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

FORM 10-Q

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

For the quarterly period ended March 31, 2022

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 001-39069

Aprea Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**84-2246769**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
535 Boylston Street **Boston, Massachusetts**	**02116**
(Address of principal executive offices)	(Zip Code)

(617) 463-9385
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	**Trading Symbol**	**Name of exchange on which registered:**
Common stock, par value $0.001 per share	APRE	NASDAQ Global Select Market

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

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

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

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

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

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

There were 21,974,302 shares of the registrant's common stock, $0.001 par value, outstanding as of May 13, 2022.

Aprea Therapeutics, Inc.
Quarterly Report on Form 10-Q
For the Quarter Ended March 31, 2022

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q includes statements that are, or may be deemed, "forward-looking statements." In some cases, these forward-looking statements can be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "designed," "would," "could," "might," "will," "should," "approximately" or, in each case, their negative or other variations thereon or comparable terminology, although not all forward-looking statements contain these words. They appear in a number of places throughout this Quarterly Report on Form 10-Q and include statements regarding our current intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our ongoing and planned development, prospects for commercialization, and market uptake of our potential product candidates, the strength and breadth of our intellectual property, our planned clinical trials, the timing of and our ability to make regulatory filings and obtain and maintain regulatory approvals for our product candidates, the legal and regulatory landscape impacting our business, the degree of clinical utility of our product candidates, particularly in specific patient populations, expectations regarding clinical trial data, our development and validation of manufacturing capabilities, our results of operations, financial condition, liquidity, prospects, growth and strategies, the length of time that we will be able to continue to fund our operating expenses and capital expenditures, our expected financing needs and sources of financing, the industry in which we operate and the trends that may affect the industry or us.

By their nature, forward-looking statements involve risks and uncertainties because they relate to future events, competitive dynamics, and healthcare, regulatory and scientific developments and depend on economic circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. We caution you that forward-looking statements are not guarantees, or predictive, of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this Quarterly Report on Form 10-Q.

Some of the factors that we believe could cause actual results to differ from those anticipated or predicted include:

- our ability to operate as an integrated company subsequent to our acquisition of Atrin Pharmaceuticals, Inc.;
- estimates of our expenses, capital requirements and our needs for additional financing;
- business interruptions, including delays in enrollment, patient follow-up and data collection of clinical trials, resulting from the outbreak of the novel coronavirus, COVID-19;
- the prospects of our product candidates, all of which are still in development;
- outcome and results of ongoing or future preclinical studies and clinical trials of our product candidates;
- our expectations regarding our ability to identify, discover or acquire additional suitable product candidates;
- the design of our planned clinical trials, including the sample size, trial duration, endpoint definition, event rate assumptions and eligibility criteria;
- our expectations regarding the timing of data from our clinical trials;
- market acceptance or commercial success of any product candidate we develop and the degree of acceptance among physicians, patients, patient advocacy groups, healthcare payors and the medical community;
- our expectations regarding competition, potential market size, the size of the patient populations for our product candidates, if approved for commercial use, and market acceptance;
- our ability to obtain regulatory approval of our product candidates, and any restrictions, limitations and/or warnings in their labels, if approved;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates;
- potential claims relating to our intellectual property and third-party intellectual property;

- the duration of our intellectual property estate that will provide protection for our product candidates;
- developments relating to our competitors and our industry;
- our sales, marketing or distribution capabilities and our ability to commercialize our product candidates, if we obtain regulatory approval;
- current and future agreements with third parties in connection with the manufacturing, commercialization, packaging and distribution of our product candidates;
- our expectations regarding the ability of our current contract manufacturing partners to produce our product candidates in the quantities and timeframe that we will require;
- our expectations regarding our future costs of goods;
- our ability to attract, retain and motivate key personnel and increase the size of our organization;
- our ability to establish collaborations in lieu of obtaining additional financing;
- the impact of government laws and regulations;
- our financial performance; and
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act or a smaller reporting company under the Exchange Act.

Any forward-looking statements that we make in this Quarterly Report on Form 10-Q speak only as of the date of such statement, and we undertake no obligation to update such statements to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q. You should also read carefully the factors described in the "Risk Factors" included in Part II, Item 1A of this Quarterly Report and in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021 to better understand significant risks and uncertainties inherent in our business and underlying any forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this Quarterly Report on Form 10-Q will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all.

This Quarterly Report on Form 10-Q includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe these industry publications and third-party research, surveys and studies are reliable, we have not independently verified such data.

We qualify all of our forward-looking statements by these cautionary statements. In addition, with respect to all of our forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

This Form 10-Q may include trademarks, tradenames, and service marks that are the property of other organizations. Solely for convenience, our trademarks and tradenames referred to in this Form 10-Q may appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.

Aprea Therapeutics, Inc.
Part I – Financial Information

Item 1. Financial Statements

Aprea Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)

	March 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 47,651,774	$ 53,076,052
Prepaid expenses and other current assets	2,393,096	3,508,358
Total current assets	50,044,870	56,584,410
Property and equipment, net	20,587	23,870
Right of use lease asset	242,183	185,811
Other noncurrent assets	29,369	29,372
Total assets	$ 50,337,009	$ 56,823,463
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,988,007	$ 1,773,032
Accrued expenses	4,512,616	5,352,996
Lease liability—current	219,499	190,471
Total current liabilities	6,720,122	7,316,499
Lease liability—noncurrent	28,061	—
Total liabilities	6,748,183	7,316,499
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Common stock, $0.001 par value, 400,000,000 shares authorized, 21,974,302 and 21,859,413 shares issued and outstanding at March 31, 2022 and December 31, 2021, respectively.	21,974	21,859
Additional paid-in capital	243,062,384	240,978,439
Accumulated other comprehensive loss	(10,424,461)	(10,358,956)
Accumulated deficit	(189,071,071)	(181,134,378)
Total stockholders' equity	43,588,826	49,506,964
Total liabilities and stockholders' equity	$ 50,337,009	$ 56,823,463

See accompanying notes to unaudited condensed consolidated financial statements.

Aprea Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)

	Three Months Ended March 31,	
	2022	2021
Operating expenses:		
Research and development	$ 4,089,577	$ 6,763,848
General and administrative	3,985,298	3,425,833
Total operating expenses	8,074,875	10,189,681
Other income (expense):		
Interest income (expense), net	1,971	(1,057)
Foreign currency gain	136,211	521,983
Total other income	138,182	520,926
Net loss	$ (7,936,693)	$ (9,668,755)
Other comprehensive loss:		
Foreign currency translation	(65,505)	(402,850)
Total comprehensive loss	$ (8,002,198)	$ (10,071,605)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.36)	$ (0.46)
Weighted-average common shares outstanding, basic and diluted	21,901,531	21,186,827

See accompanying notes to unaudited condensed consolidated financial statements.

Aprea Therapeutics, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)

	Common Stock		Additional Paid-in Capital	Other Comprehensive Loss	Accumulated Deficit	Stockholders' Equity (Deficit)
	Shares	Amount				
Balance, December 31, 2020	21,186,827	$ 21,187	$ 231,418,356	$ (10,037,261)	$ (144,007,075)	$ 77,395,207
Exercise of stock options	—	—	—	—	—	—
Stock-based compensation	—	—	1,822,562	—	—	1,822,562
Foreign currency translation	—	—	—	(402,850)	—	(402,850)
Net loss	—	—	—	—	(9,668,755)	(9,668,755)
Balance, March 31, 2021	21,186,827	$ 21,187	$ 233,240,918	$ (10,440,111)	$ (153,675,830)	$ 69,146,164
Balance, December 31, 2021	21,859,413	$ 21,859	$ 240,978,439	$ (10,358,956)	$ (181,134,378)	$ 49,506,964
Exercise of stock options	—	—	—	—	—	—
Vesting of restricted stock units	114,889	115	(115)	—	—	—
Stock-based compensation	—	—	2,084,060	—	—	2,084,060
Foreign currency translation	—	—	—	(65,505)	—	(65,505)
Net loss	—	—	—	—	(7,936,693)	(7,936,693)
Balance, March 31, 2022	21,974,302	$ 21,974	$ 243,062,384	$ (10,424,461)	$ (189,071,071)	$ 43,588,826

See accompanying notes to unaudited condensed consolidated financial statements.

