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

FORM 10-Q

(Mark One)

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

For the quarterly period ended 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: 001-33672

PALISADE BIO, INC.

(Exact name of registrant as specified in its charter)

Delaware	**52-2007292**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7750 El Camino Real, Suite 2A Carlsbad, California	**92009**
(Address of principal executive offices)	**(Zip Code)**

(858) 704-4900

(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 Stock, $0.01 par value	PALI	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, 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 8, 2024, there were 937,562 shares of common stock, $0.01 par value, outstanding.

Palisade Bio, Inc.

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PART I
FINANCIAL INFORMATION

ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Palisade Bio, Inc.
Condensed Consolidated Balance Sheets (Unaudited)
(in thousands, except share and per share amounts)

	March 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,276	$ 12,432
Prepaid expenses and other current assets	737	896
Total current assets	12,013	13,328
Restricted cash	26	26
Property and equipment, net	5	10
Operating lease right-of-use asset	170	198
Other noncurrent assets	438	490
Total assets	$ 12,652	$ 14,052
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 459	$ 698
Accrued liabilities	1,670	831
Accrued compensation and benefits	213	778
Current portion of operating lease liability	125	121
Insurance financing debt	—	158
Total current liabilities	2,467	2,586
Warrant liability	2	2
Contingent consideration obligation	61	61
Operating lease liability, net of current portion	58	90
Total liabilities	2,588	2,739
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Series A Convertible Preferred Stock, $0.01 par value, 7,000,000 shares authorized; 200,000 issued and outstanding at March 31, 2024 and December 31, 2023	2	2
Common stock, $0.01 par value; 280,000,000 shares authorized; 851,302 and 618,056 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively	8	6
Additional paid-in capital	135,087	132,811
Accumulated deficit	(125,033)	(121,506)
Total stockholders' equity	10,064	11,313
Total liabilities and stockholders' equity	$ 12,652	$ 14,052

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

Palisade Bio, Inc.
Condensed Consolidated Statements of Operations (Unaudited)
(in thousands, except share and per share amounts)

	Three Months Ended March 31,	
	2024	**2023**
License revenue	$ —	$ 250
Operating expenses:		
Research and development	2,214	1,241
General and administrative	1,459	1,538
Total operating expenses	3,673	2,779
Loss from operations	(3,673)	(2,529)
Other (expense) income:		
Interest expense	(1)	—
Other income	147	189
Total other income, net	146	189
Net loss	$ (3,527)	$ (2,340)
Basic and diluted weighted average shares used in computing basic and diluted net loss per common share*	768,137	287,702
Basic and diluted net loss per common share*	$ (4.59)	$ (8.13)

(*) Basic and diluted loss per common share and basic and diluted weighted average share used in computing basic and diluted loss per common share for the three months ended March 31, 2023 has been adjusted to reflect the 1-for-15 reverse stock split effected on April 5, 2024.

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

Palisade Bio, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(in thousands, except share amounts)
(Unaudited)

	Three Months Ended March 31, 2024						
	Preferred Stock		Common Stock		Additional Paid-in Capital*	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares*	Amount*			
Balance, December 31, 2023	200,000	$ 2	618,056	$ 6	$ 132,811	$ (121,506)	$ 11,313
Net loss	—	—	—	—	—	(3,527)	(3,527)
Stock-based compensation expense and related charges	—	—	—	—	118	—	118
Issuance of common stock for vesting of restricted stock units	—	—	5,186	—	—	—	—
Issuance of common stock in connection with warrant inducement, net of issuance costs of $2,412 (Note 5)	—	—	228,162	2	2,158	—	2,160
Reverse stock split fractional share settlement	—	—	(102)	—	—	—	—
Balance, March 31, 2024	200,000	$ 2	851,302	$ 8	$ 135,087	$ (125,033)	$ 10,064

	Three Months Ended March 31, 2023						
	Preferred Stock		Common Stock		Additional Paid-in Capital*	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares*	Amount*			
Balance, December 31, 2022	200,000	$ 2	196,287	$ 2	$ 121,665	$ (109,190)	$ 12,479
Net loss	—	—	—	—	—	(2,340)	(2,340)
Stock-based compensation expense and related charges	—	—	—	—	93	—	93
Issuance of common stock in connection with exercise of warrants	—	—	76,188	1	1,348	—	1,349
Issuance of common stock and warrants in January 2023 Offering, net of issuance costs of $507	—	—	31,789	—	2,166	—	2,166
Balance, March 31, 2023	200,000	$ 2	304,264	$ 3	$ 125,272	$ (111,530)	$ 13,747

(*) Adjusted to reflect the 1-for-15 reverse stock split effected on April 5, 2024.

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

Palisade Bio, Inc.
Condensed Consolidated Statements of Cash Flows (Unaudited)
(in thousands)

	Three Months Ended March 31,	
	2024	**2023**
Net loss	$ (3,527)	$ (2,340)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	1	1
Non-cash operating lease expense	28	25
Recurring fair value measurements of liabilities	—	(43)
Loss on disposal of property and equipment	4	—
Stock-based compensation and related charges	118	93
Changes in operating assets and liabilities:		
Accounts receivable	—	(250)
Prepaid and other current assets and other noncurrent assets	174	278
Accounts payable and accrued liabilities	615	(970)
Accrued compensation and benefits	(565)	(295)
Operating lease liabilities	(28)	(25)
Net cash used in operating activities	(3,180)	(3,526)
Cash flows from financing activities:		
Payments on insurance financing debt	(158)	(88)
Proceeds from issuance of common stock and warrants	—	2,231
Proceeds from the exercise of warrants	2,503	2,710
Payment of warrant inducement issuance costs	(321)	—
Payment of equity issuance costs	—	(413)
Net cash provided by financing activities	2,024	4,440
Net (decrease) increase in cash, cash equivalents and restricted cash	(1,156)	914
Cash, cash equivalents and restricted cash, beginning of year	12,458	12,409
Cash, cash equivalents and restricted cash, end of period	$ 11,302	$ 13,323
Reconciliation of cash, cash equivalents and restricted cash to the balance sheets:		
Cash and cash equivalents	$ 11,276	$ 13,297
Restricted cash	26	26
Total cash, cash equivalents and restricted cash	$ 11,302	$ 13,323
Supplemental disclosures of cash flow information:		
Interest paid	$ 2	$ —
Supplemental disclosures of non-cash investing and financing activities:		
Warrant inducement and equity issuance costs included in accounts payable and accrued liabilities	$ 22	$ 12
Fair value of warrants issued to solicitation agent	94	
Fair value of warrants issued to placement agent	—	173
Cash receivable for exercises of warrants included in prepaid and other current assets	—	48
Incremental fair value of modified warrants (Note 5)	1,975	—

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

1. Organization, Business and Financial Condition

As used in this Quarterly Report on Form 10-Q, unless the context indicates or otherwise requires, "Palisade," "Palisade Bio," the "Company," "we," "us," and "our" or similar designations in this report refer to Palisade Bio, Inc., a Delaware Corporation, and its subsidiaries. Any reference to "common shares" or "common stock," refers to the Company's $0.01 par value common stock. Any reference to "Series A Preferred Stock" refers to the Company's Series A 4.5% Convertible Preferred Stock. Any reference to "Leading Biosciences, Inc." or "LBS" refers to the Company's operations prior to the completion of its merger with Seneca Biopharma, Inc. ("Seneca") on April 27, 2021 (the "Merger"). Any reference herein that refers to pre-clinical studies also refers to nonclinical studies.

Description of Business

The Company is a pre-clinical stage biotechnology company focused on developing and advancing novel therapeutics for patients living with autoimmune, inflammatory, and fibrotic diseases. The Company's lead product candidate, PALI-2108, is being developed as a therapeutic for patients living with inflammatory bowel disease ("IBD"), including ulcerative colitis and Crohn's disease.

Liquidity and Going Concern

The Company has a limited operating history, and the sales and income potential of the Company's business and market are unproven. The Company has experienced losses and negative cash flows from operations since its inception. As of March 31, 2024, the Company had an accumulated deficit of $125.0 million and cash and cash equivalents of approximately $11.3 million. The Company expects to continue to incur losses in the foreseeable future. The successful transition to achieving profitability is dependent upon achieving a level of revenues adequate to support the Company's costs. There can be no assurances that such profitability will ever be achieved.

Based on the Company's current working capital, anticipated operating expenses, and anticipated net operating losses, there is substantial doubt about the Company's ability to continue as a going concern for a period of one year following the date that these condensed consolidated financial statements are issued. The condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business. The condensed consolidated financial statements do not include any adjustments for the recovery and classification of assets or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

Historically, the Company has funded its operations primarily through a combination of debt and equity financings. The Company plans to continue to fund its operations through its cash and cash equivalents on hand, as well as through future equity offerings, debt financings, other third-party funding, and potential licensing or collaboration arrangements. Refer to Note 5, Stockholders' Equity, for discussion of the recent financings undertaken by the Company. There can be no assurance that additional funds will be available when needed from any source or, if available, will be available on terms that are acceptable to the Company. Even if the Company is successful in raising additional capital, it may also be required to modify, delay or abandon some of its plans, which could have a material adverse effect on the Company's business, operating results and financial condition and the Company's ability to achieve its intended business objectives. Any of these occurrences could materially harm the Company's business, results of operations and future prospects.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

In management's opinion, the accompanying interim condensed consolidated financial statements include all adjustments, consisting of normal recurring adjustments, which are necessary to present fairly the Company's financial position, results of operations and cash flows. The interim results of operations are not necessarily indicative of the results that may occur for the full year. Certain information and note disclosures normally included in the consolidated financial statements prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP") have been condensed or omitted pursuant to instructions, rules and regulations prescribed by the U.S. Securities and Exchange Commission ("SEC"). The Company believes that the disclosures provided herein are adequate to make the information presented not misleading when these condensed consolidated financial statements are read in conjunction with the consolidated financial statements and notes included in the Company's financial statements filed in the Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on March 26, 2024.

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, LBS and Suzhou Neuralstem Biopharmaceutical Co., Ltd. All the entities are consolidated in the Company's condensed consolidated financial statements and all intercompany activity and transactions, if any, have been eliminated.

Reverse Stock Split

On April 5, 2024, the Company effected a 1-for-15 reverse stock split of its issued and outstanding common stock (the "Reverse Stock Split"). As a result of the Reverse Stock Split, each of the Company's stockholders received one share of common stock for every 15 shares such stockholder held immediately prior to the effective time of the Reverse Stock Split. The Reverse Stock Split affected all the Company's issued and outstanding shares of common stock equally. The par value and authorized shares of the Company's common stock were not adjusted as a result of the Reverse Stock Split. The Reverse Stock Split also affected the Company's outstanding stock-based awards, common stock warrants, and other exercisable or convertible securities and resulted in the shares underlying such instruments being reduced and the exercise price or conversion price being increased proportionately. Unless otherwise noted, all common stock shares, common stock per share data and shares of common stock underlying convertible preferred stock, stock-based award and common stock warrants included in these condensed consolidated financial statements, including the exercise price or conversion price of such equity instruments, as applicable, have been retrospectively adjusted to reflect the Reverse Stock Split for all periods presented.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires the Company to make estimates, judgments, and assumptions that impact the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the balance sheet, and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's condensed consolidated financial statements relate to accrued research and development expenses and its contingent consideration obligation. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may materially differ from these estimates and assumptions.

Segment Information

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, which is the Company's Chief Executive Officer, to make decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business as one operating segment, which is the Company's one reportable segment.

Cash and Cash Equivalents

Cash and cash equivalents represent cash in readily available checking and money market accounts. The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Restricted Cash

As of March 31, 2024 and December 31, 2023, the Company held restricted cash of $26,000, in a separate restricted bank account as collateral for the Company's corporate credit card program. The Company has classified these deposits as long-term restricted cash on its condensed consolidated balance sheets.

Deferred Equity Issuance Costs

Deferred equity issuance costs consist of the legal, accounting and other direct and incremental costs incurred by the Company related to its equity offerings, if not yet finalized as of the balance sheet date, or shelf registration statement. As of March 31, 2024 and December 31, 2023, deferred equity issuance costs of $75,000 and $112,000, respectively, were included in prepaid expenses and other current assets in the condensed consolidated balance sheets. These costs will be netted against additional paid-in capital as a cost of the future equity issuances to which they relate. During the three months ended March 31, 2024, the Company netted previously deferred equity issuance costs of approximately $37,000 against the additional paid-in capital recognized in conjunction with the warrant inducement transaction that closed on February 1, 2024 (see Note 5, Stockholders' Equity).

Concentration of Credit Risk

Financial instruments, which potentially subject the Company to concentration of credit risk, consist primarily of cash and cash equivalents. The Company maintains deposits in federally insured financial institutions and in money market accounts, and at times balances may exceed federally insured limits. Management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held nor has the Company experienced any losses in these accounts.

Fair Value of Financial Instruments

The Company's financial instruments consist principally of cash and cash equivalents, restricted cash, other current receivables, accounts payable, accrued liabilities, insurance financing debt, liability-classified warrants and a contingent consideration obligation. The carrying amounts of financial instruments such as cash and cash equivalents, restricted cash, other current receivables, accounts payable, and accrued liabilities approximate their related fair values due to the short-term nature of these instruments. The Company invests its excess cash in money market funds that are classified as level 1 in the fair value hierarchy defined below, due to their short-term maturity, and measured the fair value based on quoted prices in active markets for identical assets. The carrying value of the Company's insurance financing debt as of December 31, 2023 approximates its fair value due to the market rate of interest, which is based on level 2 inputs. The Company's liability-classified common stock warrants and its contingent consideration obligation is carried at fair value based on level 3 inputs as defined below. None of the Company's non-financial assets or liabilities are recorded at fair value on a nonrecurring basis.

The Company follows Accounting Standards Codification ("ASC") 820, *Fair Value Measurements and Disclosures*, which among other things, defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement determined based on assumptions that market participants would use in pricing an asset or liability.

As a basis for considering such assumptions, a three-tier fair value hierarchy has been established, which prioritizes the inputs used in measuring fair value as follows:

(1)Level 1: observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities;

(2)Level 2: inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

(3)Level 3: unobservable inputs for which there is little or no market data, which require the reporting entity to develop its own assumptions, which reflect those that a market participant would use.

Further information on the fair value of the Company's liability-classified common stock warrants and its contingent consideration obligation can be found in Note 4, Fair Value Measurements.

Derivative Financial Instruments

The Company does not use derivative instruments to hedge exposures to cash flow, market, or foreign currency risks. The Company evaluates its financial instruments, including warrants, to determine if such instruments are derivatives or contain features that qualify as embedded derivatives. The Company values its derivatives using the Black-Scholes option pricing model or other acceptable valuation models, including the Monte-Carlo simulation model. Derivative instruments are valued at inception, upon events such as an exercise of the underlying financial instrument, and at subsequent reporting periods. The classification of derivative instruments, including whether such instruments should be recorded as liabilities, is reassessed at the end of each reporting period.

The Company reviews the terms of debt instruments, equity instruments, and other financing arrangements to determine whether there are embedded derivative features, including embedded conversion options that are required to be bifurcated and accounted for separately as a derivative financial instrument. Additionally, in connection with the issuance of financing instruments, the Company may issue freestanding options and warrants.

The Company accounts for its common stock warrants in accordance with ASC 480, *Distinguishing Liabilities from Equity* ("ASC 480") and ASC 815, *Derivatives and Hedging* ("ASC 815"). Based upon the provisions of ASC 480 and ASC 815, the Company accounts for common stock warrants as liabilities if the warrant requires net cash settlement or gives the holder the option of net cash settlement, or if it fails the equity classification criteria. The Company accounts for common stock warrants as equity if the contract requires physical settlement or net physical settlement or if the Company has the option of physical settlement or net physical settlement and the warrants meet the requirements to be classified as equity. Common stock warrants classified as liabilities are initially recorded at fair value on the grant date and remeasured at fair value at each balance sheet date with the offsetting adjustments recorded in change in fair value of warrant liability within the condensed consolidated statements of operations. If the terms of a common stock warrant previously classified as a liability are amended and pursuant to such amendment meet the requirements to be classified as equity, the common stock warrants are reclassified to equity at the fair value on the date of the amendment and are not subsequently remeasured. Common stock warrants classified as equity are recorded on a relative fair value basis when they are issued with other equity-classified financial instruments.

Leases

In accordance with ASC 842, *Leases*, the Company assesses contracts for lease arrangements at inception. Operating right-of-use ("ROU") assets and operating lease liabilities are recognized at the lease commencement date equal to the present value of future lease payments using the implicit, if readily available, or incremental borrowing rate based on the information readily available at the commencement date. ROU assets include any lease payments as of commencement and initial direct costs but exclude any lease incentives. Lease and non-lease components are generally accounted for separately and the Company recognizes operating lease expense straight-line over the term of the lease.

License Revenue

The Company uses the revenue recognition guidance established by ASC 606, *Revenue From Contracts With Customers* ("ASC 606"). When an agreement falls under the scope of other standards, such as ASC 808, *Collaborative Arrangements*, the Company will apply the recognition, measurement, presentation, and disclosure guidance in ASC 606 to the performance obligations in the agreements if those performance obligations are with a customer. The Company currently does not have any collaborative arrangements with counterparties that are also considered customers. For arrangements that include amounts to be paid to the Company upon the achievement of certain development milestones of technology licensed by the Company, the Company recognizes such license revenue using the most likely method. At the end of each reporting period, the Company re-evaluates the probability or achievement of any potential milestones and any related constraints, and if necessary, adjusts its estimates of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenue in the period of adjustment.

Contingent Consideration Obligations

On September 1, 2023, the Company and Giiant Pharma, Inc. ("Giiant") entered into a research collaboration and license agreement (the "Giiant License Agreement") (see Note 7, Collaborations and License Agreements). Pursuant to the Giiant License Agreement, the Company incurred a contingent consideration obligation consisting of milestone payments, which are recognized as a liability measured at fair value, and ongoing royalty payments of a mid-single-digit percentage of the adjusted gross proceeds, as defined in the Giiant License Agreement, upon the sales or sublicenses third parties of any products developed from the assets licensed under the Giiant License Agreement. Because the contingent consideration associated with the milestone payments may be settled in shares of the Company's common stock solely at the election of the Company, the Company has determined it should be accounted for under ASC 480 and accordingly the Company has recognized it as a liability measured at its estimated fair value. At the end of each reporting period, the Company re-measures the contingent consideration obligation to its estimated fair value and any resulting change is recognized in research and development expenses in the condensed consolidated statements of operations. The Company has determined that the contingent consideration associated with the royalty payments should be recognized as a liability when they are probable and estimable, in accordance with ASC 450, *Contingencies*.

Research and Development Costs

Research and development expenses consist primarily of salaries and other personnel related expenses including stock-based compensation costs, and, to the extent applicable, may include pre-clinical costs, clinical trial costs, costs related to acquiring and manufacturing clinical trial materials, and contract services. All research and development costs are expensed as incurred. Pursuant to situations whereby the Company performs any research and development or manufacturing activities under a co-development agreement, the Company records the expense reimbursements from the co-development partner as a reduction to research and development expense once the reimbursement amount is approved for payment by the co-development partner. Expense payments made to Giiant pursuant to the terms of the Giiant License Agreement for qualifying development costs are expensed only as the associated research and development costs are incurred or other aspects of the drug development or related activities are achieved. In instances where the expense determined to be recognized exceeds the payments made to Giiant, the Company recognizes an accrual of joint development expenses. In addition, there may be instances in which payments made to Giiant will temporarily exceed the level of services provided, which results in a prepayment of the joint development expenses.

Patent Costs

Costs related to filing and pursuing patent applications (including direct application fees, and the legal and consulting expenses related to making such applications) are expensed as incurred, as recoverability of such expenditures is uncertain. These costs are included in general and administrative expenses in the condensed consolidated statements of operations.

