	$ (3,375)
Stockholders' equity	$ 137	$ (2,901)

Working capital is a non-GAAP measure and represents primarily cash, cash equivalents, investments, prepaid expenses and other current assets less current liabilities. This financial measure provides a fuller understanding of the Company's capital available to fund future operations.

Management recognizes that in order for us to meet our capital requirements, and continue to operate, additional financing will be necessary. We plan to raise additional funds in order to fund our business operations. We will seek access to financing but there is no assurance that such additional funds will be available for us to finance our operations on acceptable terms, if at all. These conditions raise substantial doubt about the Company's ability to continue as a going concern. The Company's current cash, cash equivalents and investments will enable the support of operations through August 2024. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our ability to raise additional funds could be affected by adverse market conditions, the status of our product pipeline, possible delays in enrollment in our trial, and various other factors and we may be unable to raise capital when needed, or on terms favorable to us. If necessary funds are not available, we may have to delay, reduce the scope of, or eliminate some of our development programs, potentially delaying the time to market for any of our product candidates.

Our cash needs for the next twelve months include estimates of the number of patients and rate of enrollment of our clinical trials, the amount of drug product that we will require to support our clinical trials, and our general corporate overhead costs to support our operations, and our reliance on our manufacturers. We have based these estimates on assumptions and plans which may change and which could impact the magnitude and/or timing of operating expenses and our cash runway.

Since our inception, we have financed our operations and technology acquisitions primarily from equity financing, proceeds from the exercise of warrants and stock options, and interest income on funds held for future investment.

All our cash is maintained at high-credit quality institutions. We minimize the cash levels above the insurance levels required by the Federal Deposit Insurance Corporation and the Canada Deposit Insurance Corporation, with excess cash invested in short-term investments with leading financial institutions. Our short-term investments, maturing within 90 days and classified as Cash and cash equivalents, consist of high interest savings accounts and money market funds. Our short-term investments with maturities 90 days or more are classified as investments and consist of United States Treasury Bills.

Hanmi 2023 Equity Investment

On August 10, 2023, the Company entered into a binding term sheet with Hanmi whereby Hanmi agreed at their sole discretion to invest up to a maximum of $7 million in Aptose up to a total ownership of 19.99 percent of Aptose by Hanmi. On September 6, 2023, the Company entered into a subscription agreement with Hanmi, pursuant to which the Corporation agreed to sell 668,449 Common Shares to Hanmi for proceeds of $3 million.

January 2024 Public Offering and Private Placement

On January 31, 2024, we announced the closing of a $9.7 million public offering (the "Public Offering") and a $4 million private placement (the "Private Placement") with Hanmi Pharmaceutical. The Public Offering comprised 5,649,122 common shares of the Company (the "Common Shares") and warrants at a combined offering price of US $1.71 per share. This included 736,842 Common Shares and warrants pursuant to a full exercise by the underwriter of its over-allotment option (the "Over-Allotment Option"). The Private Placement comprised 2,105,263 Common Shares of the Company sold at a price of $1.90, representing an 11% premium over the price of the Common Shares issued as part of the Public Offering. Nasdaq subsequently issued a letter to the Company regarding the value and the date of the Private Placement, as discussed in this note, below. Financing costs of approximately $1.4 million included underwriting costs of 7% and approximately $0.4 million in professional fees. The Company also issued Hanmi warrants to purchase Common Shares at an exercise price of US $1.71 per Warrant Share.

2023 Committed Equity Facility

On May 25, 2023, we entered into the 2023 Committed Equity Facility Agreement, which provides that subject to the terms and conditions set forth therein, the Company has the right, but not the obligation, to sell to Keystone, and Keystone is obligated to purchase, up to the Total Commitment during the 24-month term of the 2023 Committed Equity Facility.

Under the 2023 Committed Equity Facility, and subject to its terms and conditions set forth, we may sell to Keystone up to the lesser of (i) $25.0 million of the Common Shares and (ii) a number of Common Shares equal to 19.99% of the Common Shares outstanding immediately prior to the execution of the 2023 Committed Equity Facility (subject to certain exceptions) (the "Total Commitment"), from time to time during the 24-month term of the 2023 Committed Equity Facility. Additionally, on May 25, 2023, we entered into a Registration Rights Agreement with Keystone, pursuant to which the Company agreed to file a registration statement with the SEC covering the resale of Common Shares that are issued to Keystone under the 2023 Committed Equity Facility. This registration statement became effective on June 30, 2023 and the 2023 Committed Equity Facility commencement date was July 12, 2023 (the "Commencement Date").

