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

FORM 10-Q

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

For the quarterly period ended March 31, 2024

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

From the transition period from_____ to_____

Commission File Number: 001-40064

VIRPAX PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**82-1510982**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1055 Westlakes Drive, Suite 300
Berwyn, PA 19312
(Address of principal executive offices) (Zip Code)

(610) 727-4597
(Registrant's telephone number, including area code)

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

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.00001 Par Value Per Share	VRPX	The Nasdaq Capital Market

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

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

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

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

If an emerging growth company, indicate by check mark if registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards 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 1,171,233 shares of common stock, par value $0.00001 of Virpax Pharmaceuticals, Inc. issued and outstanding as of May 10, 2024.

VIRPAX PHARMACEUTICALS, INC.
QUARTERLY REPORT ON FORM 10-Q
FOR THE FISCAL PERIOD ENDED MARCH 31, 2024

INDEX

PART I
ITEM 1: FINANCIAL STATEMENTS
VIRPAX PHARMACEUTICALS, INC.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Virpax Pharmaceuticals, Inc.

Results of Review of Interim Financial Information

We have reviewed the condensed consolidated balance sheet of Virpax Pharmaceuticals, Inc. and Subsidiary (the "Company") as of March 31, 2024, and the related condensed consolidated statements of operations, changes in stockholders' (deficit) equity and cash flows for the three-month periods ended March 31, 2024 and 2023, and the related notes (collectively referred to as the "interim financial information"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial information for it to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the balance sheet of the Company as of December 31, 2023, and the related statements of operations, changes in stockholders' (deficit) equity, and cash flows for the year then ended (not presented herein); and in our report dated March 25, 2024, we expressed an unqualified opinion on those financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of December 31, 2023, is fairly stated, in all material respects, in relation to the balance sheet from which it has been derived.

Going Concern

Note 1 of the Company's audited consolidated financial statements as of December 31, 2023, and for the year then ended, discloses that the Company incurred continuing losses and obligations for significant cash payments in the next year. Our auditor's report on those financial statements includes an explanatory paragraph referring to the matters in Note 1 of those consolidated financial statements and indicates that these matters raised substantial doubt about the Company's ability to continue as a going concern. As indicated in Note 1 of the Company's unaudited interim financial information as of March 31, 2024, and for the three-months then ended, the Company is still incurring continuing losses and has obligations for significant cash payments in the next year. The accompanying interim financial information does not include any adjustments that might result from the outcome of this uncertainty.

Basis for Review Results

This financial information is the responsibility of the Company's management. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ EisnerAmper LLP

EISNERAMPER LLP
Iselin, New Jersey
May 13, 2024

VIRPAX PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

	March 31, 2024	December 31, 2023
ASSETS		
Current assets		
Cash	$ 1,866,131	$ 9,141,512
Prepaid expenses and other current assets	1,264,276	486,833
Total current assets	3,130,407	9,628,345
Total assets	$ 3,130,407	$ 9,628,345

LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities		
Accounts payable and accrued expenses	$ 1,843,791	$ 1,694,024
Litigation liability	2,500,000	6,000,000
Total current liabilities	4,343,791	7,694,024
Total liabilities	4,343,791	7,694,024
Commitments and contingencies		
Stockholders' (deficit) equity		
Preferred stock, par value $0.00001, 10,000,000 shares authorized; no shares issued and outstanding as of March 31, 2024, and December 31, 2023	—	—
Common stock, $0.00001 par value; 100,000,000 shares authorized, 1,171,233 shares issued and outstanding as of March 31, 2024, and December 31, 2023	12	12
Additional paid-in capital	61,551,163	61,478,444
Accumulated deficit	(62,764,559)	(59,544,135)
Total stockholders' (deficit) equity	(1,213,384)	1,934,321
Total liabilities and stockholders' (deficit) equity	$ 3,130,407	$ 9,628,345

See Notes to Condensed Consolidated Financial Statements

VIRPAX PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	For the Three Months Ended March 31,	
	2024	**2023**
OPERATING EXPENSES		
General and administrative (net of insurance reimbursement of $ 1,250,000 during the three months ended March 31, 2023 - See Note 5)	$ 1,689,182	$ 415,451
Research and development	1,613,275	1,235,614
Total operating expenses	3,302,457	1,651,065
Loss from operations	(3,302,457)	(1,651,065)
OTHER INCOME		
Other income	82,033	130,531
Loss before income taxes	(3,220,424)	(1,520,534)
Income taxes	—	—
Net loss	$ (3,220,424)	$ (1,520,534)
Basic and diluted net loss per share	$ (2.75)	$ (1.30)
Basic and diluted weighted average common stock outstanding	1,171,233	1,171,233

See Notes to Condensed Consolidated Financial Statements

VIRPAX PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY
(UNAUDITED)

	Common stock		Additional paid-in	Accumulated	Total stockholders'
	Shares	**Amount**	**capital**	**deficit**	**equity**
Balance at December 31, 2022	1,171,233	$ 12	$ 60,933,674	$ (44,354,627)	$ 16,579,059
Stock-based compensation	—	—	140,583	—	140,583
Net loss	—	—	—	(1,520,534)	(1,520,534)
Balance at March 31, 2023	1,171,233	$ 12	$ 61,074,257	$ (45,875,161)	$ 15,199,108

	Common stock		Additional paid-in	Accumulated	Total stockholders' (deficit)
	Shares	**Amount**	**capital**	**deficit**	**equity**
Balance at December 31, 2023	1,171,233	$ 12	$ 61,478,444	$ (59,544,135)	$ 1,934,321
Stock-based compensation	—	—	72,719	—	72,719
Net loss	—	—	—	(3,220,424)	(3,220,424)
Balance at March 31, 2024	1,171,233	$ 12	$ 61,551,163	$ (62,764,559)	$ (1,213,384)