Income Taxes

The Company follows ASC 740, *Income Taxes*, or ASC Topic 740 ("ASC 740"), in reporting deferred income taxes. ASC 740 requires a company to recognize deferred tax assets and liabilities for expected future income tax consequences of events that have been recognized in the Company's condensed consolidated financial statements. Under this method, deferred tax assets and liabilities are determined based on temporary differences between financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates in the years in which the temporary differences are expected to reverse. Valuation allowances are provided if, based on the weight of available evidence, it is more likely than not that some of or all the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions pursuant to ASC 740, which prescribes a recognition threshold and measurement process for financial statement recognition of uncertain tax positions taken or expected to be taken in a tax return. If the tax position meets this threshold, the benefit to be recognized is measured as the tax benefit having the highest likelihood of being realized upon ultimate settlement with the taxing authority. The Company recognizes interest accrued related to unrecognized tax benefits and penalties in the provision for income taxes.

Stock-Based Compensation

The Company's stock-based compensation expense generally includes service-based restricted stock units ("RSUs"), stock options, and market-based performance RSUs ("PSUs"). The Company accounts for forfeitures as they occur

for each type of award as a reduction of expense. Stock-based compensation expense related to service-based RSUs is based on the market value of the underlying stock on the date of grant and the related expense is recognized ratably over the requisite service period, which is usually the vesting period. The Company estimates the fair value of employee and non-employee stock option grants using the Black-Scholes option pricing model. The determination of the fair value of stock-based payment awards on the date of grant using the Black-Scholes option pricing model is affected by the Company's stock price as well as assumptions, which include the expected term of the award, the expected stock price volatility, risk-free interest rate, and expected dividends over the expected term of the award. Stock-based compensation expense represents the cost of the estimated grant date fair value of employee and non-employee stock option grants recognized ratably over the requisite service period of the awards, which is usually the vesting period. For PSUs with vesting subject to market conditions, the fair value of the award is determined at grant date using the Monte Carlo simulation model, and expense is recognized ratably over the derived service period regardless of whether the market condition is satisfied. The Monte Carlo simulation model considers a variety of potential future scenarios under the market condition vesting criteria, including but not limited to share prices for the Company and its peer companies in a selected market index.

The Company does not recognize any share-based compensation expense related to conditional RSUs, stock options, or PSUs that are subject to stockholder approval. When and if approval is obtained, the Company recognizes share-based compensation expense related to the conditional equity grants ratably to the vesting of shares over the remaining requisite service period.

The Company offers to its employees an opportunity to participate in its shareholder approved Palisade Bio, Inc. 2021 Employee Stock Purchase Plan (the "ESPP"). All employees are eligible to participate in the ESPP while employed by the Company. The ESPP permits eligible employees to purchase common stock through payroll deductions, which may not exceed $25,000 or 666 shares of the Company's shares of common stock each offering period, as defined in the ESPP, at a price equal to 85% of the fair value of the Company's common stock at the beginning or end of the offering period, whichever is lower. The ESPP is intended to qualify under Section 423 of the Internal Revenue Code.

The Company estimates the fair value of ESPP awards on the first day of the offering period using the Black-Scholes option pricing model. The estimated fair value of ESPP awards is amortized on a straight-line basis over the requisite service period of the award. The Company reviews, and when deemed appropriate, updates the assumptions used on a periodic basis. The Company utilizes its estimated volatility in the Black-Scholes option pricing model to determine the fair value of ESPP awards.

Basic and Diluted Net Loss Per Common Share

Basic net loss per common share is computed by dividing net loss available to common stockholders by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share is calculated by dividing the net loss available to common stockholders by the weighted-average number of shares of common stock outstanding during the period, plus any potentially dilutive common shares, consisting of stock-based awards and equivalents, and common stock warrants. For purposes of this calculation, stock-based awards and equivalents and common stock warrants are considered to be potential common shares and are only included in the calculation of diluted net loss per common share when their effect is dilutive.

The Company's Series A Convertible Preferred Stock and certain of the Company's outstanding common stock warrants contain non-forfeitable rights to dividends with the common stockholders, and therefore are considered to be participating securities. The Series A Convertible Preferred Stock and the common stock warrants do not have a contractual obligation to fund the losses of the Company; therefore, the application of the two-class method is not required when the Company is in a net loss position but is required if the Company is in a net income position. When in a net income position, diluted net earnings per common share is computed using the more dilutive of the two-class method or the if-converted and treasury stock methods.

As the Company was in a net loss position for all periods presented, basic and diluted net loss per common share for the three months ended March 31, 2024 and March 31, 2023 were calculated under the if-converted and treasury stock methods. For both the three months ended March 31, 2024 and March 31, 2023, basic and diluted net loss per common share were the same as all common stock equivalents were anti-dilutive for both periods.

The following table presents the calculation of weighted average shares used to calculate basic and diluted net loss per common share (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2024	2023
Basic and diluted net loss per common share:		
Net loss available to common stockholders - basic and diluted	$ (3,527)	$ (2,340)
Weighted average shares used in calculating basic and diluted net loss per common share	768,137	287,702
Basic and diluted net loss per common share	$ (4.59)	$ (8.13)

The following potentially dilutive securities were excluded from the calculation of diluted net loss per share because their effects would be anti-dilutive:

	March 31,	
	2024	2023
Stock options	41,937	4,180
Restricted stock units	20,833	2,802
Warrants for common stock	285,891	107,115
Series A Convertible Preferred Stock	8	8
Total	348,669	114,105

Comprehensive Loss

Comprehensive income (loss) is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources. The Company's comprehensive loss was the same as its reported net loss for all periods presented.

Recently Issued or Adopted Accounting Pronouncements

No new accounting pronouncements issued or adopted during the three months ended March 31, 2024 that had or are expected to have a material impact on the Company's condensed consolidated financial statements or disclosures.

3. Balance Sheet Details

Prepaid expenses and other current assets consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Prepaid insurance	$ 294	$ 428
Other receivables	153	148
Prepaid subscriptions and fees	173	138
Prepaid software licenses	36	64
Deferred equity issuance costs	75	112
Prepaid other	6	6
	$ 737	$ 896

Other noncurrent assets consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Prepaid insurance, less current portion	$ 426	$ 478
Other noncurrent assets	12	12
	$ 438	$ 490

Accrued liabilities consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Accrued accounts payable	$ 89	$ 166
Accrued clinical trial expenses	10	20
Accrued director stipends	35	106
Accrued severance and benefits (Note 8)	35	131
Accrued joint development expenses (Note 7)	1,180	98
Current portion of contingent consideration obligation (Note 4)	143	143
Accrued other	178	167
	$ 1,670	$ 831

4. Fair Value Measurements

Contingent Consideration Obligation

Pursuant to the Giiant License Agreement, the Company incurred a contingent consideration obligation related to future milestone payments. The Company has an obligation to make contingent consideration payments to Giiant, in either cash or shares of the Company's common stock solely at the Company's election, upon the achievement of development milestones (as set forth in the Giiant License Agreement). Because the contingent consideration may be settled in shares of the Company's common stock, the Company has determined it should be accounted for under ASC 480, and accordingly has recognized it as a liability measured at its estimated fair value.

At the end of each reporting period, the Company re-measures the contingent consideration obligation to its estimated fair value and any resulting change is recognized in research and development expenses in the condensed consolidated statements of operations. The fair value of the contingent consideration obligation is determined using a probability-based model that estimates the likelihood of success in achieving each of the defined milestones that is then discounted to present value using the Company's incremental borrowing rate. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined in fair value measurement accounting. The significant assumptions used in the calculation of the fair value as of March 31, 2024 included a discount rate of 16.0% and management's updated projections of the likelihood of success in achieving each of the defined milestones based on empirical, published industry data.

As of both March 31, 2024 and December 31, 2023, the fair value of the contingent consideration liability was determined to be approximately $204,000. Accordingly, there was no change in the fair value of the contingent consideration obligation for the three months ended March 31, 2024. As of both March 31, 2024 and December 31, 2023, $143,000 of the contingent consideration obligation was recognized in accrued liabilities in the condensed consolidated balance sheet as it is expected to be settled within one-year of the balance sheet date. The remaining amount of the contingent consideration liability of $61,000 was recognized as a noncurrent liability in the condensed consolidated balance sheet as of both March 31, 2024 and December 31, 2023.

Liability-Classified Warrants

The Company has issued warrants that are accounted for as liabilities based upon the guidance of with ASC 480 and ASC 815. Estimating fair values of liability-classified financial instruments requires the development of estimates that may, and are likely to, change over the duration of the instrument with related changes in internal and external market factors. Changes in fair value of the liability-classified warrants, if any, are recognized as a component of other income in the condensed consolidated statement of operations.

As of March 31, 2024, the fair value of the Company's liability-classified warrants outstanding was determined using a Black-Scholes option pricing model valuation model to be insignificant due to the low market price of the Company's stock at the date of valuation relative to the exercise price of the underlying warrants outstanding.

The following table summarizes the activity of the Company's Level 3 warrant liabilities during the three months ended March 31, 2024 and 2023 (in thousands):

	Three Months Ended March 31,	
Warrant Liabilities	**2024**	**2023**
Fair value at beginning of year	$ 2	$ 61
Change in fair value during the period	—	(43)
Fair value at end of period	$ 2	$ 18

5. Stockholders' Equity

Classes of Stock

Common Stock

As of March 31, 2024, the Company was authorized to issue 280,000,000 shares of $0.01 par value common stock. Each share of common stock entitles the holder thereof to one vote on each matter submitted to a vote at a meeting of stockholders.

On April 5, 2024, the Company effected the Reverse Stock Split. Accordingly, each of the Company's stockholders received one share of the Company's common stock for every 15 shares of the Company's common stock that such stockholder held immediately prior to the effective time of the Reverse Stock Split. The Reverse Stock Split affected all of the Company's issued and outstanding shares of the Company's common stock equally. The Reverse Stock Split also affected the Company's outstanding stock-based awards, warrants and other exercisable or convertible securities and resulted in the shares underlying such instruments being reduced and the exercise price or conversion price being increased proportionately by the Reverse Stock Split ratio. No fractional shares were issued as a result of the Reverse Stock Split with any fractional shares that would have otherwise resulted from the Reverse Stock Split paid in cash, at an amount equal to the resulting fractional interest in one share of the Company's common stock that the stockholder would otherwise be entitled, multiplied by the closing trading price of the Company's common stock on April 5, 2024. The amount of cash paid for fractional shares was immaterial to the Company's financial statements.

As a result of the Reverse Stock Split, the number of issued and outstanding shares of the Company's common stock was adjusted from 12,771,015 shares to 851,302 shares. Each share of the Company's common stock entitles the holder thereof to one vote on each matter submitted to a vote at a meeting of stockholders.

Preferred Stock

As of March 31, 2024, the Company was authorized to issue 7,000,000 shares of $0.01 par value preferred stock of which 1,000,000 shares have been designated as Series A 4.5% Convertible Preferred Stock ("Series A Convertible Preferred Stock") and 200,000 of which are issued and outstanding. As of March 31, 2024, all of the Company's 200,000 shares of Series A Convertible Preferred Stock outstanding are convertible into an aggregate of 8 shares of the Company's common stock.

Recent Equity Offerings

On September 11, 2023, the Company completed a registered direct offering of common stock pursuant to an effective shelf registration statement on Form S-3 (the "September 2023 Offering"). Gross cash proceeds from the September 2023 Offering were $2.0 million and net cash proceeds were $1.7 million after deducting cash equity issuance costs of approximately $0.3 million.

On April 3, 2023, the Company completed a registered direct offering and concurrent private placement of common stock and warrants to purchase common stock (the "April 2023 Offering"). Gross cash proceeds from the April 2023 Offering were $6.0 million and net cash proceeds were $5.3 million after deducting cash equity issuance costs of approximately $0.7 million.

On January 4, 2023, the Company completed a registered direct offering and concurrent private placement of common stock and warrants to purchase common stock (the "January 2023 Offering"). Gross cash proceeds from the January 2023 Offering were $2.5 million and net cash proceeds were approximately $2.2 million after deducting cash equity issuance costs of approximately $0.3 million.

Common Stock Warrants and Warrant Exercises

On January 30, 2024, the Company entered into warrant inducement agreements (the "Warrant Inducement Agreements") with certain accredited and institutional holders (collectively, the "Warrant Holders") of certain of the Company's remaining outstanding common stock warrants issued on May 10, 2022 (the "May 2022 Warrants"), January 4, 2023 (the "January 2023 Warrants"), and April 5, 2023 (the "April 2023 Warrants"), as well as certain outstanding Series 2 warrants issued on August 16, 2022 (the "Series 2 Warrants) (collectively, the "Existing Warrants"). Pursuant to the Warrant Inducement Agreements, the exercise price of each of Existing Warrants exercised was reduced to $10.97 per share. Each of the Warrant Holders that exercised its Existing Warrants pursuant to the Warrant Inducement Agreements, received one replacement warrant to purchase a share of the Company's common stock (the "Replacement Warrants") for each Existing Warrant exercised (in its entirety, the "February 2024 Warrant Inducement").

The Replacement Warrants are exercisable immediately, have an exercise price per share of $10.97, and expire five years from the date of issuance, which was February 1, 2024. The Replacement Warrants are subject to adjustment in the event of stock splits, dividends, subsequent rights offerings, pro rata distributions, and certain fundamental transactions, as more fully described in the Replacement Warrants. The Replacement Warrants contain standard anti-dilution provisions but do not contain any price protection provisions with respect to future securities offerings of the Company.

The Warrant Holders collectively exercised an aggregate of 228,162 Existing Warrants consisting of: (i) 4,865 May 2022 Warrants, (ii) 4,267 Series 2 Warrants, (iii) 67,511 January 2023 Warrants, and (iv) 151,519 April 2023 Warrants. As a result of the exercises of the Existing Warrants, the Company issued an aggregate of 228,162 shares of its common stock. The February 2024 Warrant Inducement closed on February 1, 2024 with the Company receiving net cash proceeds of approximately $2.2 million consisting of gross cash proceeds of $2.5 million, less cash equity issuance costs of approximately $0.3 million.

The February 2024 Warrant Inducement, which resulted in the lowering of the exercise price of the Existing Warrants and the issuance of the Replacement Warrants, is considered a modification of the Existing Warrants under the guidance of ASC 815-40. The modification is consistent with the Equity Issuance classification under that guidance as the reason for the modification was to induce the holders of the Existing Warrants to cash exercise their Existing Warrants, resulting in the imminent exercise of the Existing Warrants, which raised equity capital and generated gross cash proceeds for the Company of approximately $2.5 million. As pursuant to the guidance of ASC 480 and ASC 815 the Existing Warrants and Replacement Warrants were classified as equity instruments before and after the modification, and as the modification is directly attributable to an equity offering, the Company recognized the effect of the modification of approximately $2.0 million as an equity issuance cost netted against the additional paid-in capital recognized from the associated warrant exercises. The amount of the equity issuance cost recognized for the warrant modification was determined using the Black-Scholes option pricing model as the incremental fair value of the modified Existing Warrants and additional Replacement Warrants issued as compared to the fair value of the original Existing Warrants immediately prior to their modification.

The solicitation agent fees associated with the February 2024 Warrant Inducement consisted of: (i) a cash fee equal to 7.75% of the gross proceeds received by the Company, (ii) a common stock purchase warrant to purchase such number of shares of common stock equal to 6% of the aggregate number shares issued pursuant to the exercise of the Existing Warrants, with an exercise price of $10.97 per share, and a term of five years from issuance (the "Solicitation Agent Warrants"), and (iii) $35,000 of out-of-pocket expenses. The fair value of the Solicitation Agent Warrants was recognized by the Company as an equity issuance cost, which reduced the additional paid-in capital recognized from the issuance of common stock in connection with the exercise of the Existing Warrants.

Total equity issuance costs recognized in the February 2024 Warrant Inducement of $2.4 million include cash equity issuance costs of $0.3 million, non-cash warrant modification costs of approximately $2.0 million, and non-cash issuance costs associated with the Solicitation Agent Warrants of $0.1 million.

The Company accounts for the majority of its warrants as equity-classified in accordance with ASC 480 and ASC 815. The Company's outstanding common stock warrants that are classified as equity warrants are included as a component of stockholders' equity based on their relative fair value on their date of issuance. Common stock warrants accounted for as liabilities in accordance with the authoritative accounting guidance are included in noncurrent liabilities. The Company had exercisable common stock warrants outstanding of 285,891 and 272,211 at March 31, 2024 and December 31, 2023, respectively. Of the Company's common stock warrants exercisable at March 31, 2024, 251,262 common stock warrants have an exercise price of $10.97 and the remaining 34,646 common stock warrants have a weighted average exercise price of $812.54. Of the outstanding common stock warrants, only 9,414 are subject

to price reset provisions in the event future sales of the Company's securities are sold at a price per share less than the exercise price of such warrants.

The following table summarizes warrant activity during the three months ended March 31, 2024:

	Number of Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)
Warrants outstanding, December 31, 2023	272,211	$ 144.78	4.12
Granted	241,848	10.97	4.84
Exercised	(228,162)	10.97	—
Forfeited, expired or cancelled	(6)	27,000.00	—
Warrants outstanding, March 31, 2024	285,891	107.85	4.66

6. Equity Incentive Plans

Equity Incentive Plans

The Company's stock-based compensation generally includes RSUs, PSUs, and stock options.

There were no RSUs, stock options or other equity-based awards issued under any of the Company's equity incentive plans in the three months ended March 31, 2024. During the three months ended March 31, 2023, the Company granted 2,967 RSUs at a weighted-average fair market value of $48.79 per RSU, and 2,040 stock options at a weighted average grant date fair market value of $22.65 per stock option.

Employee Stock Purchase Plan

Compensation expense associated with the ESPP for the three months ended March 31, 2024 was approximately $5,000. There was no compensation expense associated with the ESPP in the three months ended March 31, 2023.

Share-Based Compensation Expense

The allocation of stock-based compensation for all stock awards is as follows (in thousands):

	Three Months Ended March 31, 2024	2023
Research and development expense	$ 47	$ 49
General and administrative expense	66	44
Total	$ 113	$ 93

As of March 31, 2024, the unrecognized compensation cost related to outstanding options was $0.4 million, which is expected to be recognized over a weighted-average period of approximately 1.75 years and the unrecognized compensation cost related to outstanding time-based and performance-based RSUs was $0.3 million, which is expected to be recognized over a weighted average period of approximately 2.04 years.

7. Collaborations and License Agreements

Research Collaboration and License Agreement with Giiant

On September 1, 2023 (the "Effective Date"), the Company entered into the Giiant License Agreement whereby the Company received an exclusive, worldwide license (with the right to sublicense in multiple tiers) to develop, manufacture, and commercialize substantially all of the assets of Giiant, including: (i) the PALI-2108 compound, and (ii) the PALI-1908 compound and the associated intellectual property around each of the foregoing (the "Giiant Licensed Assets"). The Giiant License Agreement has a perpetual term.

Pursuant to the Giiant License Agreement, the Company and Giiant have established a joint development committee ("JDC"), consisting of one Giiant appointee and two Company appointees. The JDC is responsible for: (i) overseeing the day-to-day development of the Giiant Licensed Assets through Proof of Concept (as defined below), and (ii) the creation and implementation of the development plan and development budget for the Giiant Licensed Assets (the "Giiant Development Plan") and any amendments or updates thereto.

Prior to receiving regulatory approval to commence a Phase 1 clinical trial (as such term is defined in the Giiant License Agreement) (the "Proof of Concept"), each of the Company and Giiant shall be solely responsible for all costs and expenses incurred by such party for the joint development of the Giiant Licensed Assets, except as set forth in the Giiant Development Plan. Prior to reaching the Proof of Concept, the Company will reimburse or advance Giiant up to an amount in the low seven-digit range for costs and expenses incurred by them, subject to increase upon unanimous consent of all members of the JDC, and provided that the costs and expenses are included in the Giiant Development Plan budget and are approved by the JDC. Upon reaching the Proof of Concept, the Company will be solely responsible for all costs and expenses incurred for the development, manufacturing, regulatory and commercialization of the Giiant Licensed Assets. For the three months ended March 31, 2024, the Company has recognized expenses related to the joint development plan with Giiant in the amount of approximately $1.6 million, which are included in research and development expenses in the condensed consolidated statements of operations. At March 31, 2024 and December 31, 2023, the Company has accrued joint development expenses of approximately $1.2 million and approximately $0.1 million, respectively, in Accrued liabilities in the condensed consolidated balance sheets.