Upon entering into the 2023 Committed Equity Facility, the Company agreed to issue to Keystone an aggregate of 25,156 Commitment Shares as consideration for Keystone's commitment to purchase Common Shares upon the Company's direction under the 2023 Committed Equity Facility. The Company issued 7,547 Common Shares, or 30% of the Commitment Shares, on the date of the 2023 Committed Equity Facility and an additional 7,547 First Back-End Commitment Shares, or 30% of the Commitment Shares, were issued to Keystone 90 days following the Commencement date for nil cash proceeds. The remaining 10,062 Second Back-End

Commitment Shares, or 40% of the Commitment Shares, were issued to Keystone in January 2024, 180 days following the Commencement Date.

In the year ended December 31, 2023, the Company's issuance of Common Shares to Keystone comprised 720,494 Common shares sold to Keystone at an average price of $2.91 per Common share for cash proceeds of $2.1 million and the 15,094 Commitment Shares. In April 2024, the Company issued 510,101 Common Shares to Keystone at an average price of $1.36 per Common share for cash proceeds of $694,000. In April 2024, the Company's issuances of Common Shares to Keystone reached the Total Commitment of the Committed Equity Facility, i.e. 19.99% of the Common Shares outstanding immediately prior to the execution of the 2023 Committed Equity Facility Agreement.

At-The-Market Facility

All references in this report to historical Common Share prices, numbers of Common Shares, and earnings per share calculations have been presented to reflect the effect of the Reverse Stock Split.

On December 9, 2022, the Company entered into an equity distribution agreement pursuant to which the Company may, from time to time, sell Common Shares having an aggregate offering value of up to $50 million through Jones Trading Institutional Services LLC ("Jones Trading") on Nasdaq (the "2022 ATM Facility"). During the year ended December 31, 2023, the Company issued 336,690 Common Shares under the 2022 ATM Facility at an average price of $5.62 for gross proceeds of $1.9 million ($1.8 million net of share issuance costs). Subsequent to March 31, 2024, the Company issued 81,591 Common Shares under the 2022 ATM Facility at an average price of $1.22 for gross proceeds of $100 thousand ($97 thousand net of share issuance costs). Since inception, the Company has 423,117 Common Shares under this 2022 ATM Facility at an average price of $5.04 for gross proceeds of $2.1 million ($2.0 million net of share issuance costs).

Our ability to raise additional funds could be affected by adverse market conditions, the status of our product pipeline, possible delays in enrollment in our clinical trials, and various other factors and we may be unable to raise capital when needed, or on terms favorable to us. If the necessary funds are not available, we may need to delay, reduce the scope of, or eliminate some of our development programs, potentially delaying the time to market for any of our product candidates.

Cash flows:

The following table presents a summary of our cash flows for the three-month periods ended March 31, 2024 and 2023:

(in thousands)	Three months ended March 31, 2024	2023
Net cash provided by (used in):		
Operating activities	$ (11,763)	$ (11,302)
Investing activities	(1,991)	(2,960)
Financing activities	11,847	50
Effect of exchange rates changes on cash and cash equivalents	1	4
Net increase/(decrease) in cash and cash equivalents	$ (1,906)	$ (14,208)

Cash used in operating activities:

Our cash used in operating activities for the three-month periods ended March 31, 2024 and 2023 was approximately $11.8 million and $11.3 million, respectively.

Net cash used in operating activities was higher in the three-month period ended March 31, 2024, as compared to the three-month period ended March 31, 2023, due primarily to the reduction in accounts payable, partly offset by the reduction in operating expenses, as discussed further below (see “Results of Operations”). Our uses of cash for operating activities for both periods consisted primarily of salaries and wages for our employees, facility and facility-related costs for our offices and laboratories, fees and pass-through expenses paid in connection with preclinical and clinical studies, drug manufacturing costs, laboratory supplies and materials, and professional fees.

We do not expect to generate positive cash flow from operations for the foreseeable future as we incur additional research and development costs, including costs related to preclinical testing, clinical trials and manufacturing, as well as operating expenses associated with supporting these activities, and potential milestone payments to our collaborators. It is expected that negative cash flows will continue until such time, if ever, that we receive regulatory approval to commercialize any of our products under development and/or royalty or milestone revenue from any such products exceeds expenses.

Cash flow from (used in) investing activities:

Our cash used in investing activities for the three-month period ended March 31, 2024 and March 31, 2023 was $2.0 million and $3.0 million, and consisted of net acquisitions of investments.