Aprea Therapeutics, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Three Months Ended March 31,	
	2022	2021
Cash flows from operating activities:		
Net loss	$ (7,936,693)	$ (9,668,755)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,942	3,588
Stock-based compensation	2,084,060	1,822,562
Amortization of right of use lease asset	60,825	72,416
Foreign currency (gain) loss	(136,211)	(521,983)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	1,115,261	931,576
Accounts payable	214,975	(1,046,891)
Accrued expenses and other liabilities	(840,380)	(3,038,763)
Lease liability	(60,108)	(75,856)
Net cash used in operating activities	(5,495,329)	(11,522,106)
Cash flows from investing activities:		
Purchases of property and equipment	—	—
Net cash used in investing activities	—	—
Cash flows from financing activities:		
Proceeds from the exercise of stock options	—	—
Net cash provided by financing activities	—	—
Decrease in cash and cash equivalents	(5,495,329)	(11,522,106)
Effect of exchange rate changes on cash	71,051	120,494
Cash and cash equivalents—beginning of year	53,076,052	89,017,686
Cash and cash equivalents—end of period	$ 47,651,774	$ 77,616,074
Non-cash investing and financing activities:		
Operating lease liabilities arising from obtaining right-of-use assets	$ 123,786	$ -

See accompanying notes to unaudited condensed consolidated financial statements.

Aprea Therapeutics, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Nature of business and basis of presentation

Nature of business—Aprea Therapeutics, Inc. (or the "Company") is a clinical-stage biopharmaceutical company focused on developing and commercializing novel cancer therapeutics that reactivate the mutant tumor suppressor protein p53. p53 is the protein expressed from the *TP53* gene, the most commonly mutated gene in cancer. The Company began principal operations in 2006 and is headquartered in Boston, Massachusetts with research facilities in Stockholm, Sweden.

On May 16, 2022, the Company signed and completed the acquisition of Atrin Pharmaceuticals Inc. (see Note 8).

Basis of presentation and management plans—The accompanying financial statements are prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP"). The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

Since its inception, the Company has devoted substantially all of its efforts to business planning, research and development, recruiting management and technical staff, and raising capital, and has financed its operations through the issuance of convertible preferred stock and common stock.

The Company is subject to risks common to companies in the biopharmaceutical industry. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be maintained, that any therapeutic products developed will obtain required regulatory approval or that any approved or consumer products will be commercially viable. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will generate significant product sales.

The Company believes that the March 31, 2022 cash balance of approximately $47.6 million will be sufficient to fund the Company's operations into the second half of 2023. In the event that additional funds are not available thereafter, management would expect to significantly reduce expenditures to conserve cash, which would involve scaling back or curtailing new development activity.

2. Summary of significant accounting policies

The Company's complete listing of significant accounting policies are described in Note 2 to the Company's audited consolidated financial statements as of December 31, 2021 included in its annual report on Form 10-K filed with the Securities and Exchange Commission (or the "SEC").

Principles of consolidation—The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries Aprea Therapeutics AB, which was incorporated in May 2009 and Aprea US, Inc., which was incorporated in June 2016. Management has concluded it has a single reporting segment for purposes of reporting financial condition and results of operations. All intercompany transactions and balances have been eliminated.

Unaudited interim consolidated financial statements—The accompanying unaudited interim condensed consolidated financial statements have been prepared by the Company in accordance with U.S. GAAP for interim information and pursuant to the rules and regulations of the SEC for reporting on Form 10-Q. Accordingly, certain information and footnote disclosure normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. These unaudited condensed interim financial statements should be read in conjunction with the audited financial statements and related notes included in the Company's annual report on Form 10-K for the year ended December 31, 2021 filed with the SEC.

The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements, and in management's opinion, include all adjustments, consisting of only normal

recurring adjustments, necessary for the fair presentation of the financial information for the interim periods have been made. The results of operations for the three months ended March 31, 2022 are not necessarily indicative of the results to be expected for the full fiscal year or any future period.

Use of estimates—The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses as of and during the reporting period. The Company bases estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. The Company assesses estimates on an ongoing basis; however, actual results could materially differ from those estimates. Significant items subject to such estimates and assumptions, are used for, but not limited to, include stock-based compensation and accounting for research and development costs.

Foreign currency and currency translation—The functional currency for Aprea Therapeutics AB is the Swedish Krona. Assets and liabilities of Aprea Therapeutics AB are translated into United States dollars at the exchange rate in effect on the balance sheet date. Operating expenses are translated at the average exchange rate in effect during the period. Unrealized translation gains and losses are recorded as a cumulative translation adjustment, which is included in the consolidated statements of stockholders' equity as a component of accumulated other comprehensive loss. Adjustments that arise from exchange rate changes on transactions denominated in a currency other than the local currency are included in other income (expense), net in the condensed consolidated statements of operations and comprehensive loss as incurred.

Cash and cash equivalents— The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents.

Fair value of financial instruments—The accounting standard for fair value measurements provides a framework for measuring fair value and requires expanded disclosures regarding fair value measurements. Fair value is defined as the price that would be received upon sale of an asset or paid to transfer a liability between market participants at measurement dates. ASC Topic 820, Fair Value Measurement ("ASC 820"), establishes a three-level valuation hierarchy for instruments measured at fair value. The hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The hierarchy defines three levels of valuation inputs, of which the first two are considered observable and the last is considered unobservable:

- Level 1 inputs: Quoted prices in active markets for identical assets or liabilities.
- Level 2 inputs: Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable, such as quoted market prices, interest rates and yield curves.
- Level 3 inputs: Unobservable inputs developed using estimates or assumptions developed by the Company, which reflect those that a market participant would use in pricing the asset or liability.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The Company's financial instruments consist of cash and cash equivalents and accounts payable. The carrying amount of accounts payable is considered a reasonable estimate of fair value due to the short-term maturity.

Accounting for leases—The Company adopted the Lease standard (ASC 842) effective January 1, 2019, using the modified retrospective method. The new standard provided a number of optional practical expedients in transition. The Company elected to apply the 'package of practical expedients' which allowed them to not reassess (i) whether existing

or expired arrangements contain a lease, (ii) the lease classification of existing or expired leases, or (iii) whether previous initial direct costs would qualify for capitalization under the new lease standard. The Company also elected to apply (i) the practical expedient which allows them to not separate lease and non-lease components, for new leases entered into after adoption and (ii) the short-term lease exemption for all leases with an original term of less than 12 months, for purposes of applying the recognition and measurements requirements in the new standard.

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on specific facts and circumstances, the existence of an identified asset(s), if any, and the Company's control over the use of the identified asset(s), if applicable. Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of future lease payments over the expected lease term. The interest rate implicit in lease contracts is typically not readily determinable. As such, the Company utilizes the incremental borrowing rate, which is the rate incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. The Company's incremental borrowing rate ranged from approximately 3.0% to 4.3% based on the remaining lease term of the applicable leases.

The Company has elected not to separate lease and non-lease components as a single component. Operating leases are recognized on the balance sheet as ROU lease assets, lease liabilities current and lease liabilities non-current. Fixed rents are included in the calculation of the lease balances while variable costs paid for certain operating and pass-through costs are excluded. Lease expense is recognized over the expected term on a straight-line basis.

Stock-based compensation—The Company measures stock options and other stock-based awards granted to employees and directors based on their fair value on the date of the grant and recognize compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. The Company applies the straight-line method of expense recognition to all awards with only service based vesting conditions.

For stock-based awards granted to non-employees, compensation expense is recognized over the period during which services are rendered by such non-employees until completed in accordance with the FASB issued ASU No. 2018-07, Compensation Stock Compensation (Topic 718): Improvements to Nonemployee Share Based Payment Accounting. The new standard largely aligns the accounting for share based payment awards issued to employees and nonemployees by expanding the scope of ASC 718 to apply to nonemployee share based transactions, as long as the transaction is not effectively a form of financing.

The Company estimates the fair value of each stock option grant on the date of grant using the Black Scholes option pricing model, which uses as inputs the fair value of the Company's common stock and assumptions the Company makes for the volatility of its common stock, the expected term of its stock options, the risk-free interest rate for a period that approximates the expected term of its stock options and its expected dividend yield. The Company elects to account for forfeitures when they occur.