As consideration for the Giiant Licensed Assets, the Company will (i) make certain payments between the mid six-digit range and low seven-digit range upon the achievement of the development milestones (as set forth in the Giiant License Agreement), in either cash or shares of the Company's common stock, at the Company's election (" Giiant Milestone Payments"), and (ii) pay ongoing royalty payments of a mid-single-digit percentage of the adjusted gross proceeds, as defined in the Giiant License Agreement, upon the sales or sublicenses of any products developed from the Giiant Licensed Assets to third parties ("Giiant Royalty Payments") (collectively, the Giiant Milestone Payments and the Giiant Royalty Payments are referred to as the "Giiant License Payments"). The Giiant License Payments are subject to a maximum payment cap in the very low eight-digit range, which will be increased or decreased on a dollar-for-dollar basis based on a formula related to the aggregate of development costs incurred by the parties ("Payment Cap"). The Company has made no Giiant License Payments since the commencement of the Giiant License Agreement.

The Company may unilaterally terminate the Giiant License Agreement for: (i) convenience, (ii) the failure to achieve Proof of Concept within eighteen months of September 1, 2023, subject to extension upon the occurrence of certain event, or (iii) a material breach by Giiant, that is not cured within ninety days of written notice.

Giiant may unilaterally terminate the Giiant License Agreement only for a material breach by Company that is not cured within ninety days of written notice provided however that upon the Payment Cap being achieved, that right will terminate and the Giiant License Agreement will become perpetual.

Co-Development and Distribution Agreement with Newsoara

LBS entered into a co-development and distribution agreement with Newsoara, a joint venture established with Biolead Medical Technology Limited, as amended, (the "Newsoara Co-Development Agreement"). Pursuant to the Newsoara Co-Development Agreement (and subsequent assignment agreement), LBS granted or licensed Newsoara an exclusive right under certain patents to develop, use, sell, offer to sell, import, and otherwise commercialize licensed products (the "Newsoara Licensed Products") for any and all indications in the People's Republic of China, including the regions of Hong Kong and Macao, but excluding Taiwan (the "Territory"). The Newsoara Licensed Products only include the drug asset referred to as LB1148. The right includes the right to grant sublicenses to third parties, subject to LBS' written consent, provided that both parties agreed that Newsoara would be permitted to use a certain partner for development purposes. The Newsoara Co-Development Agreement obligates Newsoara to initially use LBS as the exclusive supplier for all Newsoara's requirements for Newsoara Licensed Products in the Territory. During the term of the Newsoara Co-Development Agreement, Newsoara may request to manufacture the Newsoara Licensed Products in the Territory, subject to satisfying certain conditions to LBS' reasonable satisfaction. LBS is obligated to approve Newsoara manufacturing rights without undue refusal or delay. Where the Company performs any research and development or manufacturing activities under the Newsoara Co-Development Agreement, the Company records the expense reimbursement from Newsoara as a reduction to research and development expense.

In consideration of the rights granted to Newsoara under the Newsoara Co-Development Agreement, Newsoara paid LBS a one-time upfront fee of $1.0 million. In addition, Newsoara is obligated to make (i) payments of up to $6.75 million in the aggregate upon achievement of certain regulatory and commercial milestones, (ii) payments in the low six-digit range per licensed product upon achievement of a regulatory milestone, and (iii) tiered royalty payments ranging from the mid-single-digit to low-double-digit percentage range on annual net sales of Licensed Products, subject to adjustment to the royalty percentage in certain events, including a change of control, the expiration of certain patents rights, and royalties paid by Newsoara third parties. To date, Newsoara has met all of its payment obligations under the Newsoara Co-Development Agreement.

During the three months ended March 31, 2023, the Company recognized license revenue of $0.3 million earned upon Newsoara's achievement of a development milestone under the Newsoara Co-Development Agreement during the first quarter of 2023. During the three months ended March 31, 2024, the Company recognized no license revenue from Newsoara under the Newsoara Co-Development Agreement.

The Newsoara Co-Development Agreement will expire upon the later of the expiration date of the last valid claim of any licensed patent covering the Newsoara Licensed Products in the Territory. In addition, the Newsoara Co-Development Agreement can be terminated (i) by either party for the other party's material breach that remains uncured for a specified time period after written notice or for events related to the other party's insolvency, (ii) by LBS if Newsoara challenges or attempts to interfere with any licensed patent rights and, (iii) by Newsoara for any reason upon specified prior written notice.

License Agreements with the Regents of the University of California

The Company has entered into three license agreements, as amended, with the Regents of the University of California ("Regents") for exclusive commercial rights to certain patents, technology and know-how. Concurrent with the Company's decision to terminate the development of LB1148, on October 20, 2023 the Company terminated two of its license agreements with Regents. As of March 31, 2024, the only license agreement remaining with Regents is that entered into with LBS in August 2015, as amended in December 2019 and September 2022 (the "2015 UC License"). The 2015 UC License was retained for the sole purpose of maintaining the Newsoara Co-Development Agreement under which the Company may receive future milestone or royalty payments through the term of the license. Accordingly, pursuant to the 2015 UC License, the Company is obligated to pay a percentage of non-royalty licensing revenue it receives from Newsoara under the Newsoara Co-Development Agreement to Regents ranging from 30 percent to 35 percent of one-third of the upfront payment and milestone payments received from Newsoara. During the three months ended March 31, 2024, the Company recognized no sublicense fees or license maintenance fees due to Regents in research and development expenses in the condensed consolidated statements of operations. During the three months ended March 31, 2023, there were approximately $29,000 in sublicense fees and no license maintenance fees due to Regents recognized in research and development expenses in the condensed consolidated statements of operations.

The 2015 UC License will expire upon the expiration date of the longest-lived patent right licensed under the 2015 UC License. The Regents may terminate the 2015 UC License if: (i) a material breach by us is not cured within 60 days, (ii) the Company files a claim asserting the Regents licensed patent rights are invalid or unenforceable, or (iii) the Company files for bankruptcy. The Company also has the right to terminate the 2015 UC License at any time upon at least 90 days' written notice.

Contingent Value Right

Immediately prior to the closing of the Merger, Seneca issued each share of its common stock held by Seneca stockholders of record, one contingent value right ("CVR"). The CVR entitled the holder (the "CVR Holder") to receive, pro rata with the other CVR Holders, 80% of the net proceeds, if any and subject to certain minimum distribution limitations ("CVR Payment Amount"), received from the sale or licensing of the intellectual property owned, licensed or controlled by Seneca immediately prior to the closing of the Merger (the "Legacy Technology"); provided however that the CVR Holders are only entitled to receive such CVR Payment Amount if the sale or licensing of such Legacy Technology occurred on or before October 27, 2022 ("Legacy Monetization"). Pursuant to the terms of the CVR agreement ("CVR Agreement"), CVR Holders are only entitled to receive CVR Payment Amounts received within 48-months following the closing of the Merger. The CVR Agreement also provides that no distributions will be made to the CVR Holders in the event such distribution is less than $0.3 million.

NSI-189 – Exclusive License and Subsequent Exercise of Purchase Option

Prior to the Merger, Seneca exclusively licensed certain patents and technologies, including a sublicense covering a synthetic intermediate, of the Company's NSI-189 assets ("189 License"), along with a purchase option through December 16, 2023 ("Purchase Option"). On October 22, 2021, Alto Neuroscience ("Alto") agreed to terms of an early exercise of the Purchase Option under the 189 License and entered into an asset transfer agreement ("ATA"). Alto is a U.S. based public, clinical-stage biopharmaceutical company with a mission to redefine psychiatry by leveraging neurobiology to develop personalized and highly effective treatment options.

Pursuant to the terms of the CVR Agreement, no distribution was required to be made to the CVR Holders as the CVR Payment Amount after deducting costs and expenses required to maintain the 189 License was less than $0.3 million. In accordance with the terms of the CVR Agreement, the net proceeds from the sale of the NSI-189 assets, less any applicable transaction costs and expenses, were deposited into the CVR escrow to be used to pay costs and expenses associated with the monetization of the Company's other Legacy Technologies.

In addition, Alto will be required to pay the Company up to an aggregate of $4.5 million upon the achievement of certain development and regulatory approval milestones for NSI-189 (or a product containing or otherwise derived from NSI-189), which is now known as ALTO-100. If Alto sells or grants to a third party a license to the patents and other rights specific to ALTO-100 prior to the achievement of a specified clinical development milestone, Alto will be required to pay to the Company a low-double digit percentage of any consideration received by Alto from such license or sale, provided that the maximum aggregate consideration Alto will be required to pay to the Company under the ATA, including the upfront payment and all potential milestones and transaction-related payments, will not exceed $5.0 million.

Alto has successfully completed a Phase 2a clinical trial of ALTO-100 and is currently enrolling a Phase 2b clinical trial from which topline data is expected in the second half of 2024. Upon the enrollment of a patient in a Phase 3 clinical trial of ALTO-100, a milestone payment of $1.5 million will be due from Alto under the ATA. If this occurs within 48-months of the closing of the Merger, the CVR Holders will be entitled to a CVR Payment Amount, with the remaining 20% of the net proceeds deposited into the CVR escrow. If the milestone is met after 48-months of the closing of the Merger, all the net proceeds will be paid to the Company. There can be no assurance that CVR holders will receive CVR Payment Amounts from the sale of the NSI-189 assets.

NSI-532.IGF-1

On October 27, 2022, the Company entered an agreement to license NSI-532.IGF-1 to the Regents of the University of Michigan ("University of Michigan") for maintaining NSI-532.IGF-1 cell lines, continued development, maintaining patent protection, and seeking licensees. The Company received no upfront fees for the license. NSI-532.IGF-1 is a pre-clinical cell therapy being investigated as a potential therapy for prevention and treatment of Alzheimer's disease. The University of Michigan shall bear 100% of the costs for patent filing, prosecution, maintenance, and enforcement of the patent rights. The Company will receive 50% of net revenues received by the University of Michigan from the licensing of patent rights through the last-to-expire patent in patent rights, unless otherwise earlier terminated, less all reasonable and actual out-of-pocket costs incurred in the litigation of patent rights. There can be no assurance that NSI-532.IGF-1 will ever be successfully monetized or that CVR holders will receive CVR Payment Amounts from the sale of the NSI-532.IGF-1 assets.

8. Commitments and Contingencies

Corporate Office Lease

The Company is party to non-cancelable facility operating lease (the "Corporate Office Lease") of office space for its corporate headquarters in Carlsbad, California. The initial contractual term is for 39-months commencing on June 1, 2022 and expiring on August 31, 2025. The Company has the option to renew the Corporate Office Lease for an additional 36-month period at the prevailing market rent upon completion of the initial lease term. The Company has determined it is not likely that it will exercise this renewal option.

The Corporate Office Lease is also subject to additional variable charges for common area maintenance, insurance, taxes and other operating costs. This additional variable rent expense is not estimable at lease inception. Therefore, it is excluded from the Company's straight-line expense calculation at lease inception and is expensed as incurred.

As of March 31, 2024, the Company recognized an operating right-of-use asset related to the Corporate Office Lease in the amount of $170,000 and a current and noncurrent operating lease liability related to the Corporate Office Lease of $125,000 and $58,000, respectively. As of March 31, 2024, the total remaining future minimum lease payments associated with the Corporate Office Lease of approximately $196,000, including imputed interest of $13,000 calculated using a discount rate of 10.75%, will be paid over the remaining lease term of approximately 1.4 years.

Maturities of the Company's operating lease liabilities as of March 31, 2024 are as follows:

Year ending December 31,		
2024 (remaining)	$	137
2025		59
Total operating lease payments		196
Less: imputed interest		(13)
Total operating lease obligations	$	183

The Company recognized operating lease expense associated with its Corporate Office Lease and its predecessor corporate headquarters lease of approximately $32,000 in both the three months ended March 31, 2024 and March 31, 2023, respectively.

Insurance Financing Arrangements

Consistent with past practice, in June 2023, the Company entered into an agreement to finance an insurance policy that renewed in May 2023. The financing arrangement entered into in June 2023 has a stated annual interest rate of 7.92% and is payable over a 9-month period with the first payment commencing June 30, 2023. The insurance financing arrangement is secured by the associated insurance policy. As of March 31, 2024 and December 31, 2023, the aggregate remaining balance under the Company's insurance financing arrangements in place at each time was zero and $0.2 million, respectively.

Restructuring Costs

In order to better utilize the Company’s resources on the implementation of its refocused business plans and corporate strategy, the Company committed to a cost-reduction plan on September 9, 2022 (the "2022 Cost-Reduction Plan") and a reduction-in-workforce on October 27, 2023 (the "2023 RIF"). The 2022 Cost-Reduction Plan consisted primarily of a 20% reduction in the Company's employee workforce to better align the Company’s resources with its business plan. The 2023 RIF consisted of a 25% reduction in the Company's employee workforce, specifically research and development employees that were no longer deemed critical for the Company’s development of PALI-2108.

The Company recognized no restructuring expenses related to either the 2022 Cost-Reduction Plan or the 2023 RIF for the three months ended March 31, 2024 and March 31, 2023. Total expenses related to the 2022 Cost-Reduction Plan and the 2023 RIF through March 31, 2023 were approximately $0.4 million and $0.2 million, respectively. The Company does not expect to incur any other significant costs associated with either the 2022 Cost-Reduction Plan or the 2023 RIF.

The following table summarizes the change in the Company's accrued restructuring liabilities under both the 2022 Cost-Reduction Plan and the 2023 RIF, which consisted solely of employee compensation and benefits and is classified within Accrued liabilities in the condensed consolidated balance sheets as of each period shown (in thousands):

	Three Months Ended March 31,	
	2024	2023
Balance as of the beginning of year	$ 131	$ 180
Cash paid	(96)	(175)
Balance as of the end of period	$ 35	$ 5

Legal Proceedings

From time to time, the Company may be involved in various lawsuits, legal proceedings, or claims that arise in the ordinary course of business. Management believes there are no claims or actions pending against the Company through March 31, 2024, which will have, individually or in aggregate, a material adverse effect on its business, liquidity, financial position, or results of operations. Litigation, however, is subject to inherent uncertainties, and an adverse result in such matters may arise from time to time that may harm the Company's business.

Indemnification

In accordance with the Company's certificate of incorporation, as amended, amended and restated bylaws, and indemnification agreements, the Company has indemnification obligations to its officers and directors for certain events or occurrences, subject to certain limits, while they are serving in such capacity. There have been no claims to date, and the Company has a directors and officers liability insurance policy that may enable it to recover a portion of any amounts paid for future claims.

9. Subsequent Events

May 2024 Offering

On May 1, 2024, the Company entered into a securities purchase agreement with an institutional investor, pursuant to which the Company agreed to sell and issue, in a private placement, (i) 85,100 shares of the Company's common stock at a purchase price per share of $6.5015, and (ii) 530,142 prefunded warrants to purchase shares of the Company's common stock at a purchase price of $6.5014 per prefunded warrant, with such prefunded warrants being immediately exercisable, having an exercise price of $0.0001 per share, and a perpetual term, and (iii) common stock warrants to purchase 922,863 shares of the Company's common stock at an exercise price of $6.314 per share and a term of seven years from the date of issuance (the "May 2024 Warrants") (collectively, the "May 2024 Offering").

The Company issued warrants to the placement agent in the May 2024 Offering to purchase an aggregate 36,914 shares of the Company's common stock (the "May 2024 Placement Agent Warrants"). The May 2024 Placement Agent Warrants have substantially the same terms as the May 2024 Warrants, except that the exercise price of each of the May 2024 Placement Agent Warrants is $10.727 per share and the term is five years from issuance.

The May 2024 Offering closed on May 6, 2024 for net cash proceeds to the Company of approximately $3.6 million, consisting of gross cash proceeds of $4.0 million less cash equity issuance costs of approximately $0.4 million.

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

Statements in this Quarterly Report on Form 10-Q that are not strictly historical are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. You can identify these forward-looking statements because they involve our expectations, intentions, beliefs, plans, projections, anticipations, or other characterizations of future events or circumstances. These forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that may cause actual results to differ materially from those in the forward-looking statements as a result of any number of factors. Some of these factors are more fully discussed in the section of this Quarterly Report entitled "Risk Factors" and elsewhere herein. We do not undertake to update any of these forward-looking statements or announce the results of any revisions to these forward-looking statements except as required by law.

We recommend investors read this entire Quarterly Report on Form 10-Q, including the "Risk Factors" section, the condensed consolidated financial statements, and related notes thereto. As used in this Quarterly Report on Form 10-Q, unless the context indicates or otherwise requires, "Palisade," "Palisade Bio," the "Company," "we," "us," and "our" or similar designations in this report refer to Palisade Bio, Inc., a Delaware Corporation, and its subsidiaries. Any reference to "common shares" or "common stock," refers to our $0.01 par value common stock. Any reference to "Series A Preferred Stock" refers to our Series A 4.5% Convertible Preferred Stock. Any reference to "Leading Biosciences, Inc." or "LBS" refers to our operations prior to the completion of our merger with Seneca Biopharma, Inc. ("Seneca") on April 27, 2021 (the "Merger"). Any technology that we currently own or may acquire the rights to in the future is referred to by us as either a "product candidate" or "product candidates". Additionally, any reference herein that refers to pre-clinical studies also refers to nonclinical studies.

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is provided, in addition to the accompanying condensed consolidated financial statements and notes, to assist you in understanding our results of operations, financial condition and cash flows. The MD&A is organized as follows:

- *Executive Overview* — Discussion of our business and overall analysis of financial and other items affecting our Company in order to provide context for the remainder of MD&A.
- *Results of Operations* — Analysis of our financial results comparing the three months ended March 31, 2024 and 2023.
- *Liquidity and Capital Resources* — An analysis of cash flows and discussion of our financial condition and future liquidity needs.

Executive Overview

We are a pre-clinical stage biotechnology company focused on developing and advancing novel therapeutics for patients living with autoimmune, inflammatory, and fibrotic diseases. Our lead product candidate, PALI-2108, is being developed as a therapeutic for patients living with inflammatory bowel disease ("IBD"), including ulcerative colitis ("UC") and Crohn's disease ("CD").

PALI-2108

PALI-2108, our lead product candidate, is a prodrug PDE4 inhibitor that operates through a sophisticated mechanism within colon tissues, targeting the key enzyme phosphodiesterase-4 ("PDE4"). This enzyme is pivotal in cAMP hydrolysis, and by inhibiting PDE4, intracellular cAMP levels are elevated. This elevation leads to the downregulation of inflammatory cytokines and a reduction in the expression of cell adhesion molecules. By modulating these processes, PALI-2108 effectively prevents the local infiltration and activation of inflammatory cells in the colon tissues, offering a targeted approach for UC treatment. With a glucuronic-derived sugar moiety, PALI-2108 remains minimally absorbed until activated by the colonic bacterium enzyme β-glucuronidase. This prodrug exhibits colon preference, as demonstrated in DSS-induced UC mouse models and oxazolone colitis-induced mice, showcasing its localized bioactivation and colon-specific distribution.

Our target engagement study seems to indicate comparable binding to cAMP-specific PDE4 in the colon. PALI-2108's dose-dependent efficacy, lack of systemic toxicity demonstrated in tolerated dose studies, and promising results in pre-clinical models position it as a novel and targeted therapy for moderate-to-severe UC.

We have produced investigational drug batches of PALI-2108 that are compliant with Good Manufacturing Practice ("GMP"). We have completed rodent and initiated non-rodent, non-pivotal investigation new drug application ("IND") -enabling or a Canadian Clinical Trial Application ("CTA") -enabling pre-clinical studies of PALI-2108 and are currently initiating pivotal IND/CTA-enabling pre-clinical studies, which we expect to be completed by the end of the third quarter of 2024. We plan to submit an IND/CTA in the third quarter of 2024 and initiate clinical trials of PALI-2108 in the fourth quarter of 2024. By the end of 2024, we plan to submit an IND/CTA and initiate a Phase 1a single ascending dose ("SAD") and multiple ascending dose ("MAD") clinical study including food effects in normal healthy volunteers evaluating the safety, tolerability, and pharmacokinetics as well as evaluate a MAD cohort of UC patients with elevated PDE4-associated biomarkers for pharmacodynamic effects. Topline data from the Phase 1a SAD/MAD trial is expected late in the first half of 2025. Following the completion of the Phase 1a SAD/MAD trial, we plan to initiate a Phase 1b/2 POC trial in UC patients in the second half of 2025.