The composition and mix of cash, cash equivalents and investments is based on our evaluation of conditions in financial markets and our near-term liquidity needs. We have exposure to credit risk, liquidity risk and market risk related to our investments. The Company manages credit risk associated with its cash and cash equivalents and investments by maintaining minimum standards of R1-low or A-low investments. The Company invests only in highly rated financial instruments which are capable of prompt liquidation. The Company manages its liquidity risk by continuously monitoring forecasts and actual cash flows. The Company is subject to interest rate risk on its cash and cash equivalents and investments. The Company does not believe that the results of operations or cash flows would be affected to any significant degree by a sudden change in market interest rates relative to interest rates on the investments, owing to the relatively short-term nature of the investments.

Cash flow from financing activities:

Our cash flow from financing activities for the three months ended March 31, 2024, was $11.8 million, consisting of $8.1 million from the issuance of shares under the S-1 filing, and $3.7 million from the issuance of shares to Hanmi, and $18 thousand in cash proceeds from issuance of shares under the Employee Stock Purchase Plan ("ESPP"). Our cash flow from financing activities for the three months ended March 31, 2023, was $50 thousand, and consisted of $34 thousand in proceeds from shares issued from the 2022 ATM Facility and $16 thousand in cash proceeds from the issuance of shares under the ESPP plan.

CONTRACTUAL OBLIGATIONS AND COMMITMENTS DESCRIBED UNDER ITEM 7

There were no material changes to our contractual obligations and commitments described under Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, which can be found on EDGAR at www.sec.gov/edgar.shtml and on SEDAR+ at www.sedarplus.ca.

RESULTS OF OPERATIONS

A summary of the results of operations for the three-month periods ended March 31, 2024 and 2023 is presented below:

	Three months ended March 31,	
(in thousands)	2024	2023
Revenues	$ —	$ —
Research and development expenses	6,445	8,811
General and administrative expenses	3,315	5,285
Other income, net	120	420
Net loss	$ (9,640)	$ (13,676)
Other comprehensive income/(loss)	(1)	4
Comprehensive loss	$ (9,641)	$ (13,672)
Basic and diluted loss per common share	$ (0.73)	$ (2.22)

Net loss for the three-month period ended March 31, 2024 decreased by $4.0 million to $9.6 million, as compared to $13.7 million for the comparable period in 2023. Components of net loss are presented below:

Research and Development

Research and development expenses consist primarily of costs incurred related to the research and development of our product candidates and include:

- External research and development expenses incurred under agreements with third parties, such as contract research organizations, consultants, members of our scientific advisory boards, external labs and contract manufacturing organizations; and

- Employee-related expenses, including salaries, benefits, travel, and stock-based compensation for personnel directly supporting our clinical trials, manufacturing and development activities.

Subject to successful new financing activities, we expect our research and development expenses to be lower during 2024 than in 2023; for the foreseeable future, as we advance tuspetinib into more extensive clinical trials, costs will increase unless the program is partnered.

The research and development expenses for the three-month periods ended March 31, 2024, and 2023 were as follows:

	Three months ended March 31,			
(in thousands)		2024		2023
Program costs – Tuspetinib	$	3,923	$	4,774
Program costs – Luxeptinib		208		1,289
Program costs – APTO-253		22		8
Personnel-related expenses		1,954		2,078
Stock-based compensation		328		652
Depreciation of equipment		10		10
Total	$	6,445	$	8,811

Research and development expenses decreased by $2.4 million to $6.4 million for the three-month period ended March 31, 2024, as compared to $8.8 million for the comparative period in 2023. Changes to the components of our research and development expenses presented in the table above are primarily as a result of the following events:

- Program costs for tuspetinib were $3.9 million for the three-month period ended March 31, 2024, compared with $4.7 million for the comparative period in 2023. The lower program costs for tuspetinib in the current period represent the reduction of activity in our APTIVATE clinical trial, reduced manufacturing costs, and related expenses. In the comparative period in 2023, tuspetinib program costs included the healthy volunteer study, which was completed in 2023.
- Program costs for luxeptinib decreased by approximately $1.1 million, primarily due to lower clinical trial and manufacturing activities.
- Program costs for APTO-253 increased by approximately $14 thousand. The Company discontinued further clinical development of APTO-253.
- Personnel-related expenses decreased by $124 thousand, related to fewer employees in the current three-month period, partially offset by salary increases.
- Stock-based compensation decreased by approximately $324 thousand in the three months ended March 31, 2024, compared to the three months ended March 31, 2023, primarily due to stock options granted with lower grant date fair values in the current period.