The Company also awards restricted stock units ("RSUs") to employees and directors. RSUs are generally subject to forfeiture if employment terminates prior to the completion of the vesting restrictions. The Company expenses the cost of the RSUs, which is determined to be the fair market value of the shares of common stock underlying the RSUs at the date of grant, ratably over the period during which the vesting restrictions lapse.

Net loss per share—The Company has reported losses since inception and has computed basic net loss per share attributable to common stockholders by dividing net loss attributable to common stockholders by the weighted-average number of common shares outstanding for the period, without consideration for potentially dilutive securities. The Company computes diluted net loss per common share after giving consideration to all potentially dilutive common shares, including options to purchase common stock, outstanding during the period determined using the treasury-stock and if-converted methods, except where the effect of including such securities would be antidilutive. Because the Company has reported net losses since inception, these potential common shares have been anti-dilutive and basic and diluted loss per share have been the same.

Aprea Therapeutics, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

The following table sets forth the potentially dilutive securities that have been excluded from the calculation of diluted net loss per share because to include them would be anti-dilutive (in common stock equivalent shares):

	Three months ended March 31,	
	2022	2021
Options to purchase common stock	5,745,621	4,794,236
Unvested restricted stock units	458,320	500,000
Total shares of common stock equivalents	6,203,941	5,294,236

Recently issued accounting pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that the Company adopts as of the specified effective date.

Management does not believe that any recently issued, but not yet effective accounting pronouncements, if adopted, would have a material impact on the accompanying financial statements.

3. Leases

The Company is party to two operating leases for office and laboratory space. The Company's finance leases are immaterial both individually and in the aggregate. The Company has elected to apply the short-term lease exception to all leases of one year or less. Rent expense for three months ended March 31, 2022 and 2021 was $74,816 and $91,686, respectively.

The Company has an operating lease in Boston, Massachusetts for office space which was amended effective July 1, 2021. The lease will expire on December 31, 2022 and does not have any renewal options. The Company also has an operating lease for office and laboratory space in Solna, Sweden which was extended effective January 1, 2022 and now expires on June 30, 2023.

Quantitative information regarding the Company's leases for the three months ended March 31, 2022 and 2021 is as follows:

	Three months ended March 31,	
Lease Cost	2022	2021
Operating lease cost	$ 60,116	$ 57,923
Other Information		
Operating cash flows paid for amounts included in the measurement of lease liabilities	$ 64,056	$ 63,482
Operating lease liabilities arising from obtaining right-of-use assets	$ 123,786	$ —
Weighted average remaining lease term (years)	0.75-1.25	0.75-1.25
Weighted average discount rate	3.0 - 4.3%	3.0 - 4.3%

Aprea Therapeutics, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

Future lease payments under noncancelable leases are as follows at March 30, 2022:

Future Lease Payments	Operating Leases
2022	$ 192,243
2023	63,903
Total Lease Payments	$ 256,146
Less: Imputed Interest	(8,586)
Total Lease Liabilities	$ 247,560

As most of the Company's leases do not provide an implicit rate, the Company used its incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments.

4. Accrued expenses

Accrued expenses consist of the following:

	March 31, 2022	December 31, 2021
Professional fees	$ 632,621	$ 247,123
Compensation and benefits	577,149	1,418,309
Research and development	2,920,032	3,504,375
Other	382,814	183,189
Total accrued expenses	$ 4,512,616	$ 5,352,996

5. Stockholders' equity

The total number of shares of all classes of capital stock that the Company is authorized to issue is 440,000,000 shares, consisting of 400,000,000 shares of common stock, par value $0.001 per share and 40,000,000 shares of preferred stock, par value $0.001 per share.

Common Stock

The holders of common stock are entitled to one vote for each share of common stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, after the payment or provision for payment of all debts and liabilities of the Company, the holders of common stock shall be entitled to share in the remaining assets of the Company available for distribution, if any.

Shelf Registration Statement

On November 12, 2020, the Company filed a universal shelf registration statement with the SEC for the issuance of common stock, preferred stock, warrants, rights, debt securities and units up to an aggregate of $350.0 million. On November 30, 2020, the Shelf Registration Statement was declared effective by the SEC. The universal shelf registration statement includes an at-the-market ("ATM") offering program for the sale of up to $50.0 million of shares of the Company's common stock. The Company agreed to pay a commission of 3% of the gross proceeds of any common stock sold in connection with the ATM offering program. The Company did not sell any common stock under the ATM program during the three months ended March 31, 2022 or 2021.

Stock-Based Compensation Expense

The Company recorded stock-based compensation expense of $2,084,060, and $1,822,562 for the three months ended March 31, 2022 and 2021, respectively.

Aprea Therapeutics, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

6. Income Taxes

The Company has no income tax expense due to operating losses incurred for the months ended March 31, 2022 and 2021. The Company has provided a valuation allowance for the full amount of the net deferred tax assets as, based on all available evidence, it is considered more likely than not that all the recorded deferred tax assets will not be realized in a future period.

Realization of the future tax benefits is dependent on may factors, including the Company's ability to generate taxable income within the net operating loss carryforward period. Under the provisions of the U.S. Internal Revenue Code and Sweden tax law, certain substantial changes in the Company's ownership, including a sale of the Company or significant changes in ownership due to sales of equity, may have limited, or may limit in the future, the amount of net operating loss carryforwards that could be used annually to offset future taxable income. For U.S. and Swedish income tax purposes, the Company has not completed a study to assess whether a change of control has occurred or whether there have been changes of control since the Company's formation due to the complexity and cost associated with such study and because there could be additional changes of control in the future. As a result, the Company is not able to estimate the effect of the change in control, if any, on the Company's ability to utilize U.S. or Swedish net operating losses or other tax attribute carryforwards in the future. For Swedish income tax purposes, the Company's net operating losses may be subject to limitations in accordance with the country's group contribution restriction laws.

The Company files tax returns in Sweden, the United States and Massachusetts. Income tax returns prior to 2018 in the United States and Massachusetts are no longer subject to examination and income tax returns prior to 2015 are no longer subject to examination in Sweden. The Company is not currently under examination by the IRS or any other jurisdictions for any tax years.

As tax law is complex and often subject to varied interpretations, it is uncertain whether some of the Company's tax positions will be sustained upon examination. Tax liabilities associated with uncertain tax positions represent unrecognized tax benefits, which arise when the estimated benefit recorded in the Company's financial statements differs from the amounts taken or expected to be taken in a tax return because of the uncertainties described above. Substantially all of these unrecognized tax benefits, if recognized, would benefit the Company's effective income tax rate.

As of March 31, 2022 and December 31, 2021, the Company had approximately $0.1 million of liabilities related to uncertain tax positions. As the Company's uncertain tax positions can be offset by available net operating losses, the Company did not recognize interest and penalties for 2022 and 2021.

7. Commitments and contingencies

The Company records a provision for contingent losses when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. As of March 31, 2022, the Company has not recorded a provision for any contingent losses.

8. Subsequent Events

On May 16, 2022, the Company completed its acquisition of Atrin Pharmaceuticals Inc. ("Atrin"), a privately held biotechnology company focused on the discovery and development of novel therapeutics targeting proteins in the DNA damage response, or DDR, pathway in oncology through synthetic lethality, in accordance with the terms of the Agreement and Plan of Merger, signed and closed on May 16, 2022 (the "Merger Agreement"). Under the terms of the Merger Agreement, at the closing of this merger, the Company issued the securityholders of Atrin 1,117,394 shares of common stock and 2,949,630 shares of Series A non-voting convertible Preferred Stock ("Series A Preferred Stock"). The Series A Preferred Stock is non-voting and is contingently convertible into common stock subject to stockholder approval. Following stockholder approval, each share of Series A Preferred Stock is convertible into 10 shares of

common stock at any time at the option of the holder thereof, subject to certain limitations. On a pro forma basis and based upon the number of shares of Aprea common stock and preferred stock issued in the acquisition, holders of Aprea equity immediately prior to the acquisition will own approximately 41.2% of Aprea on an as-converted basis and former Atrin equity holders will own approximately 58.8% of Aprea on an as-converted basis immediately after these transactions. The Company expects to account for this purchase as an asset acquisition as substantially all of the fair value of the gross assets acquired was concentrated in a single identifiable asset. The Company's primary focus is expected to shift to the discovery and development of proprietary molecules targeting DNA Damage Response pathways in oncology and synthetic lethality.