See Notes to Condensed Consolidated Financial Statements

VIRPAX PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	For the Three Months Ended March 31,	
	2024	**2023**
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (3,220,424)	$ (1,520,534)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	72,719	140,583
Change in operating assets and liabilities:		
Prepaid expenses and other current assets	(777,443)	(828,065)
Accounts payable and accrued expenses	(304,184)	199,649
Litigation liability	(3,500,000)	—
Net cash used in operating activities	(7,729,332)	(2,008,367)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from insurance financing agreement	502,798	—
Payments to insurance financing agreement	(48,847)	—
Net cash provided by financing activities	453,951	—
Net change in cash	(7,275,381)	(2,008,367)
Cash, beginning of period	9,141,512	18,995,284
Cash, end of period	$ 1,866,131	$ 16,986,917

See Notes to Condensed Consolidated Financial Statements

VIRPAX PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

Note 1. Business, and Liquidity and Going Concern

Business

Virpax Pharmaceuticals, Inc. (“Virpax” or the “Company”) was incorporated on May 12, 2017, in the state of Delaware. Virpax is a preclinical stage pharmaceutical company focused on developing novel and proprietary drug-delivery systems, and drug-releasing technologies focused on advancing non-opioid and non-addictive pain management treatments and treatments for central nervous system (“CNS”) disorders to enhance patients’ quality of life.

On July 26, 2023, the Company formed Novvae Pharmaceuticals, Inc., a wholly owned subsidiary of the Company, in the state of Delaware, for the purpose of developing over the counter products. No activities with respect to Novvae Pharmaceuticals, Inc. have occurred since formation through the three months ended March 31, 2024.

Liquidity and Going Concern

The Company, since inception, has been engaged in organizational activities, including raising capital and research and development activities. The Company has not generated revenues and has not yet achieved profitable operations, nor has it ever generated positive cash flow from operations. There is no assurance that profitable operations, if achieved, could be sustained on a continuing basis. The Company is subject to those risks associated with any preclinical stage pharmaceutical company that has substantial expenditures for research and development. There can be no assurance that the Company’s research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees and consultants. Further, the Company’s future operations are dependent on the success of the Company’s efforts to raise additional capital.

The Company incurred a net loss of $3.2 million and $1.5 million for the three months ended March 31, 2024 and 2023, respectively, and had an accumulated deficit of $62.8 million as of March 31, 2024. The Company anticipates incurring additional losses until such time, if ever, that it can generate significant revenue from its product candidates currently in development. The Company’s primary source of capital has been the issuance of debt and equity securities.

As noted in Note 5. Commitments and Contingencies, the Company has paid $ 3.5 million to Sorrento Therapeutics, Inc. (“Sorrento”), and Scilex Pharmaceuticals Inc. (“Scilex” and together with Sorrento, the “Plaintiffs”) on March 18, 2024 pursuant to the terms of the settlement agreement that the Company entered into with the Plaintiffs on February 29, 2024 (the “Settlement Agreement”) and is obligated to pay an additional $2.5 million to the Plaintiffs on July 1, 2024. The Company will need to raise additional capital to fund operations, make the $2.5 million payment, and, in addition, fund other required payments, if any, to its former Chief Executive Officer. Due to the Company’s continuing losses and cash position, there exists substantial doubt about the Company’s ability to continue as a going concern. The accompanying financial statements do not include any adjustments to the carrying amounts and classification of assets, liabilities, and reported expenses that may be necessary if the Company were unable to continue as a going concern.

Substantial additional financing will be needed by the Company to fund its operations, including litigation costs, and to complete clinical development of and to commercially develop all of its product candidates. There is no assurance that such financing will be available when needed or on acceptable

terms. The Company also may be forced to curtail spending in research and development activities in order to conserve cash. If the Company does not obtain financing, the Company may have to liquidate assets, initiate bankruptcy proceedings, or cease operations.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation — The interim condensed consolidated financial statements included herein are unaudited. In the opinion of management, these statements include all adjustments, consisting only of normal, recurring adjustments, necessary for a fair presentation of the financial position of Virpax at March 31, 2024, and its results of operations and its cash flows for the three months ended March 31, 2024 and 2023. The interim results of operations are not necessarily indicative of the results to be expected for a full year. These interim unaudited financial statements should be read in conjunction with the audited financial statements for the years ended December 31, 2023 and 2022 and notes thereto. The accompanying financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("U.S. GAAP"). Any reference in these notes to applicable guidance is meant to refer to U.S. GAAP as found in the Accounting Standards Codification ("ASC") of the Financial Accounting Standards Board ("FASB"). Certain information and note disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been omitted pursuant to such rules and regulations of the Securities and Exchange Commission ("SEC") relating to interim financial statements. The December 31, 2023 balance sheet information was derived from the audited financial statements as of that date.

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 and liabilities, including disclosure of contingent assets and liabilities, at the date of the financial statements, and the reported amounts of expenses during the reporting period. Due to the uncertainty of factors surrounding the estimates or judgments used in the preparation of the financial statements, actual results may materially vary from these estimates.

Significant items subject to such estimates and assumptions include research and development accruals and prepaid expenses, contingent liabilities, and the valuation of stock-based compensation. It is at least reasonably possible that the estimate of the effect of a condition, situation or set of circumstances that existed at the date of the financial statements, which management considered in formulating its estimate, could change in the near term due to one or more future confirming events. Accordingly, the actual results could differ from those estimates. Accounting estimates used in the preparation of these financial statements change as new events occur, as more experience is acquired, as additional information is obtained and as the operating environment changes.

Basic and Diluted Loss per Share — Basic net loss per share is determined using the weighted average number of shares of common stock outstanding during each period. Diluted net loss per share includes the effect, if any, of the potential exercise or conversion of securities, such as stock options and warrants, which would result in the issuance of incremental shares of common stock. The computation of diluted net loss per share does not include the conversion of securities that would have an antidilutive effect. Equivalent common shares are excluded from the calculation of diluted net loss per share since their effect is antidilutive due to the net loss of the Company which consisted of the following:

	For the Three Months Ended March 31,	
	2024	2023
Equivalent common shares		
Stock options	230,264	188,078
Warrants	1,843	1,843

Cash — The Company deposits its cash with reputable financial institutions that are insured by the Federal Deposit Insurance Corporation ("FDIC"). At times, the Company's cash balances exceed the insured amounts provided by the FDIC. The Company's cash balances exceeded federally insured limits by approximately $1,600,000 and $8,900,000, as of March 31, 2024 and December 31, 2023, respectively.