Our Precision Medicine Approach

We are developing a biomarker-based patient selection approach which, if developed, will aid clinicians in identifying patients who may respond to therapy with a locally acting PDE4 inhibitor such as PALI-2108. We are working with our team of precision medicine focused bioinformatics developers to identify biomarkers and develop optimal algorithms to aid in patient selection, which we believe may enrich the responder population and improve the rate of clinical response previously demonstrated with PDE4 inhibitors. This involves the use of clinical and multiomics data from a large patient population which will be used to identify PDE4-related biomarkers that are associated with disease, correlate with severity, correlate with clinical biomarkers, and are modified with local PDE4 inhibitor therapy in the colon. We have curated clinical study data, including longitudinal biomarker and clinical outcome data, to develop a deep understanding of the potential for patient response to PDE4 therapy, and we are in discussions with potential partners to access additional large scale IBD databanks with clinical, patient-reported, and molecular data that will be used to support and further validate the approach. Additionally, we have initiated the development of corresponding biomarker assays for these PDE4-related biomarkers that will be used in clinical studies with the aim to develop FDA-approved tests for selecting potential responders to PALI-2108.

Recent Developments in the pre-clinical studies of PALI-2108

- On January 29, 2024, we disclosed the presentation of results demonstrating local bioactivation of PALI-2108 and its colon-specific distribution and limited systemic exposure in pre-clinical models. PALI-2108 had similar target engagement to other PDE4 inhibitors, dose-dependent efficacy in a UC model, and no systemic toxicity in pre-clinical studies. The results also demonstrated localized bioactivation, an expanded therapeutic window, and potent PDE4 inhibitory activity in pre-clinical studies.
- On April 16, 2024, we announced the successful completion of a critical analysis evaluating the ex-vivo bioactivation of PALI-2108. PALI-2108 exhibited efficient ex-vivo conversion into its active PDE4 inhibitor form in stool samples from both normal healthy volunteers and patients with UC. The assessment of samples using LC-MS analysis showed PALI-2108 was converted into its active PDE4 inhibitor form at a mean rate of 90.1% with conversion steadily increasing over time. As an orally administered, locally acting colon-specific PDE4 inhibitor prodrug, this milestone represents a significant step forward in understanding the pharmacological profile and potential therapeutic utility of PALI-2108 for patients affected by UC.
- On April 23, 2024, we disclosed the initiation of a strategic collaboration with Strand Life Sciences, a bioinformatics specialist. This collaboration aims to advance our precision medicine initiatives tailored specifically for UC therapy. The collaboration with Strand provides us access to advanced bioinformatics tools vital for understanding complex disease pathways and predicting responses to PDE4 inhibitors. Leveraging data from over ten UC clinical studies, we have curated a pipeline of 1600 UC patient samples, including transcriptomics and clinical outcomes. This curated dataset, enables us to identify biomarkers for selecting UC patient responders, utilizing machine learning to develop the precision medicine approach that may enable selection of UC patient responders to PALI-2108.

•On May 1, 2024, we announced the successful completion of our analysis to determine the effects of bioactivated PALI-2108 on TNF-α production in a whole blood assay. This study included WB samples from 14 clinically healthy adults. Findings from the study demonstrated that PALI-2108 exhibited efficacy in inhibiting TNF-α production induced by lipopolysaccharide ("LPS") in this ex-vivo peripheral whole blood assay. Pre-treatment of human whole blood samples with bioactivated PALI-2108 resulted in a significant reduction in LPS-induced TNF-α production compared to non-pretreated samples. Specifically, our proprietary PDE4 inhibitor, shown to be released by the local bioconversion of PALI-2108 prodrug in the colon, demonstrated a mean half-maximal inhibitory concentration (IC_{50}) for TNF-α inhibition of 0.022 μM, compared to 0.41 μM for apremilast, showcasing its potent anti-inflammatory activity.

Recent Financings

In February 2024, we completed a warrant inducement transaction for net cash proceeds of approximately $2.2 million consisting of gross cash proceeds of $2.5 million, less cash equity issuance costs of approximately $0.3 million.

In May 2024, we completed a private placement for net cash proceeds of approximately $3.6 million consisting of gross cash proceeds of $4.0 million, less cash equity issuance costs of approximately $0.4 million.

We intend to use the net proceeds from the recent financings for working capital and general corporate purposes, including the development of PALI-2108. With the additional net cash proceeds of $3.6 million received subsequent to the end of the first quarter of 2024 from the May 2024 private placement, combined with our cash and cash equivalents balance of $11.3 million as of March 31, 2024, we believe we have sufficient cash to fund our currently planned operations through the first quarter of 2025.

RESULTS OF OPERATIONS

License Revenue

We generated no revenues from the sale of our product candidates for any of the periods presented. For the three months ended March 31, 2023, we recognized license revenue of approximately $0.3 million from the co-development and distribution agreement with Newsoara, a joint venture established with Biolead Medical Technology Limited, as amended, (the “Newsoara Co-Development Agreement”). For the three months ended March 31, 2024, we recognized no license revenue.

Research and Development Expenses

Research and development expenses have historically consisted primarily of costs incurred for the clinical development of our product candidate LB1148. On August 9, 2023, based on the results of the efficacy and safety data of the U.S. Phase 2 PROFILE study, we terminated the development of LB1148. The research and development costs included:

- salaries and employee-related costs, including stock-based compensation;
- laboratory and vendor expenses related to the execution of pre-clinical and clinical trials;
- expenses under agreements with third-party contract research organizations, investigative clinical trial sites that conduct research and development activities on our behalf, and consultants;
- costs related to develop and manufacture pre-clinical study and clinical trial material; and
- regulatory expenses.

We do not expect to incur any significant costs in 2024 or beyond related to the closing down of the associated clinical trials of LB1148. Accordingly, the nature of our research and development expenses is expected to shift from clinical activities to those pre-clinical activities associated with the development of PALI-2108.

Our direct research and development expenses are tracked by product candidate and consist primarily of external costs, such as fees paid under third-party license agreements and to outside consultants, Contract Research Organizations ("CROs"), clinical site, contract manufacturing organizations (“CMOs”) and research laboratories in connection with our pre-clinical development, process development, manufacturing, clinical development, and

regulatory activities. We do not allocate employee costs and costs associated with our discovery efforts, laboratory supplies and facilities, including other indirect costs, to specific product candidates because these costs are deployed across multiple programs and, as such, are not separately classified. As needed, we manage third parties that are engaged to conduct our (i) research activities, (ii) pre-clinical, clinical and translational science development activities, and (iii) process development. When we perform any research and development or manufacturing activities under a co-development agreement, we record the expense reimbursement from the co-development partner as a reduction to research and development expense once the reimbursement amount is approved for payment by the co-development partner. Pursuant to agreements where we perform research and development activities under a joint development plan, such as our research and collaboration with Giiant Pharma, Inc. ("Giiant"), qualifying development costs are expensed as research and development costs as incurred. On September 1, 2023, we entered into a research collaboration and license agreement for substantially all of Giiant's current and future proposed products (the "Giiant License Agreement").

General and Administrative Expenses

General and administrative expenses consist primarily of salary and employee-related costs and benefits, professional fees for legal, intellectual property, investor and public relations, accounting and audit services, insurance costs, director and committee fees, and general corporate expenses.

Going Concern

We believe we have sufficient cash to fund our currently planned operations through the first quarter of 2025. Notwithstanding, our management has evaluated all conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that these financial statements are issued, including: (i) the probability that significant changes to our anticipated level of operations, due to factors that are within or outside of our control, would cause our available cash as of the date of this filing to not be sufficient to fund our anticipated level of operations for the next 12 months, and (ii) the uncertainties of the cost and timing of our efforts to in-license or acquire additional product candidates. In the opinion of management, these factors, among others, raise substantial doubt about our ability to continue as a going concern as of the filing date of this Quarterly Report on Form 10-Q and for one year from the issuance of the condensed consolidated financial statements.

Reverse Stock Split

On April 5, 2024, we effected a 1-for-15 reverse stock split of our issued and outstanding common stock (the "Reverse Stock Split"). As a result of the Reverse Stock Split, each of our stockholders received one share of our common stock for every 15 shares such stockholder held immediately prior to the effective time of the Reverse Stock Split. Unless otherwise noted, all common stock shares, common stock per share data and shares of common stock underlying convertible preferred stock, stock-based awards and common stock warrants included in these condensed consolidated financial statements, including the exercise or conversion price of such equity instruments, as applicable, have been retrospectively adjusted to reflect the Reverse Stock Split for all periods presented.

Results of Operations

Comparison of the three months ended March 31, 2024 and 2023

The following table summarizes our results of operations for the three months ended March 31, 2024 and 2023 (in thousands):

	Three Months Ended March 31,		Change	
	2024	2023	$	%
License revenue	$ —	$ 250	$ (250)	n/a
Operating expenses				
Research and development	2,214	1,241	973	78%
General and administrative	1,459	1,538	(79)	(5)%
Total operating expenses	3,673	2,779	894	32%
Loss from operations	(3,673)	(2,529)	(1,144)	45%
Other (expense) income:				
Interest expense	(1)	—	(1)	n/a
Other income	147	189	(42)	(22)%
Total other income, net	146	189	(43)	(23)%
Net loss	$ (3,527)	$ (2,340)	$ (1,187)	51%

License revenue

During the three months ended March 31, 2023, we recognized license revenue of $0.3 million earned upon the achievement of a milestone under the Newsoara Co-Development Agreement. During the three months ended March 31, 2024, we recognized no license revenue.

Research and Development Expenses

The $1.0 million, or 78%, increase in research and development expenses from $1.2 million for the three months ended March 31, 2023 to $2.2 million for the three months ended March 31, 2024 is attributable to approximately $1.6 million of expenses recognized that were directly related to the joint development of our new lead asset, PALI-2108, partially offset by a decrease in costs directly related to our development of LB1148, which we ceased in August of 2023, and lower employee-related costs.

As a result of our decision to no longer pursue the clinical development of LB1148, direct clinical trial-related costs, including clinical trial vendor fees, investigator site fees, and clinical trial consultant and contractor fees, decreased by approximately $0.3 million for the three months ended March 31, 2024, compared to the three months ended March 31, 2023. Similarly, drug manufacturing costs, regulatory activity costs and translational research costs decreased approximately $0.1 million for the three months ended March 31, 2024, compared to the three months ended March 31, 2023. Employee-related costs decreased by approximately $0.2 million for the three months ended March 31, 2024, compared to the three months ended March 31, 2023 as a result of a 25% reduction in our employee workforce, specifically research and development employees that were no longer deemed critical for our development of PALI-2108, in October 2023.

General and Administrative Expenses

General and administrative expenses remained virtually flat at approximately $1.5 million for both the three months ended March 31, 2024 and March 31, 2023. For the three months ended March 31, 2024, shareholder services costs attributable to our March 2024 special meeting of shareholders held to approve the Reverse Stock Split, and ongoing consultant and contract labor increased by approximately $0.1 million each compared to the three months ended March 31, 2023. Offsetting these increases were lower net professional fees, lower insurance costs, and lower board of director and committee fees in the three months ended March 31, 2024, compared to the three months ended March 31, 2023.

Other (expense) income

Other income, net, for the three months ended March 31, 2024 includes dividend income of approximately $147,000 from our investments of excess cash in money market funds with maturities of three months or less in the period.

Other income, net, for the three months ended March 31, 2023 includes dividend income of approximately $147,000 from our investments of excess cash in money market funds with maturities of three months or less and a non-cash gain of approximately $43,000 associated with the revaluation of liability-classified warrants in the period.

Liquidity and Capital Resources

Financial Condition

Since our inception, we have financed our operations through the sales of our securities, issuance of debt, the exercise of common stock warrants, and to a lesser degree, grants and research contracts as well as the licensing of our intellectual property to third parties. Refer to the paragraph under the heading "Going Concern" in the Results of Operations section above for management's assessment of our ability to continue as a going concern.

Sources of Liquidity

We expect to incur substantial operating losses for the foreseeable future. We will need to raise additional capital through a combination of equity offerings, debt financings, collaborations, and other similar arrangements. Our ability to raise additional capital may be adversely impacted by: (i) general political or economic conditions, (ii) inflation, (iii) rising interest rates, (iv) ongoing supply chain disruptions, (v) the ongoing global conflicts, including those in the Ukraine and Middle East, (vi) limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry, (vii) or a resurgence of COVID-19, COVID-19 variants, or another pandemic. In the event the we are unable to access additional capital, we may need to curtail or greatly reduce our operations, which could have a materially adverse impact on our business, financial condition, and results of operations.

Recent Equity Offerings

On May 6, 2024, we completed a private placement of common stock, prefunded warrants to purchase common stock and warrants to purchase common stock (the "May 2024 Offering"). Gross cash proceeds from the May 2024 Offering were $4.0 million and net cash proceeds were approximately $3.6 million after deducting cash equity issuance costs of approximately $0.4 million.

On September 11, 2023, we completed a registered direct offering of common stock pursuant to an effective shelf registration statement on Form S-3 (the "September 2023 Offering"). Gross cash proceeds from the September 2023 Offering were $2.0 million and net cash proceeds were $1.7 million after deducting cash equity issuance costs of approximately $0.3 million.

On April 3, 2023, we completed a registered direct offering and concurrent private placement of common stock and warrants to purchase common stock (the "April 2023 Offering"). Gross cash proceeds from the April 2023 Offering were $6.0 million and net cash proceeds were $5.3 million after deducting cash equity issuance costs of approximately $0.7 million.

On January 4, 2023, we completed a registered direct offering and concurrent private placement of common stock and warrants to purchase common stock (the "January 2023 Offering"). Gross cash proceeds from the January 2023 Offering were $2.5 million and net cash proceeds were approximately $2.2 million after deducting cash equity issuance costs of approximately $0.3 million.

Warrant Exercises

On January 30, 2024, we entered into warrant inducement agreements (the “Warrant Inducement Agreements”) with certain accredited and institutional holders (collectively, the “Warrant Holders”) of certain of our remaining outstanding common stock purchase warrants issued pursuant to: (i) common stock warrants issued on May 10, 2022, (ii) the January 2023 Offering, and (iii) the April 2023 Offering, as well as certain outstanding Series 2 warrants issued on August 16, 2022 (collectively, the “Existing Warrants”). Pursuant to the Warrant Inducement Agreements, the exercise price of each Existing Warrant was reduced to $10.97 per share. Each of the Warrant Holders that exercised their Existing Warrants pursuant to the Warrant Inducement Agreements received one replacement warrant for each Existing Warrant exercised with each such replacement warrant having a term of five years from issuance and an exercise price per share of $10.97 (in its entirety, the "February 2024 Warrant Inducement").

The Warrant Holders collectively exercised an aggregate of 228,162 Existing Warrants. As a result of the exercises of the Existing Warrants, we issued an aggregate of 228,162 shares of our common stock. The February 2024 Warrant

Inducement closed on February 1, 2024 with us receiving net cash proceeds of approximately $2.2 million consisting of gross cash proceeds of $2.5 million, less cash equity issuance costs of approximately $0.3 million.

During the three months ended March 31, 2023, we received gross cash proceeds of approximately $2.7 million from common stock warrant exercises, approximately $1.4 million of which related to common stock warrant exercises on December 30, 2022 for which the related cash was not received by us until January 2023.

Cash Flows

As of March 31, 2024, we had $11.3 million in cash, cash equivalents and restricted cash. The following table shows a summary of our cash flows for the three months ended March 31, 2024 and 2023 (in thousands):

	Three Months Ended March 31,	
	2024	**2023**
Net cash used in operating activities	$ (3,180)	$ (3,526)
Net cash provided by financing activities	2,024	4,440

Net Cash Used in Operating Activities

Cash used in operating activities was approximately $3.2 million for the three months ended March 31, 2024, which reflects an approximately $3.5 million net loss adjusted for (i) approximately $0.2 million of net cash inflows related to changes in operating assets and liabilities and (ii) certain non-cash items impacting the net loss, consisting primarily of an approximately $0.1 million non-cash expense recognized for stock-based compensation and related charges. The net cash inflow from operating assets and liabilities was driven by a cash outflow of approximately $0.6 million from the payment of employee cash bonuses in the period that was more than offset by a cash inflow of approximately $0.8 million from: (i) a decrease in prepaids and other current assets and other noncurrent assets, which was primarily attributable to the amortization of the current and non-current portions of the Company's prepaid insurance policies, and (ii) an increase in accounts payable and accrued liabilities, which was primarily due to an increase in accrued joint development expenses associated with the Giiant License Agreement and the timing of accounts payable payments that were partially offset by accrued severance payments and lower accrued director stipends.

Cash used in operating activities of approximately $3.5 million for the three months ended March 31, 2023 reflects an approximately $2.3 million net loss for the period adjusted for (i) approximately $1.3 million of net cash outflows related to changes in operating assets and liabilities and (ii) certain non-cash items impacting the net loss, consisting primarily of an approximately $0.1 million non-cash expense recognized for stock-based compensation and related charges. The net cash outflow from operating assets and liabilities was primarily due the recording of an approximately $0.3 million accounts receivable for license revenue recognized in the quarter and an approximately $1.0 million cash outflow for accounts payable and accrued liabilities due to the timing of payments.

Net Cash Provided by Financing Activities

For the three months ended March 31, 2024, cash provided by financing activities of approximately $2.0 million was attributable to net cash proceeds of approximately $2.2 million from the exercise of common stock warrants in conjunction with the February 2024 Warrant Inducement, partially offset by payments made on the Company's insurance financing arrangements of approximately $0.2 million.

For the three months ended March 31, 2023, cash provided by financing activities of approximately $4.4 million was attributable to cash proceeds of approximately $2.2 million from the January 2023 Offering and approximately $2.7 million from the exercise of common stock purchase warrants, which includes the receipt in early January 2023 of a $1.4 million other receivable from warrant exercises on December 30, 2022, partially offset by payments of equity issuance costs of approximately $0.4 million and payments made on the Company's insurance financing arrangements of approximately $0.1 million.

Contractual Obligations

Office Lease

We are party a to non-cancelable facility operating lease (the "Corporate Office Lease") of office space for our corporate headquarters. The initial contractual term is for 39-months commencing on June 1, 2022 and expiring on

August 31, 2025. We have the option to renew the Corporate Office Lease for an additional 36-month period at the prevailing market rent upon completion of the initial lease term. We have determined that it is not likely we will exercise this renewal option.

Commencing on June 1, 2022, we are subject to contractual monthly lease payments of $10,850, plus certain utilities, for the first 12 months with 3 percent escalations at the first, second and third lease commencement anniversaries. As of March 31, 2024, the total remaining future minimum lease payments associated with the Corporate Office Lease of approximately $196,000, including imputed interest of $13,000 calculated using a discount rate of 10.75%, will be paid over the remaining lease term of approximately 1.4 years.

Insurance Financing Arrangements

Consistent with past practice, in June 2023, we entered into an agreement to finance an insurance policy that renewed in May 2023. The insurance financing arrangement is secured by the associated insurance policy. We made the final principal payment of the insurance financing arrangement during the three months ended March 31, 2024. Accordingly, there is no outstanding balance due as of March 31, 2024. We expect to renew the insurance policy, and enter into an associated insurance financing arrangement accordingly, in late May of 2024.

Reduction in Workforce

In order to better utilize our resources on the implementation of our refocused business plans and corporate strategy, we committed to a reduction-in-workforce on October 27, 2023 (the "2023 RIF"). The 2023 RIF consisted of a 25% reduction in our employee workforce, specifically research and development employees that were no longer deemed critical for our development of PALI-2108. As of March 31, 2024, we have accrued $35,000 in severance and benefits related to the 2023 RIF and expect to make the remaining cash payments by June 30, 2024.