The acquisition was approved by the Board of Directors of Aprea and the Board of Directors and the requisite equity holders of Atrin. The closing of the transactions was not subject to the approval of Aprea stockholders. The Company has agreed to hold a stockholders' meeting to, among other items, ask the stockholders to approve the conversion of the Series A Preferred Stock into shares of common stock.

In connection with the transaction, a non-transferable contingent value right (a "CVR") will be distributed to the Aprea stockholders of record as of the close of business on May 13, 2022. Holders of the CVR will be entitled to receive certain stock and/or cash payments from proceeds received by the Company, if any, related to the disposition of its legacy assets in the 2 year period following the closing of the transaction. The CVR is expected to be distributed to eligible stockholders approximately 30 days from the closing of the Atrin acquisition.

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

You should read the following discussion and analysis of our financial condition and results of operations together with the unaudited financial information and notes thereto included in this Quarterly Report on Form 10-Q. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report, including information with respect to our plans and strategy for our business and related financing, including forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report and in our Annual Report on Form 10-K for the year ended December 31, 2021, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel cancer therapeutics. that reactivate the mutant p53 tumor suppressor protein. p53 is the protein expressed from the *TP53* gene, the most commonly mutated gene in cancer. We believe that mutant p53 is an attractive therapeutic target due to the high incidence of p53 mutations across a range of cancer types and its involvement in key cellular activities such as apoptosis. Cancer patients with mutant p53 face a significantly inferior prognosis even when treated with the current standard of care, and a large unmet need for these patients remains.

APR-246, or *eprenetapopt*, is a small molecule p53 reactivator that has been tested in clinical trials for solid tumors and for hematologic malignancies, including myelodysplastic syndromes, or MDS, and acute myeloid leukemia, or AML. Eprenetapopt has received Orphan Drug and Fast Track designations from the FDA for MDS, Fast Track designation from the FDA for AML, and Orphan Drug designation from the European Commission for MDS and AML, and we believe eprenetapopt will be a first-in-class therapy if approved by applicable regulators.

While we currently have no ongoing clinical trials of eprenetapopt, we have received clearance from FDA to proceed under our existing INDs with new clinical trials in relapsed/refractory MDS/AML and Richter's transformed NHL, including initial testing of a new oral formulation of eprenetapopt.

Myeloid Malignancy Program

On August 4, 2021, the U.S. Food and Drug Administration (FDA) placed a partial clinical hold on the clinical trials of eprenetapopt in combination with azacitidine in our Phase 3 frontline MDS clinical trial, our Phase 2 MDS/AML Post-Transplant clinical trial and our Phase 1/2 AML clinical trial. The FDA's concerns referred to the safety and efficacy data from the Phase 3 frontline MDS clinical trial. In particular, the FDA requested more information related to a potential risk-reward imbalance between the combination of eprenetapopt and azacitidine versus azacitidine alone as it relates to increased serious adverse events in the Phase 3 frontline clinical trial in MDS. At the time of the clinical hold announcement the MDS, AML and post-transplant maintenance trials had all completed enrollment. Patients who were benefiting from treatment could continue to receive study treatment. In December 2021 we discussed with FDA the data and analyses from the Phase 3 trial and reached preliminary agreement on proposals for new clinical trials in myeloid malignancies. In the first quarter of 2022, FDA informed us that it would continue the partial clinical hold on these three clinical trials, allowing patients currently on and benefiting from treatment to continue with treatment, but prohibiting enrollment of new patients. As all trials had already achieved full enrollment and primary endpoint readout, we had no plans to enroll new patients into any of these trials. These trials have been concluded and there are no patients receiving eprenetapopt in any of these trials. FDA has given us clearance to proceed under our existing myeloid malignancy IND with a new clinical trial in relapsed/refractory MDS and AML.

- **Phase 1 Relapsed/Refractory MDS/AML Trial—** In the first quarter of 2022, we received clearance from the FDA to proceed under our existing IND of a clinical trial in relapsed/refractory (R/R) MDS/AML. The trial is designed to determine the optimal pharmacologically active dose of eprenetapopt in combination with azacitidine in relapsed/refractory (R/R) MDS/AML.

Lymphoid Malignancy Program

On August 11, 2021, FDA placed a clinical hold on our clinical trial evaluating eprenetapopt in patients with non-Hodgkin lymphoma. The FDA's concerns referred to the safety and efficacy data from the Phase 3 frontline MDS clinical trial in our myeloid malignancy program. In particular, the FDA requested more information related to a potential risk-reward imbalance between the combination of eprenetapopt and azacitidine versus azacitidine alone as it relates to increased serious adverse events in the Phase 3 frontline clinical trial in MDS. At the time of the clinical hold announcement the NHL trial had enrolled one patient. Patients who were benefiting from treatment could continue to receive study treatment and no additional patients could be enrolled until the clinical hold was resolved. There are currently no patients receiving eprenetapopt in this trial. In October 2021 we discussed with FDA the requested data and analyses from the Phase 3 trial and proposed amendments for clinical trials to proceed in our lymphoid malignancy program. FDA lifted the clinical hold in December 2021.

- **Phase 1 NHL Trial—**In the first quarter of 2022 we received clearance from FDA to proceed under our existing IND with a clinical trial in relapsed/refractory (R/R) *TP53* mutant Richter's transformed NHL. Richter's transformed NHL is a subset of CLL that is characterized by significantly more aggressive disease. The trial is designed to seek to determine the optimal pharmacologically active dose of eprenetapopt in combination with venetoclax and rituximab. The trial includes administration of an oral formulation of eprenetapopt as part of a monotherapy lead-in phase. Under the trial protocol, pharmacokinetic data following oral administration would be collected to assess exposure relative to intravenous administration and to inform potential future clinical opportunities of an oral dosage form of eprenetapopt.

Next Generation Programs

APR-548

APR-548 is a second generation p53 reactivator that is a unique analog of eprenetapopt. APR-548 exhibits high oral bioavailability in preclinical testing and is being developed in an oral dosage form.

- **Phase 1 MDS/AML Trial—**We initiated a Phase 1 clinical trial testing APR-548 in relapsed/refractory MDS and AML. Enrollment in the first dosing cohort was completed. There are currently no patients receiving APR-548 in this trial and enrollment into the trial has been closed.

DNA Damage and Response Programs

As part of the ongoing process to review its business strategy and as the Company continued FDA interactions related to the clinical holds, on October 18, 2021 the Board of Directors engaged an external advisor to assist the Company with a search for pre-clinical and/or clinical assets either complementary or in addition to the Company's lead program. This undertaking was referred as the "build scenario" and during the subsequent months the Company screened pre-clinical or clinical assets which could potentially be added to the Company's development pipeline. On May 16, 2022, we completed the acquisition of Atrin Pharmaceuticals, Inc., a Delaware corporation ("Atrin"), in accordance with the terms of the Agreement and Plan of Merger, dated May 16, 2022 (the "Merger Agreement") (the "Merger").

Following the acquisition of Atrin, the Company's primary focus is expected to shift to the discovery and development of proprietary molecules targeting DDR pathways in oncology through synthetic lethality. Atrin has developed a proprietary platform to interrogate DDR pathways that may enable identification of both potential novel DDR targets for future development and potential biomarkers for enhanced sensitivity and patient selection in clinical trials.

ATRN-119

ATRN-119 is an orally bioavailable small molecule product candidate that targets Ataxia Telangiectasia and Rad3-related ("ATR") protein within the DDR. ATRN-119 and its back up candidate were both discovered by Atrin. We believe the selectivity and toxicology profiles of ATRN-119 may be differentiated from other ATR inhibitors currently

being developed by other companies. We have an open IND and have received clearance from FDA to initiate a Phase 1/2a clinical trial of ATRN-119. We anticipate enrollment of the first patient in this clinical trial in the second half of 2022. We are planning to study ATRN-119 as both a monotherapy and in combination with standard of care in Phase 1/2 clinical trials in solid tumor malignancies. We currently retain worldwide development and commercialization rights to ATRN-119.