General and Administrative

General and administrative expenses consist primarily of salaries, benefits and travel, including stock-based compensation for our executive, finance, business development, human resources, and support functions. Other general and administrative expenses are professional fees for auditing and legal services, investor relations and other consultants, insurance and facility-related expenses.

We expect that our general and administrative expenses will increase for the foreseeable future as we incur additional costs to support the expansion of our pipeline of activities. We also expect our intellectual property related legal expenses to increase as our intellectual property portfolio expands.

The general and administrative expenses for the three-month periods ended March 31, 2024, and 2023 were as follows:

	Three months ended March 31,	
(in thousands)	2024	2023
General and administrative, excluding items below	$ 2,828	$ 4,045
Stock-based compensation	481	1,222
Depreciation of equipment	6	18
Total	$ 3,315	$ 5,285

General and administrative expenses for the three-month period ended March 31, 2024 were $3.3 million, as compared to $5.3 million for the comparative period in 2023, a decrease of approximately $2.0 million. The decrease was primarily due to the following:

- General and administrative expenses, other than stock-based compensation and depreciation of equipment, decreased by approximately $1.2 million in the three months ended March 31, 2024, primarily as a result of lower professional fees expensed in the period. Professional fees of approximately $0.7 million related to the January financing events were recorded in equity, to offset the proceeds of the financing in the share capital account.
- Stock-based compensation decreased by approximately $741 thousand in the three months ended March 31, 2024, as compared to the three months ended March 31, 2023, due to stock options granted with lower grant date fair values in the current period.

CRITICAL ACCOUNTING POLICIES

Critical Accounting Policies and Estimates

We periodically review our financial reporting and disclosure practices and accounting policies to ensure that they provide accurate and transparent information relative to the current economic and business environment. As part of this process, we have reviewed our selection, application and communication of critical accounting policies and financial disclosures. Management has discussed the development and selection of the critical accounting policies with the Audit Committee of the Board of Directors and the Audit Committee has reviewed the disclosure relating to critical accounting policies in this Management's Discussion and Analysis.

Significant Accounting Judgments and Estimates

A "critical accounting policy" is one which is both important to the portrayal of our financial condition and results and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. For additional information, please see the discussion of our significant accounting policies in Note 2 to the Financial Statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on March 26, 2024. There were no material changes to our critical accounting policies and estimates during the three months ended March 31, 2024.

The Company records expenses for research and development activities based on management's estimates of services received and efforts expended pursuant to contracts with vendors that conduct research and development on the Company's behalf. The financial terms vary from contract to contract and may result in uneven payment flows as compared to services performed or products delivered. As a result, the Company is required to estimate research and development expenses incurred during the period, which impacts the amount of accrued expenses and prepaid balances related to such costs as of each balance sheet date. Management estimates the amount of work completed through discussions with internal personnel and the contract research and contract manufacturing organizations as to the progress or stage of completion of the services. The Company's estimates are based on a number of factors, including the Company's knowledge of the status of each of the research and development project milestones, and contract terms together with related executed change orders. Management makes significant judgments and estimates in determining the accrued balance at the end of each reporting period.

Although management does not expect our estimates to be materially different from amounts actually incurred, if the estimates of the status and timing of services performed differ from the actual status and timing of services performed, it could result in the Company reporting amounts that are too high or too low in any particular period. As of March 31, 2024, the Company has recorded $852 thousand in prepaid expenses and approximately $8.1 million in accrued liabilities related to its research and development activities. If the estimates are too high or too low by a factor of 10% this would mean that prepaid expenses would be over or understated by approximately $85 thousand, and accrued liabilities would be over or understated by approximately $810 thousand. On a combined basis, this could mean an increase or decrease in research and development expenses by approximately $895 thousand. To date, there have been no material differences between the estimates of such expenses and the amounts actually incurred.

Other important accounting policies and estimates made by management are the valuation of contingent liabilities, the valuation of tax accounts, and the assumptions used in determining the valuation of share-based compensation, as described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

Management's assessment of our ability to continue as a going concern involves making a judgment, at a particular point in time, about inherently uncertain future outcomes and events or conditions. Please see the "Liquidity and Capital Resources" section in this Quarterly Report on Form 10-Q for a discussion of the factors considered by management in arriving at its assessment.

Updated share information

As of May 14, 2024, we had 16,309,393 Common Shares issued and outstanding. In addition, there were 1,492,884 Common Shares issuable upon the exercise of outstanding stock options.