Fair Value of Financial Instruments — The carrying amounts of the Company's financial instruments, including cash and accounts payable approximate fair value due to the short-term nature of those instruments.

Research and Development — Research and development costs are expensed as incurred. These expenses include the costs of proprietary efforts, as well as costs incurred in connection with certain licensing arrangements and external research and development expenses incurred under arrangements with third parties, such as contract research organizations ("CROs") and consultants. At the end of each reporting period, the Company compares the payments made to each service provider to the estimated progress towards completion of the related project. Factors that the Company considers in preparing these estimates include the status of preclinical studies, milestones achieved, and other criteria related to the efforts of its vendors. These estimates will be subject to change as additional information becomes available.

Stock-based Compensation — Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which is generally the vesting period. Forfeitures are recognized when they occur. The Company's policy permits the valuation of stock-based awards granted to non-employees to be measured at fair value at the grant date and records forfeitures as they occur.

Determining the appropriate fair value of share-based awards requires the use of subjective assumptions, including the expected life of the option and expected share price volatility. The Company uses the Black-Scholes option pricing model to value its option awards. The assumptions used in calculating the fair value of share-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. As a result, if factors change and management uses different assumptions, share-based compensation expense could be materially different for future awards.

The expected life of options was estimated using the simplified method, as the Company has no historical information to develop reasonable

expectations about future exercise patterns and post-vesting employment.

Income Taxes — The Company accounts for income taxes using the asset-and-liability method in accordance with ASC 740, Income Taxes ("ASC 740"). Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on the deferred tax assets and liabilities of a change in tax rate is recognized in the period that includes the enactment date. A valuation allowance is recorded if it is more-likely-than-not that some portion or all of the deferred tax assets will not be realized in future periods. Due to current year losses, the Company does not expect any current tax expenses during 2024 and will continue to have a full valuation allowance on its deferred tax assets.

The Company follows the guidance in ASC 740-10 in assessing uncertain tax positions. The standard applies to all tax positions and clarifies the recognition of tax benefits in the financial statements by providing for a two-step approach of recognition and measurement. The first step involves assessing whether the tax position is more likely than not to be sustained upon examination based upon its technical merits. The second step involves measurement of the amount to be recognized. Tax positions that meet the more-likely than-not threshold are measured at the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate finalization with the taxing authority. The Company recognizes the impact of an uncertain income tax position in the financial statements if it believes that the position is more likely than not to be sustained by the relevant taxing authority. The Company will recognize interest and penalties related to tax positions in income tax expense. As of March 31, 2024, the Company had no uncertain income tax positions.

Note 3. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following:

	March 31, 2024	December 31, 2023
Prepaid insurance	$ 677,073	$ 136,241
Prepaid research and development	505,897	283,370
Other prepaid expenses and current assets	81,306	67,222
	$ 1,264,276	$ 486,833

Note 4. Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consist of the following:

	March 31, 2024	December 31, 2023
Accrued payroll	$ 262,586	$ 493,780
Estimated separation expense	711,000	711,000
Insurance financing agreement	453,951	—
Research and development expenses	109,623	143,071
Legal expenses	169,749	97,089
Professional fees	123,607	230,627
Other	13,275	18,457
	$ 1,843,791	$ 1,694,024

Note 5. Commitments and Contingencies

Litigation

From time to time the Company is subject to claims by third parties under various legal disputes. The defense of such claims, or any adverse outcome relating to any such claims, could have a material adverse effect on the Company's liquidity, financial condition and cash flows.

On March 12, 2021, the Company and its former Chief Executive Officer, Anthony P. Mack (together, the "Defendants"), were named as defendants in a complaint (the "Complaint") filed by the Plaintiffs in the Court of Chancery of the State of Delaware captioned *Sorrento Therapeutics, Inc. and Scilex Pharmaceuticals Inc. v. Anthony Mack and Virpax Pharmaceuticals, Inc.*, Case No. 2021-0210-PAF (the "Action"). In the Complaint, Plaintiffs alleged (i) Mr. Mack breached a Restrictive Covenants Agreement, dated as of November 8, 2016, between himself and Sorrento (the "Restrictive Covenants Agreement"), (ii) the Company tortiously interfered with the Restrictive Covenants Agreement, and (iii) the Company tortiously interfered with Scilex's relationship with Mr. Mack. On May 7, 2021, Plaintiffs filed an Amended Complaint asserting the same three causes of action. On September 28, 2021, Plaintiffs filed a Second Amended Complaint asserting the same three causes of action as the prior complaints, as well as claims in which Plaintiffs alleged (i) Mr. Mack breached an Employment, Proprietary Information and Inventions Agreement, dated as of October 25, 2016, between himself and Sorrento (the "Employment Agreement"), (ii) the Company tortiously interfered with the Employment Agreement, (iii) Mr. Mack breached his fiduciary duties to Scilex, and (iv) the Company aided and abetted Mr. Mack's alleged breach of fiduciary duties to Scilex. On April 1, 2022, Plaintiffs filed a Third Amended Complaint. The Third Amended Complaint asserted the same causes of action as the Second Amended Complaint, as well as claims for (i) misappropriation of trade secrets by Defendants under Delaware law, and (ii) misappropriation of trade secrets by Defendants under California law. On April 18, 2022, Defendants filed answers to the Third Amended Complaint. Trial was held before Vice Chancellor Paul Fiorvanti from September 12 through September 14, 2022.

In March 2023, the Company collected $1,250,000 in reimbursement of legal costs pursuant to the Company's directors' and officers' insurance policy, and recorded it as a reduction of general and administrative expense on the condensed consolidated statements of operations. No further reimbursements are permitted from the insurance policy with respect to the litigation.