ATRN-W1051

ATRN-W1051 is an orally bioavailable small molecule product candidate that targets the WEE1 protein within the DDR. ATRN-W1051 was discovered by Atrin. We believe the selectivity profile of ATRN-119 may be differentiated from other WEE1 inhibitors currently being developed by other companies. ATRN-W1051 is currently in preclinical development, and we anticipate commencing IND-enabling studies in the second half of 2022. We currently retain worldwide development and commercialization rights to ATRN-W1051.

Aprea Therapeutics AB, or Aprea AB, was originally incorporated in 2002 and commenced principal operations in 2006. We incorporated Aprea Therapeutics, Inc. (the “Company”) in May 2019. In September 2019 we completed a corporate reorganization and, as a result, all of the issued and outstanding stock of Aprea AB was exchanged for common stock, preferred stock or options, as applicable, of the Company As a result of such transactions, Aprea AB became a wholly-owned subsidiary of the Company.

We have devoted substantially all of our resources to developing our product candidates, including eprenetapopt, building our intellectual property portfolio, business planning, raising capital and providing general and administrative support for these operations. To date, we have financed our operations primarily through private placements of preferred stock and the net proceeds received from the initial public offering (IPO) of our common stock. Through March 31, 2022, we had received net proceeds of approximately $225.6 million from our sales of preferred and common stock.

Since our inception, we have incurred significant losses on an aggregate basis. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and eventual commercialization of one or more of our product candidates. Our net losses were $7.9 million and $9.7 million for the three months ended March 31, 2022 and 2021, respectively, and $37.1 million, $53.5 million and $28.1 million for the years ended December 31, 2021, 2020 and 2019, respectively. As of March 31, 2022, we had an accumulated deficit of $189.0 million. These losses have resulted primarily from costs incurred in connection with research and development activities, patent investment, and general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for at least the next several years.

We anticipate that our expenses will increase substantially if and as we:

- conduct our planned clinical trials and additional preclinical research;
- initiate and continue research and preclinical and clinical development of our other product candidates;
- seek to identify and develop additional product candidates;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing, manufacturing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- require the manufacture of larger quantities of our product candidates for clinical development and potential commercialization;
- maintain, expand, protect and enforce our intellectual property portfolio;

- acquire or in-license other drugs and technologies;
- defend against any claims of infringement, misappropriation or other violation of third-party intellectual property;
- hire and retain additional clinical, quality control and scientific personnel; and
- add operational, financial and management information systems and personnel, including personnel to support our drug development, any future commercialization efforts and our operation as a public company.

Furthermore, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution.

As a result, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. We may be unable to raise additional funds or enter into other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as and when needed, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates.

Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate revenue from product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

As of March 31, 2022, we had cash and cash equivalents of $47.6 million. We believe that our existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See “—Liquidity and Capital Resources.”

The COVID-19 pandemic

The novel coronavirus outbreak (COVID-19) has been declared a “Public Health Emergency of International Concern” by the World Health Organization. COVID-19 has spread to the countries in which we, our suppliers, and our other business partners conduct business. Governments in affected regions have implemented, and may continue to implement or re-implement, safety precautions, including quarantines, travel restrictions, business closures, cancellations of public gatherings, and other measures they deem necessary. Like many other organizations and individuals, the Company and our employees are taking additional steps to avoid or reduce infection, including limiting travel and implementing remote work arrangements. We will continue to actively monitor the situation and may take further actions that could alter our business operations as may be required by national, state, or local authorities, or that we determine are in the best interests of our employees and stockholders.

There are many uncertainties regarding the COVID-19 pandemic, and we are closely monitoring the impact of the pandemic on all aspects of our business, including how it will impact our clinical trials, employees, suppliers, vendors and business partners. While the pandemic did not materially affect our financial results and business operations for the three months ended March 31, 2022, we are unable to predict the impact that COVID-19 will have on our financial position and operating results at this time due to numerous uncertainties such as the duration and spread of the outbreak. We will continue to assess the evolving impact of the COVID-19 pandemic and will make adjustments to our operations if necessary.

Components of our results of operations

Revenue

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

Operating expenses

Our expenses since inception have consisted solely of research and development costs and general and administrative costs.

Research and development expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts, and the development of our product candidates, and include:

- expenses incurred under agreements with third parties, including contract research organizations, or CROs, that conduct research, preclinical activities and clinical trials on our behalf as well as contract manufacturing organizations, or CMOs, that manufacture our product candidates for use in our preclinical and clinical trials;
- salaries, benefits and other related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses;
- costs of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- expenses related to compliance with regulatory requirements; and
- facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expense research and development costs as incurred. We recognize costs for certain development activities, such as clinical trials, based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or information provided to us by our vendors and our clinical investigative sites. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our financial statements as prepaid or accrued research and development expenses.

We typically use our employee and infrastructure resources across our development programs. We track outsourced development costs and payments made to our research partners by product candidate or development program, but we do not allocate personnel costs or other internal costs to specific development programs or product candidates.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase for the foreseeable future as we initiate clinical trials for ATRN-119 and other product candidates and continue to discover and develop additional product candidates.

We cannot determine with certainty the duration and costs of planned clinical trials of our product candidates or if, when, or to what extent we will generate revenue from the commercialization and sale of any our product candidates for which we obtain marketing approval. We may never succeed in obtaining marketing approval for any of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including:

- the scope, rate of progress, expense and results of any future clinical trials of our product candidates and other research and development activities that we may conduct;
- uncertainties in clinical trial design and patient enrollment rates;
- significant and changing government regulation and regulatory guidance;
- the timing and receipt of, and any limitations imposed by regulatory bodies on, any marketing approvals; and
- the expense of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the U.S. Food and Drug Administration, or FDA, or another regulatory authority in a foreign jurisdiction were to require us to conduct clinical trials beyond the scope we currently anticipate, or additional clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant trial delays due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development.

We have conducted multiple trials in hematologic malignancy including a Phase 3 trial of eprenetapopt with azacitidine for frontline treatment of *TP53* mutant MDS and which is supported by published data from two Phase 1b/2 investigator-initiated trials in the U.S. (Sallman et al., *J Clin Oncol*, 2021) and France (Cluzeau et al., *J Clin Oncol*, 2021); a Phase 2 trial of eprenetapopt with azacitidine for the post-allogeneic hematopoietic cell transplantation (allo-HCT) maintenance treatment of *TP53* mutant MDS/AML; a Phase 1/2 trial of eprenetapopt with venetoclax ± azacitidine for the treatment of frontline and relapsed/refractory AML; and a Phase 1 clinical trial for the treatment of *TP53* mutant chronic lymphoid leukemia (CLL) with either eprenetapopt with venetoclax and rituximab, or eprenetapopt with ibrutinib. In addition, we have also tested eprenetapopt with anti-PD-1 therapy in solid tumor patients through a Phase 1/2 clinical trial in advanced gastric, bladder and non-small cell lung cancers. We have also initiated a Phase 1 clinical trial testing an orally-dosed next-generation small molecule p53 reactivator, APR-548, as a potential therapeutic for MDS and AML. Enrollment in the first dosing cohort was completed and enrollment has been closed. We have assembled a management team with extensive experience in the discovery, development and commercialization of novel oncology drugs to support our mission of developing p53-reactivating therapies for cancer patients.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, finance, corporate and business development and administrative functions. General and administrative expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and consulting services; insurance costs; travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expect that our general and administrative expenses will increase in the future as a result of the costs associated with the Merger as well as the expansion of operations subsequent to the Merger, as we increase our headcount to support personnel in research and development and to support our operations generally, and as we increase our research and development activities and activities related to the potential commercialization of our product candidates. We also expect to continue to incur increased expenses associated with being a public company, including costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements; director and officer insurance costs; and investor and public relations costs.

Other income and expense

Interest income and expense

Interest income consists of income earned on our cash and cash equivalents. Interest expense consists of the interest component associated with our facility leases. Our interest income initially increased as our cash and cash equivalents were higher due to the cash proceeds received from our IPO. Such interest income is subsequently decreasing as (i) our cash balance decreases as we continue to fund operations and (ii) a decrease in interest rates.