Future Liquidity Needs

We have incurred significant operating losses and negative cash flows from operations since our inception. To date, we have not been able to generate significant revenues nor achieve operating profitability. Based upon our cash and cash equivalents balance of $11.3 million as of March 31, 2024, we believe we have sufficient cash to fund our currently planned operations through the first quarter of 2025. Notwithstanding, should our anticipated level of operations significantly change, we may require additional financing sooner than the first quarter of 2025. Beyond the first quarter of 2025 we will require additional financing to continue at our expected level of operations. If we fail to obtain the needed capital, we will be forced to delay, scale back, or eliminate some or all of our development activities, or potentially cease our operations.

Critical Accounting Policies and Estimates

Our condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (“U.S. GAAP”). The preparation of financial statements in conformity with U.S. GAAP requires us to make estimates, judgments, and assumptions that impact the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the balance sheet and the reported amounts of expenses during the reporting period. Our estimates are based on historical experience, known trends, events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. In making estimates and judgments, management employs critical accounting policies

Our significant accounting policies used in the preparation of the condensed consolidated financial statements are described in more detail in Note 2 to the notes to the condensed consolidated financial statements for the quarter ended March 31, 2024, included elsewhere in this Quarterly Report on Form 10-Q. Our critical accounting estimates are identified in Management’s Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7 of our most recently filed Form 10-K. In the three months ended March 31, 2024, we determined that our accounting policy for Derivative Financial Instruments disclosed in the Form 10-K is no longer a critical accounting policy due to the insignificant impact our liability-classified warrants currently has on our financial statements. Other than the removal of our critical accounting policy for Derivative Financial Instruments, we believe there have been no significant changes in our critical accounting policies and significant judgments and estimates since those disclosed in our most recently filed Form 10-K.

Recently Issued or Adopted Accounting Pronouncements

See Note 2 to the notes to the condensed consolidated financial statements for the quarter ended March 31, 2024, included elsewhere in this Quarterly Report on Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are not required to provide the information required by this item as we are considered a smaller reporting company, as defined by Rule 229.10(f)(1).

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Our management, with the participation of our Chief Executive Officer, who is also our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2024. Based upon the evaluation, our Chief Executive Officer concluded that, as of March 31, 2024, our disclosure controls and procedures were not effective at a reasonable assurance level as a result of the material weakness that existed in our internal control over financial reporting, as described below.

However, our management, including our Chief Executive Officer, has concluded that, notwithstanding the identified material weakness in our internal control over financial reporting, the condensed consolidated financial statements in this Quarterly Report on Form 10-Q fairly present, in all material respects, our financial position, results of operations and cash flows for the periods presented in conformity with U.S. GAAP.

Material Weakness in Internal Control over Financial Reporting

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that a reasonable possibility exists that a material misstatement of our annual or interim consolidated financial statements would not be prevented or detected on a timely basis.

As previously disclosed, during the quarter ended June 30, 2021, we identified a material weakness in our internal controls over financial reporting due to a lack of controls in the financial closing and reporting process, including a lack of segregation of duties and the documentation and design of formalized processes and procedures surrounding the creation and posting of journal entries and account reconciliations. This material weakness contributed to a material weakness in our control activities based on the criteria set forth in the Committee of Sponsoring Organizations 2013 Framework. If not remediated, or if we identify further material weaknesses in its internal controls, our failure to establish and maintain effective disclosure controls and procedures and internal control over financial reporting could result in material misstatements in our consolidated financial statements and a failure to meet its reporting and financial obligations.

As described below, management has begun designing the plan and executing the remediation actions to address the material weakness and further actions are ongoing as of March 31, 2024. The material weakness continues to be present as of March 31, 2024.

Remediation Efforts related to the Material Weakness

Management, with oversight from our Audit Committee of the Board of Directors, is actively engaged in remediation efforts to address the material weaknesses identified in the management's evaluation of internal controls and procedures. The remediation efforts summarized below, which have been or are in the process of being implemented, are intended to address the identified material weakness.

(i)We will continue to hire additional finance, accounting and information technology employees with appropriate experience, certification, education and training.

(ii)We have implemented new accounting and finance management software effective July 1, 2022, which is intended to eliminate some of the existing deficiencies in our internal control environment. The information technology general controls implemented with the new accounting and finance management software will be documented and tested for operating effectiveness.

(iii)We are in the process of updating our formal accounting policies, procedures and controls, including preparation and review of account reconciliations, review of journal entries, and controls over period end financial reporting.

(iv)We have identified and remediated all segregation of duties deficiencies in our current control environment. The controls established to remediate all segregation of duties deficiencies identified will be documented and tested for operating effectiveness.

(v)We are in the process of implementing additional key internal controls designed to address the potential risks identified in our business processes. Once fully implemented, these controls will be tested for operating effectiveness.

We believe that the implementation and testing of the above steps will allow us to make progress on addressing a number of the deficient controls within our internal control environment, which will help facilitate the remediation of the material weakness identified above. As we continue to evaluate and work to improve our internal control over financial reporting, we will take additional measures to address control deficiencies, or we may modify certain of the remediation measures described above. However, we require additional time to complete the design and implementation of our remediation plans and demonstrate the operating effectiveness of our remediation efforts. The material weakness cannot be considered remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) during the 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

None.

ITEM 1A. RISK FACTORS

RISK FACTOR SUMMARY

We face many risks and uncertainties, as more fully described in this Quarterly Report on Form 10-Q under the heading "Risk Factors." The summary below does not contain all the information that may be important to you, and you should read this summary together with the more detailed discussion of these risks and uncertainties contained in "Risk Factors."

Risks Related to Our Development, Commercialization and Regulatory Approval of Our Investigational Therapies

- Our business depends on the successful pre-clinical and clinical development, regulatory approval and commercialization of our recently licensed therapeutic compound, including our lead asset PALI-2108.
- There are substantial risks inherent in drug development, and, as a result, we may not be able to successfully develop PALI-2108.
- We depend on our license agreement with Giiant to permit us to use patents and patent applications relating to PALI-2108. Termination of these rights or the failure to comply with obligations under the license agreement could materially harm our business and prevent us from developing or commercializing PALI-2108, our lead product candidate.
- We expect that our operations and development of PALI-2108 will require substantially more capital than we currently have, and we cannot guarantee when or if we will be able to secure such additional funding.
- There can be no assurance that our product candidates will obtain regulatory approval.
- If pre-clinical and clinical studies of PALI-2108 do not yield successful results, we may decide to not continue the development of PALI-2108.
- Even if our clinical studies are successful and achieve regulatory approval, the approved product label may be more limited than we anticipate, which could limit the commercial prospects of PALI-2108.
- We may in the future conduct clinical trials for PALI-2108 outside the United States ("U.S."), and the U.S. Food and Drug Administration ("FDA") and applicable foreign regulatory authorities may not accept data from such trials.
- We anticipate relying on third-party Contract Research Organizations ("CROs") and other third parties to conduct and oversee our pre-clinical studies and clinical trials. If these third parties do not meet our requirements or otherwise conduct the studies or trials as required, we may not be able to satisfy our contractual obligations or obtain regulatory approval for, or commercialize, our product candidates.
- We have entered into a collaborative research agreement with Giiant related to pre-clinical development, which will require the efforts of Giiant and its personnel, which are out of our control.

Risks Related to Our Business

- We have a limited operating history and have never generated any revenues from product sales.
- Our business model assumes revenue from, among other activities, marketing or out-licensing the products we develop. PALI-2108 is in the early stages of development and because we have a short

development history with PALI-2108, there is a limited amount of information about us upon which you can evaluate our business and prospects.

•Our common stock could be delisted from the Nasdaq Stock Market if we are unable to maintain compliance with the Nasdaq Stock Market's continued listing standards.

•We have received a notification from the Nasdaq Stock Market that our audit committee does not have three (3) independent members as a result of recent director resignations. If we fail to timely appoint an independent director that meets the Nasdaq Stock Market Requirements for audit committees, Nasdaq could delist our common stock.

•Our success depends on the attracting and retaining of senior management and scientists with relevant expertise.

•We may choose to discontinue developing or commercializing any of our product candidates, or may choose to not commercialize product candidates in approved indications, at any time during development or after approval, which could adversely affect us and our operations.

•Our inability to successfully in-license, acquire, develop and market additional product candidates or approved products could impair our ability to grow our business.

Risks Related to Our Dependence on Third Parties

•We expect to rely on collaborations with third parties for the successful development and commercialization of our product candidates.

•We anticipate relying completely on third-party contractors to supply, manufacture and distribute clinical drug supplies for our product candidates.

Risks Related to Our Financial Operations

•We have expressed substantial doubt about our ability to continue as a going concern.

•We have a history of net operating losses, and we expect to continue to incur net operating losses and may never achieve profitability.

•Failure to remediate a material weakness in internal controls over financial reporting could result in material misstatements in our consolidated financial statements.

Risks Related to Our Intellectual Property

•We may not be able to obtain, maintain or enforce global patent rights or other intellectual property rights that cover our product candidates and technologies that are of sufficient breadth to prevent third parties from competing against us.

•If we fail to comply with our obligations under our intellectual property license agreements, we could lose license rights that are important to our business.

Other Risks Related to Our Securities

•We will need to raise additional capital in the future to fund our operations, which may not be available to us on favorable terms or at all.

•Our common stock price may be highly volatile.

•If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

•Our Board of Directors has broad discretion to issue additional securities, which might dilute the net tangible book value per share of our common stock for existing stockholders.

RISK FACTORS

Investing in our common stock involves a high degree of risk. We have described below a number of uncertainties and risks that, in addition to uncertainties and risks presented elsewhere in this Quarterly Report on Form 10-Q, may adversely affect our business, operating results and financial condition. The uncertainties and risks enumerated below as well as those presented elsewhere in this Quarterly Report on Form 10-Q should be considered carefully when evaluating us, our business and the value of our securities.

Risks Related to our Development, Commercialization and Regulatory Approval of our Investigational Therapies

Our business depends on the successful pre-clinical and clinical development, regulatory approval, and commercialization of our recently licensed therapeutic compound, including our lead asset PALI-2108.

On September 1, 2023, we announced that we had entered into the Giiant License Agreement, pursuant to which we exclusively licensed all of Giiant's current and future technologies, including PALI-2108. PALI-2108 is a pre-clinical asset and is our only asset being actively developed. Our success depends on the development of PALI-2108, which is subject to a number of risks, including:

- the continued enforceability of our research collaboration and license agreement with Giiant;
- the successful completion of our investigational new drug application ("IND") or a Canadian Clinical Trial Application ("CTA") enabling studies and research;
- the submission and approval of an IND or CTA;
- our ability to develop and implement clinical trial designs and protocols;
- the successful initiation and completion of our planned pre-clinical studies and clinical trials;
- the approval by the FDA or other regulatory authority to commence the marketing of our product candidates;
- the ability for us and third-parties, if applicable, to achieve and maintain compliance with our contractual obligations and applicable regulatory requirements;
- the ability of our contract manufacturers to manufacture sufficient supply of our product candidates to meet the required pre-clinical studies and clinical trial supplies;
- the ability of our contract manufacturers to remain in good standing with regulatory agencies and to develop, validate and maintain commercially viable manufacturing facilities and processes that are compliant with cGMP;
- our ability to obtain favorable labeling for our product candidates through regulators that allows for successful commercialization;
- acceptance by physicians, insurers, payors, and patients of the beneficial quality, safety and efficacy of our product candidates, if approved, including relative to alternative and competing treatments;
- our ability to price our product candidates to recover our development costs and applicable milestone or royalty payments, and generate a satisfactory profit margin; and
- our ability and our applicable collaboration and licensing partners' ability to establish and enforce intellectual property rights related to our product candidates and technologies.

If we do not achieve one or more of these factors, many of which are beyond our control, in a timely manner or at all, we could experience significant delays or an inability to obtain regulatory approvals or commercialize our proposed product candidate. Such delays may result in increased costs and the failure to complete any required regulatory activity. Even if regulatory approvals are obtained, we may never be able to successfully commercialize our product candidates. Accordingly, we cannot make assurances that we will ever be able to generate sufficient revenue through the sale of any product candidates, if approved, to internally fund our business.

There are substantial risks inherent in drug development, and, as a result, we may not be able to successfully develop PALI-2108.

Our research and development efforts are focused on a therapeutic based on PDE4 inhibitors. Our development of PALI-2108 is in the early stages. However, such technology's commercial feasibility and acceptance in our target indication of inflammatory bowel disease are unknown. Scientific research and development requires significant amounts of capital and takes a long time to reach commercial viability, if it can be achieved at all. During the research and development process, we may experience technological barriers that we may be unable to overcome. Further, certain underlying premises in our development programs have not been proven. Because of these and similar uncertainties, it is possible that our product candidates will not reach commercialization. If we are unable to successfully develop and commercialize our product candidates, we will be unable to generate revenue or build a sustainable or profitable business.

We depend on our license agreement with Giiant to permit us to use patents and patent applications relating to PALI-2108. Termination of these rights or the failure to comply with obligations under the license agreement could materially harm our business and prevent us from developing or commercializing PALI-2108, our lead product candidate.

We are a party to a license agreement with Giiant under which we have been granted rights to patents and patent applications that are important to our business. We rely on this license agreement to be able to use various proprietary technologies that are material to our business, including certain trade secrets and patent applications that cover PALI-2108. Our rights to use this intellectual property and employ the inventions claimed in these patent applications and contained in the trade secrets are subject to the continuation of and our compliance with the terms of our license agreement. If we fail to comply with any of our obligations under the license agreement with Giiant, Giiant may have the right to terminate the license agreement, in which event we would not be able to continue the development of PALI-2108. Additionally, disputes may arise under the license agreement regarding the intellectual property that is subject to such license agreement. If disputes over intellectual property that we have licensed, or in the future may license, prevent or impair our ability to maintain any of our license agreements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates and technologies.

Pre-clinical and clinical drug development is very expensive, time-consuming and uncertain.

The pre-clinical and clinical development of product candidates is very expensive, time-consuming, difficult to design and implement, and the outcomes are inherently uncertain. Most product candidates that commence clinical trials are never approved by regulatory authorities for commercialization and of those that are approved, many do not cover their costs of development. In addition, we, any partner with which we may in the future collaborate, the FDA, or other regulatory authorities, including state and local agencies and counterpart agencies in foreign countries, or institutional review boards at our trial sites, may suspend, delay, require modifications to or terminate our clinical trials, once begun, at any time.

We expect that our operations and development of PALI-2108 will require substantially more capital than we currently have, and we cannot guarantee when or if we will be able to secure such additional funding.

We have historically funded our operations and prior development efforts through the sale of our securities. Based on our existing cash resources and our current business plan, we do not have adequate capital to fund our anticipated operations through the completion of the development of PALI-2108. As a result, we will need to secure additional funding. If we are not able to obtain additional capital in the future or on acceptable terms, we may have to curtail our research and development efforts as well as our operations.

There can be no assurance that our product candidates will obtain regulatory approval.

The sale of human therapeutic products in the U.S. and foreign jurisdictions is subject to extensive and time-consuming regulatory approval, which requires, among other things:

- pre-clinical data required for the submission of an IND or CTA;
- controlled research and human clinical testing;
- establishment of the safety and efficacy of the proposed product candidate;
- government review and approval of a submission containing manufacturing, pre-clinical and clinical data; and
- adherence to cGMP regulations during production and storage.

The proposed product candidate we currently have under development, PALI-2108, will require significant development, pre-clinical and clinical testing and the investment of significant funds to gain regulatory approval before it can be commercialized. The results of our research and human clinical testing of PALI-2108 may not meet regulatory requirements. If approved, PALI-2108 may also require the completion of post-market studies. There can be no assurance that PALI-2108 will be successfully developed and approved. The process of completing pre-clinical and clinical testing and obtaining the required approvals is expected to take a number of years and require the use of substantial resources. Further, there can be no assurance that PALI-2108 will be shown to be safe and effective in clinical trials or receive applicable regulatory approvals. If we fail to obtain regulatory approvals, it will not be able to market PALI-2108 and our operations may be adversely affected.

If pre-clinical and clinical studies of PALI-2108 do not yield successful results, we may decide to not continue the development of PALI-2108.

We must demonstrate that PALI-2108 is safe and efficacious in humans through extensive pre-clinical and clinical testing. Our research and development programs are at an early stage of development. We may experience numerous unforeseen events during, or as a result of, the testing process that could delay or prevent commercialization of any products, including the following:

- the results of pre-clinical studies may be inconclusive, or they may not be indicative of results that will be obtained in human clinical trials;
- safety and efficacy results attained in early human clinical trials, if approved, may not be indicative of results that are obtained in later clinical trials;
- after reviewing test results, we may abandon projects that it previously believed to be promising;
- we or our regulators may suspend or terminate our clinical trials because the participating subjects or patients are being exposed to unacceptable health risks; and
- PALI-2108 may not have the desired effects or may include undesirable side effects or other characteristics that preclude regulatory approval or limit their commercial use if approved.

It may take us longer than we estimate to complete pre-clinical studies and clinical trials, and we may not be able to complete them at all.

Although for planning purposes we project the commencement, continuation and completion of our pre-clinical studies and clinical trials; a number of factors, including scheduling conflicts with participating researchers and/or clinicians and research or clinical institutions, and difficulties in identifying or enrolling patients who meet trial eligibility criteria, may cause significant delays. We may not commence or complete pre-clinical studies or clinical trials involving PALI-2108 as currently contemplated or may not be able to conduct them successfully.

Even if our clinical studies are successful and achieve regulatory approval, the approved product label may be more limited than we anticipate, which could limit the commercial prospects of PALI-2108.

At the time therapeutic drugs are approved for marketing, they are given a "product label" from the FDA or other regulatory body. In most countries this label sets forth the approved indication for marketing, and identifies potential safety concerns for prescribing physicians and patients. While we intend to seek as broad a product label as possible for PALI-2108, we may receive a narrower label than is expected by either us or third parties, such as stockholders and securities analysts. For example, any approved products may only be indicated to treat refractory patients (i.e., those who have failed some other first-line therapy). Similarly, it is possible that only a specific sub-set of patients safely responds to PALI-2108. As a result, even if successful in clinical trials, PALI-2108 could be approved only for a subset of patients. Additionally, safety considerations may result in contraindications that could further limit the scope of an approved product label. Any of these or other safety and efficacy considerations could limit the commercial prospects of PALI-2108.

Even if PALI-2108 is approved for commercialization, future regulatory reviews or inspections may result in its suspension or withdrawal, closure of a facility or substantial fines.

If regulatory approval to sell PALI-2108 is received, regulatory agencies will subject PALI-2108, as well as the manufacturing facilities, to continual review and periodic inspection. If previously unknown problems with a product or manufacturing and laboratory facility are discovered, or we fail to comply with applicable regulatory approval requirements, a regulatory agency may impose restrictions on PALI-2108 or us. The agency may require the withdrawal of PALI-2108 from the market, closure of the facility or substantial fines.

We may in the future conduct clinical trials for PALI-2108 outside the United States, and the FDA or applicable foreign regulatory authorities may not accept data from such trials.

We may in the future choose to conduct clinical trials outside of the U.S. Although the FDA or applicable foreign regulatory authority may accept data from clinical trials conducted outside the U.S. or the applicable jurisdiction, acceptance of such study data by the FDA or applicable foreign regulatory authority may be subject to certain conditions or exclusion. Where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will not approve the application on the basis of foreign data alone unless such data are applicable to the U.S. population and U.S. medical practice; the studies were performed by clinical investigators of recognized competence; and the data are considered valid without the need for an on-site inspection by the FDA or, if the FDA considers such an inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. Many foreign regulatory bodies have similar requirements. In addition, such foreign studies would be subject to the applicable local laws of the foreign jurisdictions where the studies are conducted. There can be no assurance the FDA or applicable foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable home country. If the FDA or applicable foreign regulatory authority does not accept such data, it would likely result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan.

We anticipate relying on third-party CROs and other third parties to conduct and oversee our pre-clinical studies and clinical trials. If these third parties do not meet our requirements or otherwise conduct the studies or trials as required, we may not be able to satisfy our contractual obligations or obtain regulatory approval for, or commercialize, our product candidates.