On September 1, 2023, the Chancery Court issued a memorandum opinion addressing liability in the Action and found in favor of Plaintiffs on all but three counts, which the Court found were waived. The Chancery Court found it proper to attribute Mr. Mack's knowledge and actions to the Company, which Mr. Mack used to effectuate the tortious interference and breach of fiduciary duty. The Chancery Court found that Mr. Mack breached the Restrictive Covenants Agreement he entered into with Sorrento by developing Epoladerm™ the Company is liable for tortious interference with contract; Plaintiffs were deemed to have waived their claims for breach of Mr. Mack's Employment Agreement and for tortious interference with prospective economic advantage; Mr. Mack breached his fiduciary duty of loyalty to Scilex; the Company aided and abetted Mr. Mack's breach of fiduciary duty; and Mr. Mack misappropriated certain Scilex trade secrets. The Court, however, stated that the question of an appropriate remedy must await further briefing.

On October 18, 2023, in accordance with the Chancery Court's supplemental briefing schedule, Plaintiffs filed their supplemental brief requesting the following relief: an injunction, in the first instance, enjoining Mr. Mack from having any relationship with Virpax for a period of 18 months and 27 days; enjoining Virpax from further developing or marketing Epoladerm for a period of 18 months and 27 days; alternatively, if these two injunction requests were not granted, Plaintiffs requested a judgement of joint and several liability against Mr. Mack and Virpax of $14,684,833. In addition to these requests for injunctive relief (or in, the alternative, damages), Plaintiffs sought a constructive trust over the revenues of Epoladerm, Probudur™ and Envelta™, or, in the alternative to a constructive trust, a royalty of 5 per cent of net sales of Epoladerm, 8-11 percent of net sales of Probudur and 7.5 percent of net sales of Envelta. In addition to the requests for injunctive relief, imposition of a constructive trust and/or royalties, Plaintiffs also requested additional damages, jointly and severally, against Mr. Mack and Virpax as follows: $1.3 million for misuse of Scilex resources, $ 6.7 million for misappropriation of trade secrets, $13.4 million for exemplary damage (trade secrets damage x2) and attorney's fees in an unspecified amount. Finally, Plaintiffs sought injunctive relief, enjoining Mr. Mack and Virpax from further accessing Scilex's trade secrets; requiring Mr. Mack and Virpax to return Scilex's trade secrets to Plaintiffs; and enjoining Mr. Mack and Virpax from marketing or selling any products derived from or incorporating Scilex's trade secrets.

On November 29, 2023, in accordance with the Chancery Court's supplemental briefing schedule, Defendants filed their supplement brief on damages rebutting Plaintiffs' damages analysis. Throughout the brief, Defendants argued Plaintiffs failed to meet their burden to prove damages, and as such, should be precluded from any damages award. However, given the Court's instruction, Defendants proffered a reasonable damages analysis as follows. As for the injunctive relief requested against Mr. Mack, the Company took no position, as the request was directed to Mr. Mack personally. Concerning Plaintiffs' request for an injunction against further development of Epoladerm for a period of 18 months and 27 days, Defendants opposed this request, arguing lack of irreparable harm, given Plaintiffs' request for money damages. Defendants also argued a constructive trust is inappropriate, given Plaintiffs failed to articulate the parameters of such relief and, additionally, the lack of sales for the drug candidates preclude such relief. In terms of the money damages related to the three drug candidates, Defendants proffered a reasonable royalty rate of 1-3% of the net profits of the drug candidates, as opposed to lump sum damages, as such rate would alleviate the speculative nature of the damages requested by Plaintiffs. As for the misappropriation of trade secrets request of $6.7 million, given the Court found only 5 of the proffered 1,182 documents were trade secrets, Defendants contend Plaintiffs should receive no monetary damages (given the reasonable royalty would encompass use of these documents and, alternatively, Defendants would return such documents). However, if the Court were to award damages, such damages should be pro rata for the documents, or roughly $28,382. And, finally, Defendants opposed the request for attorneys' fees and exemplary damages.

On December 21, 2023, Plaintiffs filed their reply brief on damages, generally reasserting their prior arguments on damages and rebutting Defendants' arguments. Plaintiffs also asserted they supported their damages claims with sufficient evidence.

On February 29, 2024, the Plaintiffs and the Company entered into a Settlement Agreement to fully resolve all claims by the Plaintiffs against the Company related to the Action, subject to the entry by the United States Bankruptcy Court for the Southern District of Texas, which is handling the Sorrento bankruptcy filing (the "Bankruptcy Court"), of an order approving the Settlement Agreement (the "Settlement Order"). On March 1, 2024, the Plaintiffs filed a motion to approve the Settlement Agreement and grant the related relief with the Bankruptcy Court. On March 14, 2024, the Bankruptcy Court entered an order approving the Settlement Agreement and on March 20, 2024 the Plaintiffs filed a Stipulation of Dismissal with the Chancery Court dismissing the Action.

VIRPAX PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

As settlement consideration, the Company agreed to pay Sorrento and Scilex a total cash payment of $ 6 million, of which $3.5 million was paid two business days after the date that the Settlement Order was entered by the Bankruptcy Court (the "Effective Date"), which payment was made on March 18, 2024 and the remaining $2.5 million is to be paid on or before July 1, 2024. Additionally, the Company agreed to pay to Plaintiffs royalties of 6% of annual net sales of products developed from drug candidates Epoladerm, Probudur and Envelta until the earlier of the expiration of the last-to-expire valid patent claim of such product and the expiration of any period of regulatory exclusivity for such product.

Pursuant to the Settlement Agreement, each of the Plaintiffs and the Company provided mutual releases of all claims as of the Effective Date, whether known or unknown, arising from any allegations set forth in the Action. Plaintiffs' release relates to claims against the Company only. Plaintiffs' release as to the Company was effective upon the Company's initial payment of $3.5 million, and the Company's release of the Plaintiffs was effective on the Effective Date.