Foreign currency gain

Our consolidated financial statements are presented in U.S. dollars, which is our reporting currency. The financial position and results of operations of our subsidiary Aprea AB is measured using the foreign subsidiary's local currency as the functional currency. Aprea AB cash accounts holding U.S. dollars are remeasured based upon the exchange rate at the date of remeasurement with the resulting gain or loss included in the consolidated statement of operations and comprehensive loss. Expenses of such subsidiaries have been translated into U.S. dollars at average exchange rates prevailing during the period. Assets and liabilities have been translated at the rates of exchange on the consolidated balance sheet date. The resulting translation gain and loss adjustments are recorded directly as a separate component of stockholders' equity and as other comprehensive loss on the consolidated statement of operations and comprehensive loss.

Income taxes

We have not recorded any U.S. federal, state or foreign income tax expense or benefits for the net losses we have incurred in any year, due to our uncertainty of realizing a benefit from those items. We have provided a valuation allowance for the full amount of the net deferred tax assets as, based on all available evidence, it is considered more likely than not that all the recorded deferred tax assets will not be realized in a future period.

Critical accounting policies and use of estimates

Our management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of our financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses in our financial statements. We base our estimates on historical experience, known trends and 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 values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in the notes to our financial statements, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our financial statements.

Accrued research and development expenses

As part of the process of preparing our financial statements, we are required to estimate our accrued research and development expenses at each balance sheet. This process involves reviewing open contract and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated costs incurred for the services when we have not yet been invoiced or otherwise notified of the actual costs. The majority of our service providers invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advanced payments. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and

circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees paid to:

- CROs in connection with performing research activities on our behalf and conducting preclinical studies and clinical trials on our behalf;
- investigative sites or other service providers in connection with clinical trials;
- vendors in connection with preclinical and clinical development activities; and
- vendors related to product manufacturing and development and distribution of preclinical and clinical supplies.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with CROs that conduct and manage preclinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing fees, we estimate the time period over which services will be performed, enrollment of patients, number of sites activated and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or amount of prepaid expense accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in us reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

Stock-based compensation

We measure stock options and other stock-based awards granted to employees and directors based on their fair value on the date of the grant and recognize compensation expense of those awards, over the requisite service period, which is generally the vesting period of the respective award. We apply the straight-line method of expense recognition to all awards with only service-based vesting conditions and apply the graded-vesting method to all awards with performance-based vesting conditions or to awards with both service-based and performance-based vesting conditions.

For stock-based awards granted to non-employees, compensation expense is recognized over the period during which services are rendered by such non-employees until completed in accordance with the FASB issued ASU No. 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting. The new standard largely aligns the accounting for share-based payment awards issued to employees and nonemployees by expanding the scope of ASC 718 to apply to nonemployee share-based transactions, as long as the transaction is not effectively a form of financing.

We estimate the fair value of each stock option grant on the date of grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield.

We also award restricted stock units (“RSUs”) to employees and directors. RSUs are generally subject to forfeiture if employment terminates prior to completion of the vesting restrictions. We expense the cost of the RSUs, which is determined to be the fair market value of the shares of common stock underlying the RSUs at the date of grant, ratably over the period during which the vesting restrictions lapse.

Emerging growth company and smaller reporting company status

We are an emerging growth company (EGC), as defined in the JOBS Act. Under this act, emerging growth companies are permitted to delay adopting new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We may remain classified as an EGC until the end of the fiscal year in which the fifth anniversary of our IPO occurs, although if the market value of our common stock that is held by non-affiliates exceeds $700 million as of the last trading day of the second quarter before that time or if we have annual gross revenues of $1.07 billion or more in any fiscal year, we would cease to be an EGC as of December 31 of the applicable year. We also would cease to be an EGC if we issue more than $1 billion of non-convertible debt over a three-year period.

We are also a "smaller reporting company," as such term is defined in Rule 12b-2 of the Exchange Act, meaning that the market value of our common stock held by non-affiliates is less than $700 million and our annual revenue is less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our common stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our common stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Results of operations

Comparison of the three months ended March 31, 2022 and 2021

	Three months ended March 31,		
	2022	2021	Change
Operating expenses:			
Research and development	$ 4,089,577	$ 6,763,848	$ (2,674,271)
General and administrative	3,985,298	3,425,833	559,465
Total operating expenses	8,074,875	10,189,681	(2,114,806)
Other income (expense):			
Interest income (expense), net	1,971	(1,057)	3,028
Foreign currency gain	136,211	521,983	(385,772)
Total other income	138,182	520,926	(382,744)
Net loss	$ (7,936,693)	$ (9,668,755)	$ 1,732,062

Research and development expenses

	Three months ended March 31,		
	2022	2021	Change
Eprenetapopt (APR-246)	$ 1,591,898	$ 3,803,173	$ (2,211,275)
Other early-stage development programs	755,392	1,116,000	(360,608)
Unallocated research and development expenses	1,742,287	1,844,675	(102,388)
Total research and development expenses	$ 4,089,577	$ 6,763,848	$ (2,674,271)

Research and development expenses for the three months ended March 31, 2022 were $4.1 million, compared to $6.8 million for the three months ended March 31, 2021. The overall decrease of $2.7 million was primarily due to the decreased activity in connection with the wrap up of the clinical trials of eprenetapopt as follows:

- a decrease of $0.4 million related to our pivotal Phase 3 clinical trial of eprenetapopt with azacitidine for frontline treatment of *TP53* mutant MDS which completed enrollment in Q2 2020;
- a decrease of $0.4 million in manufacturing expenses related to the pausing of scale-up of manufacturing activities for the anticipated commercial production of eprenetapopt;
- a decrease of $0.3 million related to our Phase 2 post-transplant MDS/AML clinical trial;
- a decrease of $0.3 million related to our Phase 1 AML clinical trial;
- a decrease of $0.3 million related to our Phase 1/2 solid tumor trial
- a decrease of $0.2 million related to the development of a Phase 1/2 clinical trial in relapsed/refractory *TP53* mutant chronic lymphoid leukemia (CLL) assessing eprenetapopt with venetoclax and rituximab and eprenetapopt with ibrutinib in order to further assess eprenetapopt in hematological malignancies;
- a decrease of $0.2 million related to the development of a Phase 1 dose-escalation clinical trial of APR-548, a next generation p53 reactivator being developed in an oral dosage form; and
- a decrease of $0.2 million related to pre-clinical activities.

General and administrative expenses

General and administrative expenses for the three months ended March 31, 2022 were $4.0 million, compared to $3.4 million for the three months ended March 31, 2021. The increase of $0.6 million was primarily related to

- an increase of $0.4 million of legal expense associated with general legal matters and ongoing SEC filings; and
- an increase of $0.2 million in non-cash stock-based compensation expense. The increase in non-cash stock-based compensation expense was primarily related to stock option and RSU grants made in March 2022 in connection with the Company's annual compensation review for employees and stock option and RSU grants made in June 2021 in connection with the Company's annual compensation review for its non-employee board members.

Other income and expense

Foreign currency gain for the three months ended March 31, 2022 was $0.1 million compared to a foreign currency gain of $0.5 million for the three months ended March 31, 2021. The decrease in the foreign currency loss of $0.4 million was primarily due to a weakening of the U.S. dollar against the Swedish Krona during the three months ended March 31, 2022 as compared to the three months ended March 31, 2021. Interest income, net for the three months ended March 31, 2022 consisted of interest income on our cash and cash equivalents, offset in part, by interest expense associated with our facility leases. Interest expense, net for the three months ended March 31, 2021 consisted of interest expense on our facility leases, offset in part, by interest income on our cash and cash equivalents.

Liquidity and capital resources

Since our inception, we have incurred significant losses on an aggregate basis. We have not yet commercialized any of our product candidates, which are in various phases of preclinical and clinical development, and we do not expect to generate revenue from sales of any products for several years, if at all. To date, we have financed our operations primarily through private placements of our preferred and common stock and the net proceeds received from the initial public offering (IPO) of our common stock. Through March 31, 2022, we had received net proceeds of $225.6 million from our sales of preferred and common stock. As of March 31, 2022, we had cash and cash equivalents of $47.6 million.