We may rely on third-party CROs to conduct and oversee our anticipated pre-clinical studies and clinical trials and other aspects of product development. We also expect to rely on various medical institutions, clinical investigators and contract laboratories to conduct our trials in accordance with our clinical protocols and all applicable regulatory requirements, including the FDA's regulations and good clinical practice ("GCP") requirements, which are an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators and monitors, and state regulations governing the handling, storage, security and recordkeeping for drug and biologic products. These CROs and other third parties are expected to play a significant role in the conduct of these trials and the subsequent collection and analysis of data from the clinical trials. We expect to rely heavily on these parties for the execution of our clinical trials and pre-clinical studies and will control only certain aspects of their activities. We and our CROs and other third-party contractors will be required to comply with GCP and good laboratory practice ("GLP") requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities. Regulatory authorities enforce these GCP and GLP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP and GLP requirements, or reveal noncompliance from an audit or inspection, any clinical data generated in our clinical trials may be deemed unreliable and the FDA or other regulatory authorities may require us to perform additional clinical trials before approving our or our partners' marketing applications. We cannot assure that upon inspection by a given regulatory authority, such regulatory authority will determine whether or not any of our clinical or pre-clinical trials comply with applicable GCP and GLP requirements. In addition, our clinical trials generally must be conducted with compounds produced under cGMP regulations. Our failure to comply with these regulations and policies may require it to repeat clinical trials, which would be costly and delay the regulatory approval process. If any of our CROs were to terminate their involvement with us, there is no assurance that we would be able to enter into arrangements with alternative CROs or do so on commercially reasonable terms.

The successful commercialization of PALI-2108, if approved, will depend in part on the extent to which government authorities and health insurers establish adequate reimbursement levels and pricing policies.

Sales of any approved drug candidate will depend in part on the availability of coverage and reimbursement from third-party payers such as government insurance programs, including Medicare and Medicaid, private health insurers, health maintenance organizations and other health care related organizations, who are increasingly challenging the price of medical products and services. Accordingly, coverage and reimbursement may be uncertain. Adoption of any drug by the medical community may be limited if third-party payers will not offer coverage. Additionally, significant uncertainty exists as to the reimbursement status of newly approved drugs. Cost control initiatives may decrease coverage and payment levels for any drug and, in turn, the price that we will be able to charge and/or the volume of our sales. We are unable to predict all changes to the coverage or reimbursement methodologies that will be applied by private or government payers. Any denial of private or government payer coverage or inadequate reimbursement could harm our business or future revenues, if any. If we partner with third parties with respect to any of our product candidates, we may be reliant on that partner to obtain reimbursement from government and private payors for the

drug, if approved, and any failure of that partner to establish adequate reimbursement could have a negative impact on our revenues and profitability.

In addition, both the federal and state governments in the United States and foreign governments continue to propose and pass new legislation, regulations, and policies affecting coverage and reimbursement rates, which are designed to contain or reduce the cost of health care. Further federal and state proposals and healthcare reforms are likely, which could limit the prices that can be charged for the product candidates that we develop and may further limit our commercial opportunity. There may be future changes that result in reductions in potential coverage and reimbursement levels for our product candidates, if approved and commercialized, and we cannot predict the scope of any future changes or the impact that those changes would have on our operations.

If future reimbursement for PALI-2108, subject to approval, are substantially less than projected, or rebate obligations associated with them are substantially greater than expected, our future net revenue and profitability, if any, could be materially diminished.

We face potential product liability exposure, and if successful claims are brought against us, it may incur substantial liability for a product candidate and may have to limit our commercialization.

The use of our product candidates in clinical trials and the sale of any products for which we obtain marketing approval exposes us to the risk of product liability claims. Product liability claims might be brought against us by clinical trial participants, consumers, health-care providers, pharmaceutical companies, or others selling our products. If we cannot successfully defend ourselves against these claims, it may incur substantial liabilities. Regardless of merit or eventual outcomes of such claims, product liability claims may result in:

- decreased demand for our product candidates;
- impairment of our business reputation;
- withdrawal of clinical trial participants;
- costs of litigation;
- substantial monetary awards to patients or other claimants; and
- loss of revenues.

Our insurance coverage may not be sufficient to reimburse it for all expenses or losses it may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect it against losses.

Even if a product candidate obtains regulatory approval, it may fail to achieve the broad degree of physician and patient adoption and use necessary for commercial success.

The commercial success of our product candidates, if approved, will depend significantly on attaining broad adoption and use of the drug by physicians and patients. The degree and rate of physician and patient adoption of a product, if approved, will depend on a number of factors, including but not limited to:

- patient demand for approved products that treat the indication for which they are approved;
- the effectiveness of a product compared to other available therapies or treatment regimens;
- the availability of coverage and adequate reimbursement from managed care plans and other healthcare payors;
- the cost of treatment in relation to alternative treatments and willingness to pay on the part of patients;
- insurers' willingness to see the applicable indication as a disease worth treating;
- proper administration by physicians or patients;
- patient satisfaction with the results, administration and overall treatment experience;
- limitations or contraindications, warnings, precautions or approved indications for use different than those sought by us that are contained in the final FDA-approved labeling, or other authoritative regulatory body approved labeling, for the applicable product;
- any FDA requirement, or other authoritative regulatory body requirement, to undertake a risk evaluation and mitigation strategy;

•the effectiveness of our sales, marketing, pricing, reimbursement and access, government affairs, and distribution efforts;

•adverse publicity about a product or favorable publicity about competitive products;

•new government regulations and programs, including price controls and/or limits or prohibitions on ways to commercialize drugs, such as increased scrutiny on direct-to-consumer advertising of pharmaceuticals; and

•potential product liability claims or other product-related litigation.

If any of our product candidates are approved for use but fail to achieve the broad degree of physician and patient adoption necessary for commercial success, our operating results and financial condition will be adversely affected, which may delay, prevent or limit our ability to generate revenue and continue our business.

We have entered into a collaborative research agreement with Giiant related to pre-clinical development, which will require the efforts of Giiant and its personnel, which are out of our control.

The license agreement with Giiant provides for certain joint research and development of PALI-2108 related to pre-clinical studies and development. Our business strategy relies on such collaboration to shorten the time required to file an IND and accelerate the knowledge transfer of trade secrets and other know-how associated with the licensed technologies. Overall, the success of the development PALI-2108 will depend on our ability to manage such relationship, and to a certain extent, to the efforts of Giiant, which are beyond our control. If we are not able to successfully manage such relationship, the development of PALI-2108 may take longer and be more costly than previously anticipated.

Risks Related to our Business

We have a limited operating history and have never generated any revenues from product sales.

We are a pre-clinical biopharmaceutical company with a limited operating history that may make it difficult to evaluate the success of our business to date and to assess our future viability. While we were initially formed in 2001, our operations, to date, have been limited to business planning, raising capital and other research and development activities related to our product candidates. We additionally adopted a new business plan in September 2023 upon entering into the Giiant License Agreement. Accordingly, we have not yet demonstrated an ability to successfully complete any clinical trials and have never completed the development of any product candidate, nor have we ever generated any revenue from product sales. Consequently, we have no meaningful operations upon which to evaluate our business, and predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing biopharmaceutical products.

Our business model assumes revenue from, among other activities, marketing or out-licensing the products we develop. PALI-2108 is in the early stages of development and because we have a short development history with PALI-2108, there is a limited amount of information about us upon which you can evaluate our business and prospects.

We have no approved drugs and thus have not begun to market or generate revenues from the commercialization of any products. We recently in-licensed PALI-2108 and accordingly, we only have a limited history upon which we can evaluate our ability to develop PALI-2108 as it is still at an early stage of development. Thus, we have limited experience and have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical area.

For example, to execute our business plan, we will need to:

•Execute product development activities using unproven technologies;

•Build, maintain, and protect a strong intellectual property portfolio;

•Demonstrate safety and efficacy of our drug candidates in multiple pre-clinical animal studies and human clinical studies;

•Receive FDA approval and approval from similar foreign regulatory bodies;

•Gain market acceptance for the development and commercialization of any drugs we develop;

•Ensure our products are reimbursed by commercial and/or government payors at a rate that permits commercial viability;

•Develop and maintain successful strategic relationships with suppliers, distributors, and commercial licensing partners;

•Manage our spending and cash requirements as our expenses will increase in the near term if we add programs and additional pre-clinical and clinical trials; and

•Effectively market any products for which we obtain marketing approval.

If we are unsuccessful in accomplishing these objectives, we may not be able to develop our proposed products, raise sufficient capital to fund our operations, expand our business or continue our operations.

Our common stock could be delisted from the Nasdaq Stock Market if we are unable to maintain compliance with the Nasdaq Stock Market's continued listing standards.

Our common stock is listed on the Nasdaq Stock Market. There are a number of continued listing requirements that we must satisfy in order to maintain its listing on The Nasdaq Stock Market, including the requirement to maintain a minimum bid price of at least $1.00 (the "Bid Price Rule"). Although we are currently in compliance with the Bid Price Rule, we have been unable to comply with this rule in the past. For example, in October 2023, we were notified that we were no longer in compliance with the Bid Price Rule and had 180 days to cure such deficiency. On April 5, 2024, we effected a 1-for-15 reverse stock split and we were notified by the Nasdaq Stock Market that as of April 19, 2024, we were back in compliance with the Bid Price Rule. Notwithstanding our current compliance with the Bid Price Rule, in the event that our common stock trades below $1.00 for 30 consecutive business days, we may again be subject to delisting. If we fail to comply with the Bid Price Rule in the future, or any of the other continued listing requirements, there can be no assurance that we will be able to regain compliance. The delisting of our common stock would likely adversely affect the market liquidity and market price of our common stock and our ability to obtain financing for the continuation of our operations and/or result in the loss of confidence by investors.

We have received a notification from the Nasdaq Stock Market that our audit committee does not have three (3) independent members as a result of recent director resignations. If we fail to timely appoint an independent director that meets the Nasdaq Stock Market Requirements for audit committees, Nasdaq could delist our common stock.

On March 22, 2024, we received a notice from the Nasdaq Stock Market stating that pursuant to the recent resignation of certain members of the Board of Directors ("Board"), we became noncompliant with the requirements set forth in Nasdaq Listing Rule 5605(c)(2)(A), which requires us to have an audit committee of at least three (3) independent directors. As of March 22, 2024, we had only two (2) independent directors serving on the Audit Committee.

The Notice states that, consistent with Nasdaq Listing Rule 5605(c)(4), Nasdaq will provide us with a cure period in order to regain compliance (i) until the earlier of the Company's next annual shareholders' meeting or March 4, 2025, or (ii) if the next annual shareholders' meeting is held before September 3, 2024, then we must evidence compliance no later than September 3, 2024.

On May 7, 2024, we appointed Margery Fischbein to serve as a member of the Board and our Audit Committee. We believe that Ms. Fischbein's appointment to the Audit Committee will cure such deficiency. However, as of the date of this Quarterly Report on Form 10-Q, we have not received notice from Nasdaq that the Audit Committee deficiency has been cured.

If we do not regain compliance within the allotted compliance period, including any extensions that may be granted by Nasdaq, Nasdaq will provide notice that our common stock will be subject to delisting. We will then be entitled to appeal the determination to a Nasdaq Listing Qualifications Panel and request a hearing. While we believe we are currently in compliance with all Nasdaq listing requirements, we cannot be sure that we will be able to continue to comply with such other continued listing requirements of Nasdaq.

Our success depends on attracting and retaining senior management and scientists with relevant expertise.

Our future success depends to a significant extent on the continued services of our key employees, including our senior scientific, technical and managerial personnel. We do not maintain key person life insurance for any of our executives. Competition for qualified employees in the pharmaceutical industry is high, and our ability to execute our strategy will depend in part on our ability to continue to attract and retain qualified scientists and management. If we are unable

to find, hire, and retain qualified individuals, we may be unable to execute our business plan in a timely manner, if at all.

We may choose to discontinue developing or commercializing any of our product candidates, or may choose to not commercialize product candidates in approved indications, at any time during development or after approval, which could adversely affect us and our operations.

At any time, we may decide to discontinue the development of, or temporarily pause the development of, any of our product candidates then in existence for a variety of reasons, including the appearance of new technologies that make our product candidates obsolete, competition from competing product(s) or changes in or failure to comply with applicable regulatory requirements. If we temporarily pause or terminate a program in which we have invested significant resources, we will not receive any return on our investment and we will have missed the opportunity to have allocated those resources to potentially more productive uses, which could have an adverse effect on us and our business.

Our inability to successfully in-license, acquire, develop and market additional product candidates or approved products could impair our ability to grow our business.

PALI-2108 is currently our only product candidate being actively developed. We may in-license, acquire, develop and market additional products and product candidates. Since our internal research and development capabilities are limited, we may be dependent on pharmaceutical companies, academic or government scientists and other researchers to sell or license products or technology to us. The success of this strategy depends partly on our ability to identify and select promising pharmaceutical product candidates and approved products, negotiate licensing or acquisition agreements with their current owners, and finance these arrangements.

The process of identifying, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing, sales and other resources, may compete with us for the license or acquisition of product candidates and approved products. Moreover, we may devote resources to potential acquisitions or licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire the rights to additional approved products or product candidates on terms that we find acceptable, or at all.

Further, any product candidate that we acquire or licenses may require additional development efforts prior to commercial sale, including pre-clinical or clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. In addition, we cannot provide assurance that any approved products that we acquire will be manufactured or sold profitably or achieve market acceptance.

We may seek to avail ourselves of mechanisms to expedite the development or approval for product candidates we may pursue in the future, such as Fast Track or breakthrough designation, but such mechanisms may not actually lead to a faster development or regulatory review or approval process.

We may seek to avail ourselves of Fast Track designation, breakthrough designation, or priority review for product candidates we may pursue in the future. For example, if a drug is intended for the treatment of a serious or life-threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for FDA Fast Track designation. However, the FDA has broad discretion with regard to these mechanisms, and even if we believe a particular product candidate is eligible for any such mechanism, we cannot guarantee that the FDA would decide to grant it. Even if we believe a product candidate meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. Even if we do obtain Fast Track or priority review designation or pursue an accelerated approval pathway, we may not experience a faster development process, review, or approval compared to conventional FDA procedures. The FDA may withdraw a particular designation if it believes that the designation is no longer supported by data from our clinical development program.

Risks Related to our Dependence on Third Parties

We expect to rely on collaborations with third parties for the successful development and commercialization of our product candidates.

We expect to rely upon the efforts of third parties for the successful development and commercialization of our product candidates. The clinical and commercial success of our product candidates may depend upon maintaining successful relationships with third-party partners, which are subject to a number of significant risks, including the following:

- our partners' ability to execute their responsibilities in a timely, cost-efficient and compliant manner;

•reduced control over delivery and manufacturing schedules;

•price increases;

•manufacturing deviations from internal or regulatory specifications;

•quality incidents;

•the failure of partners to perform their obligations for technical, market or other reasons;

•misappropriation of our product candidates; and

•other risks in potentially meeting our product commercialization schedule or satisfying the requirements of our end-users.

We cannot provide any assurance that we will be able to establish or maintain third-party relationships in order to successfully develop and commercialize our product candidates.

We anticipate relying completely on third-party contractors to supply, manufacture and distribute clinical drug supplies for our product candidates.

We do not currently have, nor do we currently plan to acquire, the infrastructure or capability to supply, store, manufacture or distribute pre-clinical, clinical or commercial quantities of drug substances or products. Additionally, we have not entered into a long-term commercial supply agreement to provide us with such drug substances or products. As a result, our ability to develop and commercialize, if approved, our product candidates is dependent on our ability to obtain the APIs and other substances and materials used in our product candidates successfully from third parties and to have finished products manufactured by third parties in accordance with regulatory requirements and in sufficient quantities for pre-clinical and clinical testing and commercialization. If we fail to develop and maintain supply and other technical relationships with these third parties, we may be unable to continue to develop or commercialize our products and product candidates, which could adversely affect us and our business.

We are dependent on our contract suppliers and manufacturers for day-to-day compliance with applicable laws and cGMP for production of our proposed products and API. If the safety or quality of any product or product candidate or component is compromised due to a failure to adhere to applicable laws or for other reasons, we may not be able to commercialize or obtain regulatory approval for the affected product or product candidates successfully, and we may be held liable as a result.

We expect to continue to depend on third-party contract suppliers and manufacturers. Our supply and manufacturing agreements do not guarantee that a contract supplier or manufacturer will provide services adequate for our needs. Additionally, any damage to or destruction of our third-party manufacturers' or suppliers' facilities or equipment, even by force majeure, may significantly impair our ability to have our products and product candidates manufactured on a timely basis. Our reliance on contract manufacturers and suppliers further exposes us to the possibility that they, or third parties with access to their facilities, may misappropriate our trade secrets or other proprietary information. In addition, the manufacturing facilities of certain of our suppliers may be located outside of the United States. This may give rise to difficulties in importing our products or product candidates or their components into the United States or other countries.

Risks Related to Our Financial Operations

We have expressed substantial doubt about our ability to continue as a going concern.

Management has determined that there is substantial doubt about our ability to continue as a going concern for a period of one year following the issuance of this report. This determination was based on conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued, including the probability that significant changes to our anticipated level of operations, due to factors that are within or outside of our control, would cause our available cash as of the date of this filing to not be sufficient to fund our anticipated level of operations for the next 12 months. Our future consolidated financial statements may include a similar qualification about our ability to continue as a going concern. Our year-end and interim consolidated financial statements were prepared assuming that it will continue as a going concern and do not include any adjustments that may result from the outcome of this uncertainty.

If we seek additional financing to fund our business activities in the future and there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding to us on commercially reasonable terms or at all.

We have a history of net operating losses, and we expect to continue to incur net operating losses and may never achieve profitability.

We have incurred net operating losses since our inception. We expect that our net operating losses will continue for the foreseeable future as it continues our drug development and discovery efforts. To achieve profitability, we must, either directly or through licensing and/or partnering relationships, meet certain milestones, successfully develop and obtain regulatory approval for one or more drug candidates and effectively manufacture, market and sell any drugs we successfully develop. Even if we are able to successfully commercialize product candidates that receive regulatory approval, we may not be able to realize revenues at a level that would allow us to achieve or sustain profitability. Accordingly, we may never generate significant revenue and, even if we do generate significant revenue, we may never achieve profitability.

Failure to remediate a material weakness in internal controls over financial reporting could result in material misstatements in our consolidated financial statements.

Our management has identified a material weakness in our internal control over financial reporting. The material weakness was due to a lack of controls in the financial closing and reporting process, including a lack of segregation of duties and the documentation and design of formalized processes and procedures surrounding the creation and posting of journal entries and account reconciliations.

If our remaining material weakness, which management concluded is still present as of the date of these financial statements, is not remediated, or if we identify further material weaknesses in our internal controls, our failure to establish and maintain effective disclosure controls and procedures and internal control over financial reporting could result in material misstatements in our consolidated financial statements and a failure to meet our reporting and financial obligations.

Changing circumstances and market conditions, some of which may be beyond our control, could impair our ability to access our existing cash and cash equivalents and investments and to timely pay key vendors and others.

Changing circumstances and market conditions, some of which may be beyond our control, could impair our ability to access our existing cash and cash equivalents and investments and to timely pay key vendors and others. For example, on March 10, 2023, Silicon Valley Bank ("SVB") was placed into receivership with the Federal Deposit Insurance Corporation ("FDIC"), which resulted in all funds held at SVB being temporarily inaccessible by SVB's customers. Although we do not have any funds at SVB, if other banks and financial institutions with whom we have banking relationships enter receivership or become insolvent in the future in response to financial conditions affecting the banking system and financial markets, we may be unable to access, and we may lose, some or all of our existing cash and cash equivalents to the extent those funds are not insured or otherwise protected by the FDIC. In addition, in such circumstances we might not be able to timely pay key vendors and others. We regularly maintain cash balances that are not insured or are in excess of the FDIC's insurance limit. Any delay in our ability to access our cash and cash equivalents (or the loss of some or all of such funds) or to timely pay key vendors and others could have a material adverse effect on our operations and cause it to need to seek additional capital sooner than planned.

Risks Related to Our Intellectual Property

We may not be able to obtain, maintain or enforce global patent rights or other intellectual property rights that cover our product candidates and technologies that are of sufficient breadth to prevent third parties from competing against us.