ITEM 3 – **QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK**

Under SEC rules and regulations, as a smaller reporting company, we are not required to provide this information.

ITEM 4 – **CONTROLS AND PROCEDURES**

As of the end of our fiscal quarter ended March 31, 2024, evaluation of the effectiveness of our "disclosure controls and procedures" (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the United States Exchange Act of 1934, as amended (the "Exchange Act")), was carried out by our management, with the participation of our principal executive officer and principal financial officer. Based upon that evaluation, our principal executive officer and principal financial officer have concluded that as of the end of our fiscal quarter ended March 31, 2024, our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

It should be noted that while our principal executive officer and principal financial officer believe that our disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that our disclosure controls and procedures or internal control over financial reporting will prevent all errors or fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during our fiscal quarter ended March 31, 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 involved in any material active legal actions. However, from time to time, we may be subject to various pending or threatened legal actions and proceedings, including those that arise in the ordinary course of our business. Such matters are subject to many uncertainties and to outcomes that are not predictable with assurance and that may not be known for extended periods of time.

ITEM 1A – RISK FACTORS

FOR INFORMATION REGARDING FACTORS THAT COULD AFFECT APTOSE'S RESULTS OF OPERATIONS, FINANCIAL CONDITION AND LIQUIDITY, SEE THE RISK FACTORS DISCUSSED IN OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2023, UNDER ITEM 1A – RISK FACTORS. THERE HAVE BEEN NO MATERIAL CHANGES TO THE RISK FACTORS DISCLOSED UNDER ITEM 1A – RISK FACTORS OF THE ANNUAL REPORT.

ITEM 6 – EXHIBITS

Exhibit Number	Description of Document
10.1	Amended and Restated Warrant to Purchase Common Shares, by and between the Company and Hanmi Pharmaceutical Co., Ltd dated April 24, 2024.
10.2	Second Amended and Restated Executive Employment Agreement dated April 29, 2024 between the Company and Dr. William G. Rice
10.3	Amended and Restated Executive Employment Agreement dated April 29, 2024 between the Company and Dr. Rafael Bejar
10.4	Amended and Restated Executive Employment Agreement dated April 29, 2024 between the Company and Mr. Fletcher Payne
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101**	The following consolidated financial statements from the Aptose Biosciences Inc. Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) statements of operations and comprehensive loss, (ii) balance sheets, (iii) statements of changes of shareholders' equity, (iv) statements of cash flows, and (v) the notes to the financial statements.
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH	Inline XBRL Taxonomy Extension Schema With Embedded Linkbase Documents
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)
*	Filed herewith.
**	In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101 to this Quarterly Report on Form 10-Q is deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act, is deemed not filed for purposes of Section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 14th day of May, 2024.

APTOSE BIOSCIENCES INC.

By: /s/ William G. Rice, Ph.D.
William G. Rice, Ph.D.
President and Chief Executive Officer

Exhibit 31.1

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, William G. Rice, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aptose Biosciences 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.The registrant's other certifying officer 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 fourth fiscal quarter 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 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.

Date: May 14, 2024

/s/ William G. Rice
Name: William G. Rice, Ph.D.
Title: President and Chief Executive Officer

Exhibit 31.2

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Fletcher Payne, certify that:

1.I have reviewed this Quarterly Report on Form 10-Q of Aptose Biosciences 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.The registrant's other certifying officer 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;

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;

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

b)Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter 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 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):

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: May 14, 2024

/s/ Fletcher Payne
Name: Fletcher Payne
Title: Senior Vice President and Chief Financial Officer

Exhibit 32.1

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, William G. Rice, the President and Chief Executive Officer of Aptose Biosciences Inc. (the “Company”), hereby certify that, to my knowledge:

1. The Quarterly Report on Form 10-Q for the quarter ended March 31, 2024 (the “Report”) of the Company fully complies with the requirements of Section 13(a) or Section 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: May 14, 2024

/s/ William G. Rice
Name: William G. Rice, Ph.D.
Title: President and Chief Executive Officer

Exhibit 32.2

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Fletcher Payne, the Senior Vice President and Chief Financial Officer of Aptose Biosciences Inc. (the “Company”), hereby certify that, to my knowledge:

1.The Quarterly Report on Form 10-Q for the quarter ended March 31, 2024 (the “Report”) of the Company fully complies with the requirements of Section 13(a) or Section 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: May 14, 2024

/s/ Fletcher Payne
Name: Fletcher Payne
Title: Senior Vice President and Chief Financial Officer