The Plaintiffs can still pursue claims against Mr. Mack. The Company's Bylaws require the Company to "indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a director or officer of the Corporation, or, while a director or officer of the Corporation." Such indemnification, however, is limited to circumstances where the covered person "acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation…." Mr. Mack may attempt to claim he is entitled to indemnification, should the Court find him liable for damages in the Action. Given the findings in the Memorandum Opinion issued in the Action, the Company believes it has a strong position that Mr. Mack would not be entitled to indemnification. There is a risk, however, that a Court could find he is entitled to such indemnification. Additionally, per Section 7.6 of the Bylaws, the Company has been advancing Mr. Mack's attorneys' fees and costs for the Action. It is likely Mr. Mack will contend he is still entitled to advancement of any fees and/or costs for the Action going forward and may seek judicial intervention. However, as per the Bylaws, Mr. Mack is only entitled to advancement of expenses for indemnifiable actions. As noted above, given the Memorandum Opinion in the Action, the Company believes that it has a strong position that Mr. Mack is not entitled to indemnification, and therefore, not entitled to advancement of expenses. However, there is a risk that a Court could find that Mr. Mack is entitled to such advancement. Further, Mr. Mack may attempt to seek damages from the Company based on the Court's final judgment on damages under the theory of joint and several liability and seek contribution from the Company for any monetary judgment.

The Court is aware that Plaintiffs have settled with the Company and that the Settlement Agreement fully releases the Company from any claims or damages, the Plaintiff has against the Company, related to the Action. Given the Settlement Agreement does not release Mr. Mack from liability related

to the Action, the Court has requested supplemental briefing as to whether the Court can dismiss the Company from the lawsuit, as well as any claims Mr. Mack has against the Company arising from the Action. While the Company believes that any damages assessed may be awarded against Mr. Mack alone, Plaintiffs cannot seek additional damages from Virpax. However, there is a risk that Mr. Mack will still seek contribution from the Company for any damages claim arising from the Action and, there is a risk that the Court will rule in Mr. Mack's favor. Any such amounts for indemnification, contribution or other amounts awarded by the Court in Mr. Mack's favor could be significant.

No further reimbursements are permitted from our insurance policy with respect to the litigation. Accordingly, if Mr. Mack was successful in seeking indemnification from us, we would have to pay such amounts in cash which would further reduce our cash position.

As of December 31, 2023, the Company had accrued $ 6.0 million with respect to the litigation. After the initial payment of $ 3.5 million to the Plaintiffs, as of March 31, 2024, the Company had an accrual of $2.5 million with respect to the litigation.

Global Macroeconomic Environment

The global macroeconomic environment could be negatively affected by, among other things, resurgence of COVID-19 or other pandemics or epidemics, instability in global economic markets, increased U.S. trade tariffs and trade disputes with other countries, instability in the global credit markets, supply chain weaknesses, instability in the geopolitical environment as a result of the withdrawal of the United Kingdom from the European Union, the Russian invasion of Ukraine, the war in the Middle East, other political tensions, and foreign governmental debt concerns. Such challenges have caused, and may continue to cause, uncertainty and instability in local economies and in global financial markets. As a result, the Company and its third party CMOs, and CROs have and may in the future face disruptions in procuring items that are essential to the Company's research and development activities, including, for example, medical and laboratory supplies used in the Company's preclinical studies that are sourced from abroad or for which there are shortages, or potential difficulties recruiting patients, and may cause delays and difficulties with ongoing and planned preclinical and clinical trials. In addition, the licensor of Probudur that is conducting the development work for Probudur is located in Israel and could be impacted by the current Middle East crisis which could disrupt the development of Probudur. The extent to which the Company's financial condition, liquidity or results of operations are impacted is uncertain, and may negatively impact the Company's results of operations, financial condition, and liquidity the remainder of 2024 and potentially beyond.

Anthony Mack Resignation

On November 15, 2023, the Company accepted the resignation of Anthony P. Mack as Chief Executive Officer ("CEO") and Chair of the Board of Directors (the "Board") of the Company effective November 17, 2023. The resignation was not related to any disagreement with the Company on any matter relating to its operations, policies or practices. The Company is negotiating a separation agreement with Mr. Mack and has recorded estimated separation compensation related to the separation agreement of $711,000 which is included in accounts payable and accrued expenses as of March 31, 2024 and December 31, 2023. While the Company believes this estimated expense related to the separation agreement to be reasonably possible, actual results may materially vary from these estimates. As part of the consideration for the separation agreement, Mr. Mack will be expected to release, discharge and waive any rights to indemnification, and/or contribution related to the Action. The accrual does not include any amounts that the Company may be required to pay for indemnification claims or contribution that he may seek against the Company and such claims may be significant.

Note 6. Stockholders' Equity

Overview

Preferred Stock

The Company's current Certificate of Incorporation authorizes the issuance of preferred stock. The total number of shares of preferred stock which the Company is authorized to issue is 10,000,000, with a par value of $ 0.00001 per share. As of March 31, 2024 and December 31, 2023 there were no preferred shares issued or outstanding.

Common Stock

The Company's current Certificate of Incorporation authorizes the issuance of common stock. The total number of shares which the Company is authorized to issue is 100,000,000, with a par value of $ 0.00001 per share. As of March 31, 2024 and December 31, 2023, there were 1,171,233 common shares issued or outstanding.

On February 29, 2024, the Company filed a certificate of amendment to the Company's Amended and Restated Certificate of Incorporation for purposes of effecting a 1-for-10 reverse stock split (the "Reverse Split") of the Company's outstanding shares of common stock such that, effective upon March 1, 2024, the day after the filing thereof, every 10 issued and outstanding shares of the Company's common stock were subdivided and reclassified into one validly issued, fully paid and non-assessable share of the Company's common stock.

All share and per share amounts in the condensed consolidated financial statements have been retroactively adjusted for all periods presented to give effect to the Reverse Split, including reclassifying $105 equal to the reduction in par value to additional paid-in capital.