Our success with respect to our current and future product candidates will depend, in part, on our ability to obtain and maintain patent protection in both the U.S. and other countries, to preserve our trade secrets and to prevent third parties from infringing on our proprietary rights. Our ability to protect our product candidates from unauthorized or infringing use by third parties depends in substantial part on our ability to obtain and maintain valid and enforceable patents in certain countries.

The patent application process, also known as patent prosecution, is expensive and time-consuming, and we and our current or future licensors and licensees may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner in all the countries that are desirable. It is also possible that we or our current licensors, or any future licensors or licensees, will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, these and any of our patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Moreover, our competitors independently may develop equivalent knowledge, methods and know-how or discover workarounds to our patents that would not constitute infringement. Any of these outcomes could impair our ability to enforce the exclusivity of any issued or pending patents we may have or the

ability to obtain future patent protections, which may have an adverse impact on our business, financial condition and operating results.

Our ability to obtain, maintain and enforce patents is uncertain and involves complex legal and factual questions especially across varying countries. Accordingly, rights under any existing patents or any patents we might obtain or license may not cover our product candidates or may not provide us with sufficient protection for our product candidates to afford a sustainable commercial advantage against competitive products or processes, including those from branded, generic and over-the-counter pharmaceutical companies. In addition, we cannot guarantee that any patents or other intellectual property rights will be issued from any pending or future patent or other similar applications owned by or licensed to us. Even if patents or other intellectual property rights have issued or will issue, we cannot guarantee that the claims of these patents and other rights are or will be held valid or enforceable by the courts, through injunction or otherwise, or will provide us with any significant protection against competitive products or otherwise be commercially valuable to us in every country of commercial significance that we may target.

Our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our technology and the prior art allow our technology to be patentable over the prior art. We do not have outstanding issued patents covering all of the recent developments in our technology and are unsure of the patent protection that we will be successful in obtaining, if any. Even if the patents do successfully issue, third parties may design around or challenge the validity, enforceability or scope of such issued patents or any other issued patents we own or license, which may result in such patents being narrowed, invalidated or held unenforceable. If the breadth or strength of protection provided by the patents we hold or pursue with respect to our product candidates are challenged, it could dissuade companies from collaborating with us to develop or threaten our ability to commercialize or finance our product candidates.

The laws of some foreign jurisdictions do not provide intellectual property rights to the same extent or duration as in the U.S., and many companies have encountered significant difficulties in acquiring, maintaining, protecting, defending and especially enforcing such rights in foreign jurisdictions. If we encounter such difficulties in protecting or are otherwise precluded from effectively protecting our intellectual property in foreign jurisdictions, our business prospects could be substantially harmed, especially internationally.

Proprietary trade secrets and unpatented know-how are also very important to our business. Although we have taken steps to protect our trade secrets and unpatented know-how by entering into confidentiality agreements with third parties, and intellectual property assignment and protection agreements with officers, directors, employees, and certain consultants and advisors, there can be no assurance that such agreements will not be breached or enforced by courts, that we would have adequate remedies for any breach, including injunctive and other equitable relief, or that our trade secrets and unpatented know-how will not otherwise become known, inadvertently disclosed by us or our agents and representatives, or be independently discovered by our competitors. If our trade secrets are independently discovered, we would not be able to prevent their use and if we or our agents or representatives inadvertently disclose trade secrets and/or unpatented know-how, we may not be allowed to retrieve these trade secrets and/or unpatented know-how and maintain the exclusivity we previously held.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on our product candidates does not guarantee exclusivity. The requirements for patentability differ in certain countries, particularly developing countries. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as laws in the United States, especially when it comes to granting use and other kinds of patents and what kind of enforcement rights will be allowed, especially injunctive relief in a civil infringement proceeding. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States and even in launching an identical version of our product notwithstanding we have a valid patent in that country. Competitors may use our technologies in jurisdictions where we have not obtained patent protection, or produce copy products, and, further, may export otherwise infringing products to territories where we have patent protection but enforcement on infringing activities is inadequate or where we have no patents. These products may compete with our products, and our patents or other intellectual property rights may not prevent them from competing.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the U.S. Patent and Trade Office ("USPTO") and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedures, including certain documentary, fee payment and other similar provisions during the patent application process. While an inadvertent

lapse can, in many cases, be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction just for failure to know about and/or timely pay a prosecution fee. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees in prescribed time periods, and failure to properly legalize and submit formal documents in the format and style the country requires. If we or our licensors fail to maintain the patents and patent applications covering our product candidates for any reason, our competitors might be able to enter the market, which would have an adverse effect on our business.

If we fail to comply with our obligations under our intellectual property license agreements, we could lose license rights that are important to our business.

We have entered into the Giiant License Agreement, with respect to our lead product candidate, PALI-2108 and other assets of Giiant. The Giiant License Agreement imposes various diligence, milestone, royalty, insurance, expense reimbursement, and other obligations on us. If we fail to comply with these obligations, the licensor may have the ability to terminate the license, subject to certain requirements as more fully set forth in the Giiant License Agreement. In the event that license granted thereunder terminates, our business, financial condition, operating results, and prospects would be materially adversely affected.

We may be subject to patent infringement claims, which could result in substantial costs, liabilities and prevent us from commercializing our potential products.

Because the intellectual property landscape in the fields in which we participate is rapidly evolving and interdisciplinary, it is difficult to conclusively assess our freedom to operate without infringing on third-party rights. If any patent infringement claims are brought against us, whether successful, we may incur significant expenses and divert the attention of our management and key personnel from other business concerns. This could negatively affect our results of operations and prospects. We cannot be certain that patents owned or licensed by us will not be challenged, potentially successfully, by others.

In addition, if our product candidates are found to infringe the intellectual property rights of third parties, these third parties may assert infringement claims against our customers, licensees and other parties with whom we have business relationships, and we may be required to indemnify those parties for any damages they suffer as a result of such claims. The claims may require us to initiate or defend protracted and costly litigation on behalf of customers, licensees, and other parties regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of those parties or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, we may be unable to continue selling such products.

We may be subject to claims that our officers, directors, employees, consultants or independent contractors have wrongfully used or disclosed to us alleged trade secrets of their former employers or their former or current customers.

As is common in the biotechnology and pharmaceutical industries, certain of our employees were formerly employed by other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Moreover, we engage the services of consultants to assist us in the development of our product candidates, many of whom were previously employed at, or may have previously been or are currently providing consulting services to, other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that our employees or consultants have inadvertently or otherwise wrongfully used or disclosed trade secrets or other proprietary information of their former employers or their former or current customers. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims. Even if we are successful in defending against any such claims, any such litigation could be protracted, expensive, a distraction to our management team, not viewed favorably by investors and other third parties, and may potentially result in an unfavorable outcome.

Other Risks Related to Our Securities

We will need to raise additional capital in the future to fund our operations, which may not be available to us on favorable terms or at all.

We will require substantial additional capital to fund our operations and conduct the costly and time-consuming research and development, pre-clinical studies, and clinical work necessary to pursue regulatory approval of product candidates. Our future capital requirements will depend upon a number of factors, including: the number and timing of product candidates in the pipeline; progress with and results from pre-clinical testing and clinical trials; the ability to manufacture sufficient drug supplies to complete pre-clinical and clinical trials; the costs involved in preparing,

filing, acquiring, prosecuting, maintaining and enforcing patent and other intellectual property claims; and the time and costs involved in obtaining regulatory approvals and favorable reimbursement or formulary acceptance. Raising additional capital may be costly or difficult to obtain, and given our limited cash reserves and the significant amount of capital that we will likely need to fund our operations and business plan, our stockholders will likely experience significant dilution to their ownership interests or inhibit our ability to achieve our business objectives. If we raise additional funds through public or private equity sales of our securities, the terms of these securities may include liquidation or other preferences that adversely impact the rights of our common stockholders. Further, to the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, our stockholders' ownership percentage will be decreased. In addition, any debt financing may subject us to fixed payment obligations and covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish certain valuable intellectual property or other rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. Even if we obtain additional funding, there can be no assurance that it will be available on terms acceptable to us or our stockholders.

Our common stock price may be highly volatile.

Since the completion of the merger with Seneca on April 27, 2021, our stock price has been subject to significant fluctuation. Market prices for securities of biotechnology and other life sciences companies historically have been particularly volatile and may be subject to large daily price swings. Some of the factors that may cause the market price of our shares to fluctuate include, but are not limited to:

- failure of our product candidates to show safety and/or efficacy in our pre-clinical or clinical trials;
- our ability to obtain timely regulatory approvals for our product candidates, and delays or failures to obtain such approvals;
- the results of pre-clinical or clinical trials, including our decision to pause or terminate any such trials;
- failure of our product candidates, if approved, to achieve commercial success;
- the entry into, or termination of, or breach by parties of key agreements, including the Giiant License Agreement, and employment agreements with our named executive officers;
- the initiation of, material developments in, or conclusion of any litigation to enforce or defend any intellectual property rights or defend against the intellectual property rights of others;
- announcements of any financings;
- announcements by commercial partners or competitors of new commercial products, clinical progress or the lack of, significant contracts, commercial relationships or capital commitments;
- failure to elicit meaningful stock analyst coverage and downgrades of our stock by analysts; and
- the loss of key personnel.

Moreover, the stock markets in general have experienced substantial volatility in the biotechnology industry, particularly in the micro-capitalization space, that has often been unrelated to the operating performance of individual companies or a certain industry segment. These broad market fluctuations may also adversely affect the trading price of our shares. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm our profitability and reputation.

We take advantage of reduced disclosure and governance requirements applicable to smaller reporting companies, which could result in our common stock being less attractive to investors.

As of June 30, 2023, the last business day of our most recently completed second fiscal quarter, our public float is less than $250 million and therefore, we qualify as a smaller reporting company under SEC rules. As a smaller reporting company, we can take advantage of reduced disclosure requirements, such as simplified executive compensation disclosures and reduced financial statement disclosure requirements in our SEC filings. Such reduced disclosures in our SEC filings may make it harder for investors to analyze our results of operations and financial prospects. We cannot predict if investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and

our stock price may be more volatile. We may take advantage of the reporting exemptions applicable to a smaller reporting company until we are no longer a smaller reporting company, which status would end once we have a public float greater than $250 million. In that event, we could still be a smaller reporting company if our annual revenues are below $100 million and we have a public float of less than $700 million.

We do not anticipate paying any dividends in the foreseeable future.

We do not anticipate paying any dividends in the foreseeable future. We currently plan to retain our future earnings, if any, to fund the development and growth of our business. As a result, capital appreciation, if any, of our shares will likely be your sole source of gain, if any, for the foreseeable future.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock is and will be influenced by the research and reports that equity research analysts publish about us and our business. Equity research analysts may elect not to provide research coverage of our common stock, and such lack of research coverage may adversely affect the market price of our common stock. In the event it does have equity research analyst coverage, we will not have any control over the analysts, or the content and opinions included in their reports. The price of our common stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our common stock could decrease, which in turn could cause our stock price or trading volume to decline.

Future sales of substantial amounts of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock.

Future sales in the public market of shares of our common stock, including shares issued upon exercise of our outstanding stock options or warrants, or the perception by the market that these sales could occur, could lower the market price of our common stock or make it difficult for us to raise additional capital.

Our business could be negatively affected as a result of the actions of activist stockholders, and such activism could impact the trading value of our securities.

Stockholders may, from time to time, engage in proxy solicitations or advance stockholder proposals, or otherwise attempt to effect changes and assert influence on our Board and management. Activist campaigns that contest or conflict with our strategic direction or seek changes in the composition of our Board could have an adverse effect on our operating results and financial condition. A proxy contest would require us to incur significant legal and advisory fees, proxy solicitation expenses and administrative and associated costs and require significant time and attention by our Board and management, diverting their attention from the pursuit of our business strategy. Any perceived uncertainties as to our future direction and control, our ability to execute on our strategy, or changes to the composition of our Board or senior management team arising from a proxy contest could lead to the perception of a change in the direction of our business or instability, which may result in the loss of potential business opportunities, make it more difficult to pursue our strategic initiatives, or limit our ability to attract and retain qualified personnel and business partners, any of which could adversely affect our business and operating results. If individuals are ultimately elected to our Board with a specific agenda, it may adversely affect our ability to effectively implement our business strategy and create additional value for our stockholders. We may choose to initiate, or may become subject to, litigation as a result of the proxy contest or matters arising from the proxy contest, which would serve as a further distraction to our Board and management and would require us to incur significant additional costs. In addition, actions such as those described above could cause significant fluctuations in our stock price based upon temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

Securities class action litigation could divert our management's attention and harm our business and could subject us to significant liabilities.

The stock markets have from time-to-time experienced significant price and volume fluctuations that have affected the market prices for the equity securities of life sciences and biotechnology companies. These broad market fluctuations may cause the market price of our common shares to decline. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. Even if we are successful in defending claims that may be brought in the future, such litigation could result in substantial costs and may be a distraction to our management and may lead to an unfavorable outcome that could adversely impact our financial condition and prospects.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.

Provisions in our certificate of incorporation and bylaws may delay or prevent an acquisition or a change in management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Although we believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirors to negotiate with our Board, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove then current management by making it more difficult for stockholders to replace members of the Board, which is responsible for appointing the members of management.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our periodic reports. This reporting will require us to incur substantial professional fees and internal costs to expand our accounting and finance functions as to expend significant management efforts.

Our management identified a material weakness in our internal control over financial reporting. If we do not remediate this material weakness, or if we identify further material weaknesses in our internal controls, our failure to establish and maintain effective internal financial and accounting controls and procedures could result in material misstatements in our consolidated financial statements and a failure to meet our reporting and financial obligations.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate consolidated financial statements. If that were to happen, the market price of our common stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

Our Board of Directors has broad discretion to issue additional securities, which might dilute the net tangible book value per share of our common stock for existing stockholders.

We are entitled under our certificate of incorporation, as amended, to issue up to 280,000,000 shares of common stock and 7,000,000 "blank check" shares of preferred stock. Shares of our blank check preferred stock provide our Board with broad authority to determine voting, dividend, conversion, and other rights of such preferred stock. As of March 31, 2024, we had outstanding, common stock or securities convertible into common stock, totaling 1,202,005 shares. As a result, we are authorized to issue up to an additional 278,797,995 shares of common stock or common stock equivalents under our certificate of incorporation as amended. Additionally, pursuant to the initial issuance of (i) 1,000,000 shares of Series A 4.5% Convertible Preferred Stock, of which 200,000 shares are outstanding and (ii) 1,460 shares of Series B Convertible Preferred Stock, of which no shares are outstanding, we are authorized to issue up to an additional 6,800,000 shares of preferred stock. We expect that significant additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our existing stockholders will likely experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner that we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors will likely be materially diluted by the initial and subsequent sales. Additionally, new investors may gain rights superior to existing stockholders, depending on the terms of such transactions and types of securities. Pursuant to our equity incentive plans and employee stock purchase plan, management is authorized to grant stock options, restricted stock units and other equity-based awards to employees, directors and consultants, and to sell common stock to employees, respectively. Any increase in the number of shares outstanding as a result of the exercise of outstanding options, the vesting or settlement of outstanding stock awards, or the purchase of shares pursuant to the employee stock purchase plan will cause stockholders to experience additional dilution, which could cause our stock price to fall.

General Risk Factors

Our business could be adversely affected by the effects of health pandemics or epidemics, such as the COVID-19 pandemic, which could cause significant disruptions in our operations and those of our current or future CMOs, CROs, and other third parties upon whom we rely.

Health pandemics or epidemics, such as the COVID-19 pandemic, have in the past and could again in the future result in quarantines, stay-at-home orders, remote work policies, or other similar events that may disrupt businesses, delay our research and development programs and timelines, negatively impact productivity and increase risks associated with cybersecurity, the future magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations. More specifically, these types of events may negatively impact personnel at third-party manufacturing facilities or the availability or cost of materials, which could disrupt our supply chain. Moreover, our trials may be negatively affected. Clinical site initiation and patient enrollment may be delayed due to prioritization of hospital resources. Some patients may not be able or willing to comply with trial protocols if quarantines impede patient movement or interrupt healthcare services. Our ability to recruit and retain patients, principal investigators, and site staff (who as healthcare providers may have heightened exposure) may be hindered, which would adversely affect our trial operations. Disruptions or restrictions on our ability to travel to monitor data from our trials, or to conduct trials, or the ability of patients enrolled in our trials or staff at trial sites to travel, as well as temporary closures of our trial partners and CMOs' facilities, would negatively impact our trial activities. In addition, we rely on independent clinical investigators, CROs, and other third-party service providers to assist us in managing, monitoring, and otherwise carrying out certain of our pre-clinical studies and clinical trials, including the collection of data from our trials, and the effects of health pandemics or epidemics, such as the COVID-19 pandemic, may affect their ability to devote sufficient time and resources to our programs or to travel to sites to perform work for us. Similarly, our trials could be delayed and/or disrupted. As a result, the expected timeline for data readouts, including incompleteness in data collection and analysis and other related activities, and certain regulatory filings may be negatively impacted, which would adversely affect our ability to obtain regulatory approval for and to commercialize our product candidates, increase our operating expenses, and adversely affect our business, financial condition, results of operations, and prospects. In addition, impact on the operations of the FDA or comparable foreign regulatory authorities could negatively affect our planned trials and approval processes. Finally, economic conditions and business activity may be negatively impacted and may not recover as quickly as anticipated.

Unstable economic and market conditions may have serious adverse consequences on our business, financial condition, and stock price.

Global economic and business activities continue to face widespread uncertainties, and global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, rising inflation and monetary supply shifts, rising interest rates, bank failures, labor shortages, declines in consumer confidence, declines in economic growth, increases in unemployment rates, recession risks, and uncertainty about economic and geopolitical stability (for example, related to the ongoing Russia-Ukraine and Israel-Hamas conflict). The financial institutions in which we hold our cash and cash equivalents are subject to risk of failure. For example, recent events surrounding certain banks, including Silicon Valley Bank, First Republic Bank, and Signature Bank, created temporary uncertainty on their customers' cash deposits in excess of Federal Deposit Insurance Corporation limits prior to actions taken by governmental entities. While we do not expect any developments with any such banks to have a material impact on our cash and cash equivalents balance, expected results of operations, or financial performance for the foreseeable future, if further failures in financial institutions occur where we hold deposits, we could experience additional risk. Any such loss or limitation on our cash and cash equivalents would adversely affect our business.

The extent of the impact of these conditions on our operational and financial performance, including our ability to execute our business strategies and initiatives in the expected timeframe, as well as that of third parties upon whom we rely, will depend on future developments which are uncertain and cannot be predicted. There can be no assurance that further deterioration in economic or market conditions will not occur, or how long these challenges will persist. If the current equity and credit markets further deteriorate, or do not improve, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive. Furthermore, our stock price may decline due in part to the volatility of the stock market and the general economic downturn.

If our information systems or data, or those of third parties upon which we rely, are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to regulatory investigations or actions; litigation; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; loss of customers or sales; and other adverse consequences.

In the ordinary course of our business, it may process, as defined above, proprietary, confidential, and sensitive data, including personal data (such as health-related patient data), intellectual property, and trade secrets (collectively, sensitive information). We may rely upon third-party service providers and technologies to operate critical business systems to process sensitive information in a variety of contexts, including, without limitation, third-party providers of cloud-based infrastructure, employee email, CROs, and other functions. Our ability to monitor these third parties' information security practices is limited, and these third parties may not have adequate information security measures in place. We may share or receive sensitive information with or from third parties.

The risk of a security breach or disruption, particularly through cyber-attacks, cyber-intrusion, malicious internet-based activity, and online and offline fraud, are prevalent and have generally increased as the number, intensity, and sophistication of attempted attacks and intrusions from around the world have increased. These threats are becoming increasingly difficult to detect and come from a variety of sources, including traditional computer hackers, threat actors, personnel (such as through theft or misuse), sophisticated nation states, and nation-state-supported actors. Some actors now engage and are expected to continue to engage in cyber-attacks, including without limitation nation-state actors for geopolitical reasons and in conjunction with military conflicts and defense activities. During times of war and other major conflicts, we and the third parties upon which we rely may be vulnerable to a heightened risk of these attacks, including cyber-attacks that could materially disrupt our systems and operations, supply chain, and ability to produce, sell and distribute our products.