If our stockholders do not timely approve the conversion of our Series A Preferred Stock, then the holders of the our Series A Preferred Stock may elect to require that we settle their shares of Series A Preferred Stock for cash at a price per share equal to the fair value of the Series A Preferred Stock, as described in our certificate of designation relating to the Series A Preferred Stock. If we are forced to settle a significant amount of the Series A Preferred Stock, it could materially affect our results of operations, including raising a substantial doubt about the entity's ability to continue as a going concern within one year from the date of this quarterly report on Form 10-Q

Cash flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Three months ended March 31,	
	2022	2021
Net cash provided by (used in):		
Operating activities	$ (5,495,329)	$ (11,522,106)
Investing activities	--	--
Financing activities	--	--
Net decrease in cash and cash equivalents	$ (5,495,329)	$ (11,522,106)

Operating activities.

Cash used in operating activities resulted primarily from our net losses adjusted for non-cash charges and changes in components of working capital. Net cash used in operating activities was $5.5 million for the three months ended March 31, 2022 compared to $11.5 million for the three months ended March 31, 2021. The decrease in cash used in operating activities of $6.0 million was primarily attributable to a decrease in our net loss of $1.8 million, which was largely due to decreased clinical trial activity, and a decrease in operating assets and liabilities of $3.6 million, partially offset by an increase in non-cash stock-based compensation of $0.3 million.

Investing activities.

No cash was used in investing activities for the three months ended March 31, 2022 or 2021.

Financing activities.

No cash was provided by financing activities for the three months ended March 31, 2022 or 2021.

Funding requirements

We expect our expenses to increase in connection with our ongoing and planned development activities. In addition, we have incurred and continue to incur additional costs associated with operating as a public company. We expect that our expenses will increase substantially if and as we:

- initiate and conduct clinical trials and additional preclinical research for our product candidates;
- seek to identify and develop additional product candidates;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing, manufacturing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- require the manufacture of larger quantities of our product candidates for clinical development and potentially commercialization;

- maintain, expand, protect and enforce our intellectual property portfolio;
- acquire or in-license other drugs and technologies;
- defend against any claims of infringement, misappropriation or other violation of third-party intellectual property;
- hire and retain additional clinical, quality control and scientific personnel;
- build out new facilities or expand existing facilities to support our ongoing development activity;
- add operational, financial and management information systems and personnel, including personnel to support our drug development, any future commercialization efforts and our transition to a public company; and
- continue to operate as a public company.

As of March 31, 2022, we had cash and cash equivalents of $47.6 million. We believe that our existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect.

Because of the numerous risks and uncertainties associated with the development of our product candidates and programs and because the extent to which we may enter into collaborations with third parties for development of our product candidates is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of our planned clinical trials, drug discovery and preclinical research for our product candidates;
- the number of future product candidates that we pursue and their development requirements;
- the costs, timing and outcome of regulatory review of our product candidates;
- the extent to which we acquire or invest in assets or businesses, products and technologies, including entering into or maintaining licensing or collaboration arrangements for product candidates on favorable terms, and although we recently completed the Merger and may continue to explore such opportunities from time to time during the normal course of business, we currently have no commitments or agreements to complete any such transactions];
- the costs and timing of future commercialization activities, including drug sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval, to the extent that such sales, marketing, manufacturing and distribution are not the responsibility of any collaborator that we may have at such time;
- the amount of revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval;
- the impact of COVID-19 on the financial markets in general and on our business in particular;
- the costs of preparing, filing and prosecuting patent applications, maintaining, protecting and enforcing our intellectual property rights and defending intellectual property-related claims;
- our headcount growth and associated costs as we expand our business operations and our research and development activities; and

- the costs of operating as a public company.

Developing drug products, including conducting preclinical studies and clinical trials, is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval for any product candidates or generate revenue from the sale of any products for which we may obtain marketing approval. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interests in our securities may be diluted, and the terms of these securities may include liquidation or other preferences and anti-dilution protections that could adversely affect the rights of our common stockholders. Additional debt or preferred equity financing, if available, may involve agreements that include restrictive covenants that may limit our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends, which could adversely impact our ability to conduct our business, and may require the issuance of warrants, which could potentially dilute existing ownership interest.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technology, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or collaborations, strategic alliances or licensing arrangements with third parties when needed, we may be required to delay, limit, reduce and/or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual obligations and commitments

For additional details regarding our contractual obligations, see Note 3 “Leases” to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Shelf Registration Statement

On November 12, 2020, we filed a universal shelf registration statement with the SEC for the issuance of common stock, preferred stock, warrants, rights and debt securities and units up to an aggregate of $350.0 million. On November 30, 2020, the Shelf Registration Statement was declared effective by the SEC. The universal shelf registration statement includes an at-the-market offering program for the sale of up to $50.0 million of shares of our common stock. During the year ended December 31, 2021, we sold 366,773 shares of our common stock under the at-the-market offering program resulting in net proceeds of approximately $1.5 million. There were no sales of common stock under the at-the-market program during the three months ended March 31, 2022.

Recent accounting pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (“FASB”) or other standard setting bodies that we adopt as of the specified effective date.

We do not believe that any recently issued, but not yet effective accounting pronouncements, if adopted, would have a material impact on our financial statements.

Off-balance sheet arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Item 3. Quantitative and qualitative disclosures about market risk

Interest Rate Risk

We are exposed to market risk related changes in interest rates. As of March 31, 2022, our cash equivalents consisted of bank deposits and money market accounts. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, historical fluctuations in interest income have not been significant for us.

Foreign Currency Exchange Rate Risk

We face market risk to the extent that changes in foreign currency exchange rates affect our non-U.S. dollar functional currency foreign subsidiaries' revenues, expenses, assets and liabilities. The financial position and results of operations of our subsidiary Aprea AB is measured using the foreign subsidiary's local currency as the functional currency. Aprea AB cash accounts holding U.S. dollars are remeasured based upon the exchange rate at the date of remeasurement with the resulting gain or loss included in the consolidated statement of operations and comprehensive loss.

Our investments in foreign subsidiaries with a functional currency other than the U.S. dollar are generally considered long-term. In addition, we do not believe that we currently have any significant direct foreign exchange risk. Accordingly, we have not used any derivative financial instruments to hedge exposure to such risk.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2022. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, mean controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company on the reports that it files or submits under the Exchange Act is accumulated and communicated to management, including, our principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgement in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2022, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable level.

Changes in Internal Control

There has been no change in our internal control over financial reporting as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II: OTHER INFORMATION

Item 1. Legal Proceedings.

We are not currently subject to any material legal proceedings.

Item 1A. Risk Factors.

Our business is subject to substantial risks and uncertainties. Investing in our common stock involves a high degree of risk. You should carefully consider the risk factors below, the risk factors in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021, together with the information contained elsewhere in this Quarterly Report on Form 10-Q, including Part I, Item 1 "Financial Statements" and Part I, Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in our other public filings in evaluating our business, including our Annual Report on Form 10-K for the year ended December 31, 2021, which was filed with the SEC on March 15, 2022. Any of the risks and uncertainties described below and in our other filings with the SEC, either alone or taken together, could materially and adversely affect our business, financial condition, results of operations, prospects for growth, and the value of an investment in our common stock. In addition, these risks and uncertainties could cause actual results to differ materially from those expressed or implied by forward looking statements contained in this Form 10-Q (please read the Cautionary Note Regarding Forward-Looking Statements in this Form 10-Q).

Risks related to our financial position and need for additional capital

There is no guarantee that the Merger will increase stockholder value.

On May 16, 2022, we completed the Merger. We cannot guarantee that the Merger and the related transactions will not impair stockholder value or otherwise adversely affect our business. The acquisition poses significant integration challenges between our businesses and management teams which could result in management and business disruptions, any of which could harm our results of operation, business prospects, and impair the value of such acquisition to our stockholders. Additionally, our preclinical studies or clinical trials may not replicate or advance the results of the research programs and pre-clinical studies that were completed by Atrin prior to the Merger, which may also materially and adversely affect our business, results of operations and prospects.