The Reverse Split affected all issued and outstanding shares of Common Stock, as well as Common Stock underlying stock options and warrants outstanding immediately prior to the effectiveness of the Reverse Split.

Warrants

There were warrants exercisable for 1,843 shares of the Company's common stock outstanding as of March 31, 2024. There were no warrants granted,

exercised, or forfeited during the three months ended March 31, 2024 and 2023. Warrants exercisable for 505 shares have an exercise price of $98.89 with expiration date of September 22, 2030. Warrants exercisable for 1,338 shares have an exercise price of $125.00 with an expiration date of February 16, 2026.

Note 7. Stock-Based Compensation

On May 20, 2017, the Company established the Virpax Pharmaceuticals, Inc. Amended and Restated 2017 Equity Incentive Plan (the "2017 Plan"). The Company's Board of Directors (the "Board"), acting through its Equity Incentive Plan Committee, had determined that it would be to the advantage and best interest of the Company and its stockholders to grant restricted stock awards to certain individuals as compensation to serve as an employee of the Company and as an incentive for increased efforts during such service.

On June 14, 2022, the Company established the Virpax Pharmaceuticals, Inc. 2022 Equity Incentive Plan (the "2022 Plan") and no new grants of awards will be made under the 2017 Plan and all new grants of awards will be made under the 2022 Plan. The 2022 Plan and 2017 Plan are administered by the Compensation Committee of the Board (the "Compensation Committee"); provided that the entire Board may act in lieu of the Compensation Committee on any matter. The 2022 Plan enables the Company to continue to provide equity and equity-based awards to eligible employees, officers, non-employee directors and other individual service providers by reserving 150,000 shares of the Company's common stock for issuance under the 2022 Plan, subject to a 2% annual increase (similar to the 2017 Plan) pursuant to an "evergreen" provision in the 2022 Plan (discussed further below). The Company believes that offering ownership interests in the Company is a key factor in retaining and recruiting employees, officers, non-employee directors and other individual service providers, and aligning and increasing their interests in the Company's success.

The 2022 Plan (which is summarized below) is substantially similar to the 2017 Plan, except for (i) the increase in shares of common stock reserved for issuance as discussed above, and (ii) the elimination of annual limitations on grants of awards to eligible individuals and certain other provisions which had been included in the 2017 Plan in order to satisfy (now repealed) provisions of Section 162(m) of the Internal Revenue Code of 1986, as amended.

The 2022 Plan reserves an aggregate of (i) 150,000 shares of the Company's common stock for the issuance of awards under the 2022 Plan (all of which may be granted as an Incentive Stock Option, or ISOs) plus (ii) an additional number of shares of common stock subject to outstanding awards under the 2017 Plan that become forfeited or canceled without payment or which are surrendered in payment of the exercise price and/or withholding taxes (collectively, the "Share Limit"). Pursuant to the 2022 Plan's "evergreen" provision, the Share Limit shall be cumulatively increased on January 1, 2023, and on each January 1 thereafter, by 2% of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or such lesser number of shares as determined by the Board. The 2022 Plan increased by 23,425 shares on January 1, 2024.

In applying the aggregate share limitation under the 2022 Plan, shares of common stock (i) subject to awards that are forfeited, cancelled, returned to the Company for failure to satisfy vesting requirements or otherwise forfeited, or terminated without payment being made thereunder and (ii) that are surrendered in payment or partial payment of the exercise price of an option or stock appreciation right or taxes required to be withheld with respect to the exercise of Stock Options or stock appreciation rights or in payment with respect to any other form of award are not counted and, therefore, may be made subject to new awards under the 2022 Plan. There are 85,358 shares available for future grant under the 2022 Plan at March 31, 2024.

Under the 2022 Plan, the Company may grant equity-based awards to individuals who are employees, officers, directors, or consultants of the Company. Options issued under the 2022 Plan will generally expire ten years from the date of grant and vest over a one-year to three-year period.

Total stock-based compensation, consists of the following:

	For the Three Months Ended March 31,	
	2024	2023
General and administrative expense	$ 51,581	$ 95,942
Research and development expense	21,138	44,641
	$ 72,719	$ 140,583

The fair value of option awards is estimated using the Black-Scholes option-pricing model. The exercise price of each award is generally not less than the per share fair value in effect as of that award date. The determination of fair value using the Black-Scholes model is affected by the Company's share fair value as well as assumptions regarding a number of complex and subjective variables, including expected price volatility, risk-free interest rate and projected employee share option exercise behaviors.

The Company estimates its expected volatility by using a combination of historical share price volatilities of similar companies within its industry. The risk-free interest rate assumption is based on observed interest rates for the appropriate term of the Company's options on a grant date. The expected option term assumption is estimated using the simplified method and is based on the mid-point between vest date and the remaining contractual term of the option, since the Company does not have sufficient exercise history to estimate expected term of its historical option awards. Options granted under the 2022 Plan during the three months ended March 31, 2024 and 2023 were valued using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the Three Months Ended March 31,	
	2024	2023
Expected term (years)	5.87	5.43
Risk-free interest rate	3.99%	3.66%
Expected volatility	124.83%	110.00%
Expected dividend yield	0.00%	0.00%

The following is a summary of stock option activity under the Company's stock option Plans for the three months ended March 31, 2024:

	Number of Shares	Weighted Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value

Options outstanding at January 1, 2024	175,686	34.60	—	—
Forfeited	11,422	70.16	—	—
Exercised	—	—	—	—
Granted	66,000	3.18		
Options outstanding at March 31, 2024	230,264	23.83	8.3	71,346
Options exercisable at March 31, 2024	115,597	40.49	7.3	—

The weighted-average grant-date fair value of stock options granted during the three months ended March 31, 2024 and 2023 was $ 2.83 and $6.10, respectively.

As of March 31, 2024, there was $435,742 of total time-based unrecognized compensation costs related to unvested stock options. These costs are expected to be recognized over a weighted average period of 1.3 years.