We and the third parties upon which we rely may be subject to a variety of evolving threats, including but not limited to social engineering attacks (including through phishing attacks), malicious code (such as viruses and worms), malware (including as a result of advanced persistent threat intrusions), denial-of-service attacks (such as credential stuffing), personnel misconduct or error, ransomware attacks, supply-chain attacks, software bugs, server malfunctions, software or hardware failures, loss of data or other information technology assets, adware, natural disasters, terrorism, war, and telecommunication and electrical failures. Ransomware attacks, including by organized criminal threat actors, nation-states, and nation-state-supported actors, are becoming increasingly prevalent and can lead to significant interruptions in our operations, loss of data and income, reputational harm, and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments. Similarly, supply-chain attacks have increased in frequency and severity.

Furthermore, our remote workforce poses increased risks to our information technology systems and data, as most of our employees work from home, utilizing network connections outside our premises.

Any of the previously identified or similar threats could cause a security breach or disruption. While we have not experienced any such security breach or other disruption to date, if such an event were to occur, it could result in unauthorized, unlawful, or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of, or access to our sensitive information and cause interruptions in our operations, including material disruptions of our development programs and business operations.

We may expend significant resources or modify our business activities (including our clinical trial activities) to try to protect against security breaches and disruptions. Certain data privacy and security obligations may require us to implement and maintain specific security measures, industry-standard or reasonable security measures to protect our information technology systems and sensitive information. While we have implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. We may be unable in the future to detect vulnerabilities in our information technology systems because such threats and techniques change frequently, are often sophisticated in nature, and may not be detected until after a security breach or disruption has occurred. Despite our efforts to identify and remediate vulnerabilities, if any, in our information technology systems, our efforts may not be successful. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities.

Applicable data privacy and security obligations may require us to notify relevant parties of certain security breaches and disruptions. Such disclosures are costly, and the disclosure or the failure to comply with such requirements could lead to adverse consequences. If we (or a third party upon whom it relies) experience a security breach or other disruption, or are perceived to have experienced such events, we may experience adverse consequences, including: government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and/or oversight; restrictions on processing sensitive information (including personal data);

litigation (including class claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; interruptions in our operations (including availability of data); financial loss; and other similar harms. In particular, since we sponsor clinical trials, any breach or disruption that compromises patient data and identities could generate significant reputational damage, which may affect trust in us and our ability to recruit for future clinical trials. Additionally, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to our data privacy and security obligations. Furthermore, we cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims.

Our business and operations would suffer in the event of system failures, cyber-attacks or a deficiency in our cybersecurity.

Despite the implementation of security measures, our internal computer systems, and those of our current and future CROs and other contractors and consultants, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Although we have not suffered any material incidents to date, the risk of a security breach or disruption, particularly through cyber-attacks or cyber-intrusion, including by computer hackers, foreign governments, and cyber-terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. While we have not experienced any such material system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. In addition, since we sponsor clinical trials, any breach that compromises patient data and identities causing a breach of privacy could generate significant reputational damage and legal liabilities and costs to recover and repair, including affecting trust in us to recruit for future clinical trials. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our products and product candidates could be delayed.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3. DEFAULT UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURE

Not Applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Description of document
2.1†	Agreement and Plan of Merger, dated as of December 16, 2020, by and among Seneca Biopharma, Inc., Leading BioSciences, Inc. and Townsgate Acquisition Sub 1, Inc. (Incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
3.1	Amended and Restated Certificate of Incorporation of the Registrant (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 27, 2021).
3.2	Certificate of Designation of Series A 4.5% Convertible Preferred Stock (Incorporated by reference to Exhibit 3.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 6, 2024).
3.3	Amended and Restated Bylaws of the Registrant (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 6, 2024).
3.4	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 16, 2022).
3.5	Amendment to Amended and Restated Certificate of Incorporation of Palisade Bio, Inc., effective November 15, 2022 (Incorporated by reference to Exhibit 3.01(i) to the Registrant's Current Report on Form 8-K, filed with the SEC on November 16, 2022).
3.6	Amendment to the Amended and Restated Certificate of Incorporation of Palisade Bio, Inc. effective April 5, 2024 (Incorporated by reference to Exhibit 3.01(i) to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2024).
4.1	Reference is made to Exhibits 3.1, 3.2 and 3.3.
4.2	Description of Securities (incorporated by reference to Exhibit 4.2 to the Registrant's Form 10-K, filed with the SEC on March 17, 2022).
4.3	Specimen Common Stock Certificate. (Incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K, filed with the SEC on March 17, 2022).
4.4	Form of Series A Preferred Stock Certificate (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on September 12, 2016).
4.5	Form of Consulting Warrant issued January 2011 and March 2012 (Incorporated by reference to Exhibit 4.01 to the Registrant's Registration Statement on Form S-3 (File No. 333-188859) original filed with the SEC on May 24, 2013
4.6	Form of Common Stock Purchase Warrant from August 2017 Public Offering Dated August 1, 2017 (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on July 28, 2017).
4.7	Form of Common Stock Purchase Warrant from October 2018 Offering (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on October 29, 2018)
4.8	Form of Placement Agent Common Stock Purchase Warrant from October 2018 Offering (Incorporated by reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on October 29, 2018)
4.9	Consultant Warrant for Hibiscus BioVentures, LLC issued January 2019 (Incorporated by reference to Exhibit 4.40 to the Registrant's Form 10-Q, originally filed with the SEC on May 14, 2019)
4.10	Form of Series M and Series N warrant from July 2019 Offering (Incorporated by reference to Exhibit 4.45 to the Registrant's Registration Statement on Form S-1/A (File No. 333-232273), filed with the SEC on July 24, 2019)
4.11	Letter Agreement from January 2020 Offering (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on January 22, 2020)

4.12	Form of Series O Pre-Funded Warrant from July 2019 Offering (Incorporated by reference to Exhibit 4.45 to the Registrant's Registration Statement on Form S-1/A (File No. 333-232273), filed with the SEC on July 24, 2019)
4.13	Form of Series Q Replacement Warrant issued in January 2020 Offering (Incorporated by reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on January 22, 2020)
4.14	Form of Placement Agent Agreement from January 2020 Offering (Incorporated by reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on January 22, 2020)
4.15	Form of Placement Agent Warrant issued in January 2020 Offering (Incorporated by reference to Exhibit 4.03 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on January 22, 2020)
4.16	Form of Placement Agent Warrant issued in May 2020 Offering (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on May 27, 2020)
4.17	Form of Securities Purchase Agreement with Investors from May 2020 Offering (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on May 27, 2020)
4.18	Form of Warrant to Purchase Shares of Common Stock of Leading BioSciences, Inc. (Incorporated by reference to Exhibit 4.30 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
4.19	Form of Bridge Warrant of Leading BioSciences, Inc. (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
4.20	Form of Equity Warrant of Leading BioSciences, Inc. (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
4.21†	Registration Rights Agreement, by and between Seneca Biopharma, Inc. and the investor party thereto, dated December 16, 2020 (Incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
4.22	Waiver Agreement, dated as of July 21, 2021, by and between Palisade Bio, Inc. and Altium Growth Fund, LP (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on July 22, 2021).
4.23	Warrant, dated as of July 21, 2021, issued to Altium Growth Fund, LP (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on July 22, 2021).
4.24	Waiver Agreement, dated as of January 31, 2022, by and between Palisade Bio, Inc. and Altium Growth Fund, LP (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on February 21, 2022).
4.25	Warrant, dated as of January 31, 2022, issued to Altium Growth Fund, LP (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on February 21, 2022).
4.26	Securities Purchase Agreement, dated as of August 19, 2021, by and between Palisade Bio, Inc. and Yuma Regional Medical Center (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 24, 2021).
4.27	Warrant, dated as of August 19, 2021, issued to Yuma Regional Medical Center (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 24, 2021).
4.28	Form of Common Stock Purchase Warrant (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 6, 2022).
4.29	Form of Placement Agent Warrant (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 6, 2022).
4.30	Form of Series 1 Common Stock Warrant (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 16, 2022).
4.31	Form of Series 2 Common Stock Warrant (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 16, 2022).

4.32	Warrant Agency Agreement dated August 16, 2022, by and between Palisade Bio, Inc. and American Stock Transfer and Trust Company, LLC. (Incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 16, 2022).
4.33	Form of Series B Preferred Stock Certificate of Registrant (Incorporated by reference to Exhibit 4.33 to the Registrant's Registration Statement on Form S-1/A, filed with the SEC on August 9, 2022)
4.34	Form of Underwriter Warrant issued August 16, 2022 (Incorporated by reference to Exhibit 4.33 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on November 14, 2022).
4.35	Form of Registered Prefunded Warrant issued in January 2023 Registered Offering (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
4.36	Form of Prefunded Warrant issued in January 2023 Private Placement (Incorporated by reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
4.37	Form of Warrant issued in January 2023 Private Placement (Incorporated by reference to Exhibit 4.03 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
4.38	Form of Placement Agent Warrant issued in January 2023 Private Placement (Incorporated by reference to Exhibit 4.04 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
4.39	Form of Prefunded Warrant issued in April 2023 Private Placement (Incorporated by Reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2023).
4.40	Form of Warrant issued in April 2023 Private Placement (Incorporated by Reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2023).
4.41	Form of Placement Agent Warrant issued in April 2023 Private Placement (Incorporated by reference to Exhibit 4.03 to the Registrant's Current Report on Form 8-K filed with the SEC on April 5, 2023).
4.42	Form of Placement Agent Warrant issued in September 2023 Private Placement (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K filed with the SEC on September 11, 2023).
4.43	Form of Replacement Warrant issued in February 2024 Warrant Inducement Transaction (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K filed with the SEC on February 1, 2024).
4.44	Form of Placement Agent Warrant issued in February 2024 Warrant Inducement Transaction (Incorporated by reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K filed with the SEC on February 1, 2024).
4.45	Form of Prefunded Common Stock Warrant issued in May 2024 Private Placement (Incorporated by reference to Exhibit 4.01 to the Registrant's Current Report on Form 8-K filed with the SEC on May 3, 2024).
4.46	Form of Common Stock Warrant issued in May 2024 Private Placement (Incorporated by reference to Exhibit 4.02 to the Registrant's Current Report on Form 8-K filed with the SEC on May 3, 2024).
4.47	Form of Placement Agent Warrant issued in May 2024 Private Placement (Incorporated by reference to Exhibit 4.03 to the Registrant's Current Report on Form 8-K filed with the SEC on May 3, 2024).
10.1+	Seneca Biopharma 2019 Equity Incentive Plan (Incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement, originally filed with the SEC on April 29, 2019).
10.2+	Form of Restricted Option Grant from 2019 Equity Incentive Plan (Incorporated by reference to Exhibit 4.43 to the Registrant's Registration Statement on Form S-1 (File No. 333-232273), originally filed with the SEC on June 21, 2019, originally filed with the SEC on June 21, 2019).
10.3#	License Agreement, by and between Leading BioSciences, Inc. and The Regents of the University of California, dated August 19, 2015, as amended on December 20, 2019 (Incorporated by reference to Exhibit 10.18 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.4#	License Agreement, by and between Leading BioSciences, Inc. and The Regents of the University of California, dated April 1, 2020 (Incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).

10.5[#]	License Agreement, by and between Palisade Bio, Inc. and The Regents of the University of California, dated July 6, 2021 (incorporated by reference to Exhibit 10.5 to the Registrant's Form 10-K, filed with the SEC on March 17, 2022).
10.6[#]	Co-Development and Distribution Agreement, by and between Leading BioSciences, Inc. and Newsoara Biopharma Co., Ltd. (as successor-in-interest to Biolead Medical Technology Limited), dated February 17, 2018, as amended on November 27, 2018 (Incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.7	Form of Seneca Biopharma, Inc. Support Agreement, dated as of December 16, 2020, by and between Leading BioSciences, Inc. and each of the parties named in each agreement therein (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
10.8	Form of Leading BioSciences, Inc. Support Agreement, dated as of December 16, 2020, by and between Seneca Biopharma, Inc. and each of the parties named in each agreement therein(Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
10.9[†]	Securities Purchase Agreement, by and between Leading BioSciences, Inc. and the investor party thereto, dated December 16, 2020 (Incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
10.10[†]	Securities Purchase Agreement, by and among Seneca Biopharma, Inc., Leading BioSciences, Inc. and the investor party thereto, dated December 16, 2020 (Incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2020).
10.11	Amendment Agreement to Securities Purchase Agreement by and among, the Company, Leading BioSciences, Inc. and Altium Growth Fund, LP, dated May 3, 2021 (Incorporated by reference to Exhibit 10.03 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on May 14, 2021).
10.12	Form of Separation Agreement with Seneca Biopharma, Inc. Executives (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 18, 2021).
10.13[†]	Contingent Value Rights Agreement, dated as of April 27, 2021, by and among the Company, American Stock Transfer & Trust Company, LLC and Raul Silvestre (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 27, 2021).
10.14[+]	Form of Indemnification Agreement (incorporated by reference from Exhibit 10.03 to the Registrant's Current Report on Form 8-K filed with the SEC on December 18, 2018).
10.15[+]	Leading BioSciences, Inc. Amended and Restated 2013 Employee, Director and Consultant Equity Incentive Plan and Forms of Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise of Stock Option thereunder (Incorporated by reference to Exhibit 10.24 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.16[+]	Palisade Bio, Inc. 2021 Equity Incentive Plan, as amended (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on June 9, 2023).
10.17[+]	Form of Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise under the Palisade Bio, Inc. 2021 Equity Incentive Plan (Incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K, filed with the SEC on November 23, 2021).
10.18[+]	Form of Non-Employee Director Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise under the Palisade Bio, Inc. 2021 Equity Incentive Plan (Incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K, filed with the SEC on November 23, 2021).
10.19[+]	Palisade Bio, Inc. Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on June 9, 2023).
10.20[+]	Palisade Bio, Inc. 2021 Inducement Incentive Plan, as Amended August 7, 2023 (Incorporated by reference to Exhibit 10.20 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on August 10, 2023).
10.21[+]	Form of Restricted Stock Unit Grant Notice and Award Agreement under the Palisade Bio, Inc. 2021 Inducement Incentive Plan (Incorporated by reference to Exhibit 99.1 to the Registrant's Registration Statement on Form S-8 (File No. 333-261196), filed with the SEC on November 19, 2021).

10.22+	Form of Stock Option Grant Notice and Award Agreement under the Palisade Bio, Inc. 2021 Inducement Incentive Plan (Incorporated by reference to Exhibit 99.2 to the Registrant's Registration Statement on Form S-8 (File No. 333-261196), filed with the SEC on November 19, 2021).
10.23+	Non-Employee Director Compensation Policy (Incorporated by reference to Exhibit 10.35 to the Registrant's Annual Report on Form 10-K filed with the SEC on March 22, 2023).
10.24+	Amended and Restated Executive Employment Agreement, by and between Leading BioSciences, Inc. and JD Finley, dated January 24, 2021(Incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.25+	Executive Employment Agreement, by and between Leading BioSciences, Inc. and Thomas Hallam, Ph.D., dated December 16, 2020 (Incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.26+	Executive Employment Agreement, by and between Leading BioSciences, Inc. and Michael Dawson, M.D., dated December 16, 2020 (Incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form S-4 (File No. 333-251659), originally filed with the SEC on December 23, 2020, as amended).
10.27†	Asset Transfer Agreement, by and between Alto Neuroscience, Inc. and Palisade Bio, Inc., dated October 18, 2021 (incorporated by reference to Exhibit 10.27 to the Registrant's Form 10-K, filed with the SEC on March 17, 2022).
10.28	Office Lease Between AP Beacon Carlsbad, LP, and Palisade Bio, Inc., dated May 12, 2022 (Incorporate by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed with the SEC on May 13, 2022).
10.29	First Amendment dated July 14, 2022 to the Office Lease Between AP Beacon Carlsbad, LP, and Palisade Bio, Inc., dated May 12, 2022 (Incorporated by reference to Exhibit 10.2 to the Registrants Form 10-Q filed with the SEC on August 15, 2022).
10.30	Form of Securities Purchase Agreement, dated May 6, 2022, by and among the Company and the purchasers named therein (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 6, 2022).
10.31+	Separation Agreement and Release with former Chief Executive Officer (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K filed with the SEC on October 14, 2022).
10.32	Form of Securities Purchase Agreement dated December 30, 2022, by and among the Company and the purchasers named therein (Incorporated by Reference to Exhibit 10.01 to the Registrant's Current report on Form 8-K, filed with the SEC on January 4, 2023).
10.33	Form of Registration Rights Agreement, dated December 30, 2022, by and among the Company and signatories named therein (Incorporated by reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
10.34	Form of Placement Agency Agreement, dated December 30, 2022, by and between the Company and Ladenburg Thalmann & Co Inc. (Incorporated by reference to Exhibit 10.03 to the Registrant's Current Report on Form 8-K, filed with the SEC on January 4, 2023).
10.35+	Form of First Amendment Consulting Agreement dated January 25, 2023 by and between Dr. Herbert Slade and the Company (Incorporated by reference to Exhibit 10.35 to the Registrant's Annual Report on Form 10-K filed with the SEC on March 22, 2023).
10.36+	Form of Consulting Agreement dated April 7, 2023 by and between Dr. Herbert Slade and the Company. (Incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K filed with the SEC on March 22, 2023).
10.37	Form of Securities Purchase Agreement dated April 3, 2023, by and among the Company and the purchasers named therein (Incorporated by Reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2023).
10.38	Form of Registration Rights Agreement dated April 3, 2023, by and among the Company and the signatories named therein (Incorporated by Reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2023).

10.39	Form of Placement Agency Agreement dated April 3, 2023, by and among the Company and Ladenburg Thalmann & Co Inc. (Incorporated by Reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on April 5, 2023).
10.40#	Form of Research, Collaboration, and License Agreement with Giiant Pharma (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on September 8, 2023.
10.41	Form of Securities Purchase Agreement dated September 7, 2023, by and among the Company and the signatories named therein (Incorporated by Reference to Exhibit 10.01 to the Registrant's Current report on Form 8-K, filed with the SEC on September 11, 2023).
10.42	Form of Placement Agency Agreement dated September 7, 2023, by and among the Company and Ladenburg Thalmann & Co Inc. (Incorporated by reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on September 11, 2023).
10.43	Form of Employment Agreement with Mitchell Jones, dated September 5, 2023 (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on September 11, 2023).
10.44	Form of Warrant Inducement Agreement entered into pursuant to February 2024 Warrant Inducement Transaction (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on February 1, 2024).
10.45	Form of Securities Purchase Agreement entered into pursuant to the May 2024 Private Placement (Incorporated by reference to Exhibit 10.01 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 3, 2024).
10.46	Form of Registration Right Agreement entered into Pursuant to the May 2024 Private Placement (Incorporated by reference to Exhibit 10.02 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 3, 2024).
10.47	Form of Placement Agency Agreement entered into Pursuant to the May 2024 Private Placement (Incorporated by reference to Exhibit 10.03 to the Registrant's Current Report on Form 8-K, filed with the SEC on May 3, 2024.
31.1*	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.
31.2*	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.
32.1**	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rules 13a-14(b) or 15d-14(b) of the Exchange Act, and 18 U.S.C. Section 1350.
101.INS*	Inline XBRL Instance Document-the instance document does not appear in the Interactive Data File as its XBRL tags are embedded within the Inline XBRL document.
104*	Cover Page Interactive Data File (embedded within the Inline XBRL and contained in Exhibit 101).

* Filed herewith
** Furnished herewith.
+ Indicates management contract or compensatory plan.
# Certain portions of this exhibit (indicated by "[***]") have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.
† Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the Securities and Exchange Commission upon request.

SIGNATURES

In accordance with the requirements of the Securities Exchange Act of 1934, the Registrant has caused this report to be signed by the undersigned hereunto duly authorized.

PALISADE BIO, INC.

Date: May 13, 2024

/s/ J.D. Finley
J.D. Finley, Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)