We have incurred significant losses in each year since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since our inception, we have incurred significant losses on an aggregate basis. Our net loss was $7.9 million for the three months ended March 31, 2022, and $37.1 million, $53.5 million and $28.1 million for the years ended December 31, 2021, 2020 and 2019, respectively. Our accumulated deficit was $189.0 million and $181.1 million as of March 31, 2022 and December 31, 2021, respectively. We have not generated any revenue to date from sales of any drugs and have financed our operations principally through private placements of our preferred stock and the net proceeds received from the initial public offering (IPO) of our common stock. We have devoted substantially all of our efforts to research and development. One of our product candidates, eprenetapopt or APR-246, has been tested in clinical trials for solid tumors and hematologic malignancies. A second generation compound, APR-548, also entered clinical development, and we are developing other product candidates, currently in preclinical research, including ATRN-119 which we acquired during the Merger and expect will be in clinical development in the second half of 2022. In December 2020, we announced that our pivotal Phase 3 trial failed to meet its predefined primary endpoint of complete remission (CR) rate. As a result, we expect that it will be several years, if ever, before we have any product candidates ready for commercialization. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter.

To become and remain profitable, we must develop, obtain approval for and eventually commercialize a drug or drugs with significant market potential, either on our own or with a collaborator. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing and selling those drugs for which we may obtain marketing approval and establishing and managing any collaborations for the development, marketing and/or commercialization of our product candidates. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research

and development efforts, expand our business and/or continue our operations. A decline in the value of our company could also cause our stockholders to lose all or part of their investment.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for many years, if at all. If we are unable to obtain product approvals or generate significant commercial revenues, our business will be materially harmed.

Risks related to the discovery, development and commercialization of our product candidates

We have not tested ATRN-119 and ATRN-W1051 in clinical trials. The results of preclinical studies and early-stage clinical trials may not be predictive of future results in later studies or trials. Initial success in clinical trials may not be indicative of results obtained when these trials are completed or in later-stage clinical trials.

We have not tested ATRN-119 and ATRN-W1051 in clinical trials. The results of preclinical studies, whether or not conducted by us, may not be predictive of the results of clinical trials, and the results of any early-stage clinical trials we commence in the future may not be predictive of the results of the later-stage clinical trials. For example, even if successful, the results of our Phase 1 clinical trials of our product candidates ATRN-119 and ATRN-W1051 and other product candidates may not be predictive of the results of further clinical trials of these product candidates or any of our other product candidates. In addition, initial success in clinical trials may not be indicative of results obtained when such trials are completed on in later stage clinical trials. In particular, the small number of patients in our planned early clinical trials may make the results of these trials less predictive of the outcome of later clinical trials. Moreover, preclinical and clinical data often are susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless have failed to obtain marketing licensure of their product candidates. Our future clinical trials for ATRN-119 and ATRN-W1051 may not ultimately be successful or support further clinical development. There is a high failure rate for product candidates proceeding through clinical trials. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving encouraging results in earlier studies. Any such setbacks in our clinical development could materially harm our business, results of operations, financial condition and prospects.

Risks Related to Ownership of our Common Stock

Pursuant to the terms of the Merger Agreement, we are required to recommend that our stockholder approve the conversion of all outstanding shares of our Series A Preferred Stock into shares of our common stock. We cannot guarantee that our stockholders will approve this matter, and if they fail to do so our operations may be materially harmed.

Under the terms of the Merger Agreement, we agreed to call and hold a meeting of our stockholders to obtain the requisite approval for the conversion of all outstanding shares of Series A Preferred Stock issued in the Merger into shares of our common stock, as soon as practicable, and in any event, within 84 days after the date of the Merger, subject to certain exceptions. If such approval is not obtained at that meeting, to seek to obtain such approval at an annual or special stockholders meeting to be held at least every six months thereafter until such approval is obtained, which would be time consuming and costly. Additionally, if our stockholders do not timely approve the conversion of our Series A Preferred Stock, then the holders of our Series A Preferred Stock may be entitled to require us to settle their shares of Series A Preferred Stock for cash at a price per share equal to the fair value of the Series A Preferred Stock, as described in our certificate of designation relating to the Series A Preferred Stock. If we are forced to settle a significant amount of the Series A Preferred Stock, it could materially affect our results of operations, including raising a substantial doubt

about the entity's ability to continue as a going concern within one year from the date of this quarterly report on Form 10-Q.

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

Unregistered sales of equity securities

Other than as previously disclosed, we had no sales of unregistered equity securities during the period covered by these financial statements. Use of proceeds from registered securities.

On October 7, 2019, we completed our IPO, in which we sold 6,516,667 shares of common stock, $0.001 par value per share, which included the exercise in full by the underwriters of their option to purchase an additional 850,000 shares of common stock, at a price to the public of $15.00 per share. The offer and sale of the shares in the IPO was registered under the Securities Act pursuant to registration statements on Form S-1 (File No. 333-233662), which was filed with the SEC on September 6, 2019 and amended subsequently and declared effective on October 2, 2019, and Form S-1MEF, which was filed and declared effective with the SEC on October 2, 2019. The underwriters of the offering were J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC and RBC Capital Markets, LLC.

Our registration statements relating to the IPO registered common stock with a maximum aggregate offering price of up to $103,500,005. We raised approximately $90.9 million in net proceeds after deducting underwriting discounts and commissions of $6.8 million but before deducting other offering expenses. No offering expenses were paid directly or indirectly to any of our directors of officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates.

Through March 31, 2022, we have used approximately $43.3 million of the net proceeds from our IPO for matters described in our final IPO prospectus filed with the SEC on October 4, 2019, or our IPO prospectus.

Repurchases of equity securities by the issuer

None.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Given the recent acquisition of Atrin, the Company has determined to tentatively hold the Company's 2022 annual meeting of stockholders during the last week of July 2022 (the "Annual Meeting"), on a date and at a time and location to be announced. Pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), in order to be included in the Company's proxy statement and form of proxy for the Annual Meeting, shareholder proposals must be received at the Company's principal executive offices (Aprea Therapeutics, Inc., 535 Boylston Street, Boston, MA 02116, Attention: Secretary) no later than May 26, 2022 (which the Company believes is a reasonable time before the Company begins to print and send its proxy materials), and also must otherwise comply with the requirements set forth in Rule 14a-8.

Item 6. Exhibits.

Exhibit Index

Exhibit Number	Description of Document
31.1	Certification of the Registrant's Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Registrant's Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of the Registrant's Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of the Registrant's Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Schema Document.
101.CAL	XBRL Calculation Linkbase Document.
101.DEF	XBRL Definition Linkbase Document.
101.LAB	XBRL Label Linkbase Document.
101.PRE	XBRL Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

* The certifications furnished in Exhibit 32.1 and Exhibit 32.2 hereto are deemed to accompany this Quarterly Report and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: May 16, 2022

Aprea Therapeutics, Inc.

By: /s/ Christian S. Schade
Christian S. Schade
Chairman and Chief Executive Officer (Principal Executive Officer)

Date: May 16, 2022

By: /s/ Scott M. Coiante
Scott M. Coiante
Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF PERIODIC REPORT
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Christian S. Schade, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aprea Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 16, 2022

/s/ Christian S. Schade
Christian S. Schade
Chief Executive Officer

CERTIFICATION OF PERIODIC REPORT PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott M. Coiante, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aprea Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 16, 2022

/s/ Scott M. Coiante
Scott M. Coiante
Chief Financial Officer

STATEMENT OF CHIEF EXECUTIVE OFFICER OF
APREA THERAPEUTICS, INC.
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Aprea Therapeutics, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2022 as filed with the Securities and Exchange Commission (the "Report"), I, Christian S. Schade, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

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

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

Date: May 16, 2022

/s/ Christian S. Schade
Christian S. Schade
Chief Executive Officer

STATEMENT OF CHIEF ACCOUNTING OFFICER OF
APREA THERAPEUTICS, INC.
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Aprea Therapeutics, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2022 as filed with the Securities and Exchange Commission (the "Report"), I, Scott M. Coiante, Chief Accounting Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

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

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

Date: May 16, 2022

/s/ Scott M. Coiante
Scott M. Coiante
Chief Financial Officer