Note 8. Research and Development and License Agreements

MedPharm Limited

Research and Option Agreement

On April 11, 2017, the Company entered into a research and option agreement, as amended on May 30, 2018 (the "MedPharm Research and Option Agreement"), with MedPharm Limited, a company organized and existing under the laws of the United Kingdom ("MedPharm"), pursuant to which MedPharm granted the Company an option to obtain an exclusive, world-wide, royalty bearing license to use certain technology developed by MedPharm. Pursuant to the MedPharm Research and Option Agreement, MedPharm will conduct certain research and development of proprietary formulations incorporating certain MedPharm technologies and certain of the Company's proprietary molecules.

Under the MedPharm Research and Option Agreement, MedPharm granted the Company an option (the "MedPharm Option") to obtain an exclusive (even to MedPharm), worldwide, sub-licensable (through multiple tiers), royalty bearing, irrevocable license to research, develop, market, commercialize, and sell any product utilizing MedPharm's spray formulation technology which is the result of the activities performed under the MedPharm Research and Option Agreement, subject to the Company's entry into a definitive license agreement with MedPharm. In order to exercise the MedPharm Option, the Company must provide MedPharm with written notice of such exercise before the end of the Option Period (as defined in the MedPharm Research and Option Agreement). The Option Period is subject to extension upon mutual agreement with MedPharm.

Pursuant to the MedPharm Research and Option Agreement, the Company has a right of first refusal with respect to any license or commercial arrangement involving any Licensed Intellectual Property (as defined in the MedPharm Research and Option Agreement) in combination with any Virpax Molecule (as defined in the MedPharm Research and Option Agreement). In the event that MedPharm reaches an agreement with respect to a license or other commercial arrangement that involves technology or molecules covered by the right of first refusal, the Company has ten business days from the date of notice to notify MedPharm of its intention to exercise the right of first refusal and the Company's intention to match the financial terms of the other license or commercial arrangement.

License Agreement

On June 6, 2017, as a result of the Company's exercise of the MedPharm Option under the MedPharm Research and Option Agreement, the Company entered into a license agreement, as amended on September 2, 2017 and October 31, 2017 (the "MedPharm License Agreement"), with MedPharm for the exclusive global rights to discover, develop, make, sell, market, and otherwise commercialize any pharmaceutical composition or preparation (in any and all dosage forms) in final form containing one or more compounds, including Diclofenac Epolamine ("Epoladerm"), that was developed, manufactured or commercialized utilizing MedPharm's spray formulation technology ("MedPharm Product"), to be used for any and all uses in humans (including all diagnostic, therapeutic and preventative uses). Under the MedPharm License Agreement, the Company is required to make future milestone and royalty payments to MedPharm. The Company is obligated to make aggregate milestone payments to MedPharm of up to GBP 1.150 million upon the achievement of specified development milestones (payable in Great British Pounds). Additional milestone payments are due upon the achievement of certain development and commercial milestones achieved outside the United States, payable on a country-by-country basis. Royalty payments must be paid to MedPharm in an amount equal to a single-digit percentage of net sales of all MedPharm Product sold by the Company during the royalty term in the territory. Royalties shall be payable, on a country-by-country basis, during the period of time commencing on the first commercial sale and ending upon the expiration of the last-to-expire patent claim on the licensed product, which is set to expire on December 4, 2028. Each party has the right to terminate the agreement in its entirety upon written notice to the other party if such other party is in material breach of the agreement and has not cured such breach within ninety (90) days after notice from the terminating party indicating the nature of such breach.

LipoCureRx, Ltd.

On March 19, 2018, the Company entered into a license and sublicense agreement (the "Lipocure Agreement") with LipocureRx, Ltd., a company organized and existing under the laws of Israel ("Lipocure"), for the sole and exclusive global license and sub-license rights to discover, develop, make, sell, market, and otherwise commercialize bupivacaine liposome, in injectable gel or suspension ("Licensed Compound") or any pharmaceutical

composition or preparation (in any and all dosage forms) in final form, including any combination product, containing a Licensed Compound ("Licensed Product"), including Probudur. Under the Lipocure Agreement, the Company was required to pay an upfront fee upon signing of $150,000 and is required to make future milestone and royalty payments to Lipocure. The Company is obligated to make aggregate milestone payments of up to $19.8 million upon the achievement of specified development and commercial milestones. Lipocure met the development milestone of $300,000 in the third quarter of 2023 for successfully completing a formulation for the Licensed Product. The Company paid $150,000 in the third quarter of 2023 and paid the balance in the fourth quarter of 2023. Royalty payments must be paid in an amount equal to a single digit to low double-digit percentage of annual net sales of royalty qualifying products, subject to certain adjustments. Royalties shall be payable during the period of time, on a country-by-country basis, commencing on the first commercial sale and ending upon the expiration of the last-to-expire patent claim on the licensed product, which is set to expire on July 24, 2030. Each party has the right to terminate the agreement in its entirety upon written notice to the other party if such other party is in material breach of the agreement and has not cured such breach within ninety (90) days after notice from the terminating party indicating the nature of such breach.

Nanomerics Ltd.

Nanomerics Collaboration Agreement

On April 11, 2019, the Company entered into an exclusive collaboration and license agreement, as amended (the "Nanomerics Collaboration Agreement"), with Nanomerics Ltd., a company organized and existing under the laws of United Kingdom ("Nanomerics"), for the exclusive world-wide license to develop and commercialize products, including Envelta, which contain hydrophilic neuropeptide Leucin5-Enkephalin and an amphiphile compound which is quaternary ammonium palmitoyl glycol chitosan, to engage in a collaborative program utilizing Nanomerics' knowledge, skills and expertise in the clinical development of products and to attract external funding for such development. The Nanomerics Collaboration Agreement was also amended to include a program for the pre-clinical development of a product for post-traumatic stress disorder ("PTSD").

Under the Nanomerics Collaboration Agreement, the Company is required to make royalty payments equal to a single digit percentage of annual net sales of royalty qualifying products. The Company is also required to make aggregate milestone payments of up to $103 million upon the achievement of specified development and commercial milestones, and sublicense fees for any sublicense relationships it enters into subsequent to the Nanomerics Collaboration Agreement. The Company's obligation to pay royalties, on a country-by-country basis, shall commence on the date of first commercial sale of its licensed products and shall expire with respect to each separate licensed product, on the latest to occur of (a) the tenth (10th) anniversary of the first commercial sale of the first licensed product; (b) the expiration date of the last to expire of any valid claim (patent is set to expire on November 3, 2034); and, (c) the date upon which a generic product has been on the market for a period of no fewer than ninety (90) days. The Company has the right to terminate the agreement upon 180 days' prior written notice to Nanomerics. Upon termination, the Company shall assign to Nanomerics all its right title and interest in all results other than results specific to (a) the Device (as defined in the Nanomerics Collaboration Agreement), including its manufacture or use; and (b) the Technology, but excluding any clinical Results relating to the Compound or Licensed Products (all terms as defined in the Nanomerics Collaboration Agreement).

Nanomerics License Agreement (AnQlar™)

On August 7, 2020, the Company entered into a collaboration and license agreement with Nanomerics (the "Nanomerics License Agreement") for the exclusive North American license to develop and commercialize a High-Density Molecular Masking Spray (AnQlar) as an anti-viral barrier to prevent or reduce the risk or the intensity of viral infections in humans. Under the Nanomerics License Agreement, we were required to make royalty payments and milestone payments upon the achievement of specified development and commercial milestones, and sublicense fees for any sublicense relationships we enter into subsequent to the Nanomerics License Agreement (any patent that issues from the currently filed provisional patent application would expire on August 24, 2041).

On March 9, 2022, the Company entered into an Amended and Restated Collaboration and License Agreement with Nanomerics (the "Amended Nanomerics License Agreement") which amended and restated the August 7, 2020, Nanomerics License Agreement and expanded the Company's North American rights for AnQlar to include exclusive global rights to develop and commercialize AnQlar as a viral barrier to prevent or reduce the risk or the intensity of viral infections. The Amended Nanomerics License Agreement provides for payments up to $5.5 million upon the achievement of specified development milestones and profit share payments equal to between 30% to 40% of certain profits (as set forth in the Amended Nanomerics License Agreement), payable to Nanomerics upon the achievement of specified commercial milestones. The profit share payments are triggered upon determination by the FDA that AnQlar may be marketed as an Over-the-Counter product in the United States. In the event the profit share payments are not triggered as defined above, the Company would be obligated to pay royalties within a range of 5% to 15% of annual net sales of royalty qualifying products and commercial milestones on a worldwide basis amounting to aggregate milestone payments of up to $112.5 million upon the achievement of these commercial milestones. The Amended Nanomerics License Agreement also provides for additional aggregate milestone payments totaling $999,999 upon first receipt of regulatory approval for a licensed product in the European Union, Asia/Pacific region and South America/Middle East region. The Company's obligation to pay royalties, on a country-by-country basis, shall commence on the date of first commercial sale of its licensed products and shall expire with respect to each separate licensed product, on the latest to occur of (a) the tenth (10th) anniversary of the first commercial sale of the first licensed product; (b) the expiration date of the last to expire of any valid claim; and, (c) the date upon which a generic product has been on the market for a period of no fewer than ninety (90) days. The Company has the right to terminate the Nanomerics License Agreement upon sixty (60) days' prior written notice to Nanomerics. Upon termination, the Company shall assign to Nanomerics all its rights, title and interest in all of its results. Nanomerics has the right to terminate the agreement upon sixty (60) days' prior written notice. In consideration for entering into this Amended Nanomerics License Agreement, the Company paid Nanomerics a nonrefundable fee of $1,500,000 in March 2022.

Nanomerics License Agreement (NobrXiol™, formerly VRP324)

On September 17, 2021, we entered into a collaboration and license agreement with Nanomerics (the "Nanomerics License Agreement - NobrXiol") for the exclusive worldwide license to develop and commercialize an investigational formulation delivered via the nasal route to enhance pharmaceutical-grade cannabidiol ("CBD") transport to the brain to potentially treat seizures associated with tuberous sclerosis complex ("TSC"), Lennox-Gastaut syndrome and Dravet syndrome in patients one year of age and older. Under the Nanomerics License Agreement – NobrXiol, we are required to make royalty payments within a range of 5% to 15% of annual net sales of royalty qualifying products. Our obligation to pay royalties, on a country-by-country basis, shall commence on the date of first commercial sale of licensed products (as defined in the Nanomerics License Agreement – NobrXiol) and shall expire with respect to each separate licensed product, on the latest to occur of (a) the fifteen (15th) anniversary of the first commercial sale of the first licensed product; (b) the expiration date of the last to expire of any valid claim; and, (c) the date upon which a generic product has been on the market for a period of no fewer than ninety (90) days. We paid an upfront milestone payment upon signing of $200,000 and are required to make future milestone and royalty payments of up to $41 million upon the achievement of specified development and commercial milestones, and sublicense fees for any sublicense relationships we enter into subsequent to the Nanomerics License Agreement – NobrXiol (any patent that issues from the currently filed PCT patent application would expire on September 9, 2043). We have the right to terminate the Nanomerics License Agreement – NobrXiol upon one hundred and eighty (180) days' prior written notice to Nanomerics. Upon termination, we shall assign to Nanomerics all its rights, title and interest in all of its

results. Nanomerics has the right to terminate the agreement upon thirty (30) days' prior written notice if we conclude in writing to Nanomerics that the study aim has not been achieved or we notify Nanomerics that we have decided against proceeding with a Phase 3 Clinical trial.

On April 21, 2022, the Company notified Nanomerics that the study aim of demonstrating the ability of Nanomerics platform technology delivering CBD to the brain via nasal administration in an animal model was met. Pursuant to the Nanomerics License Agreement - NobrXiol, the Company paid and incurred a milestone payment of $500,000 upon meeting this study aim in April 2022.

Research Agreements

Yissum

On January 31, 2023, the Company entered into an Agreement for Rendering of Research Services with Yissum Research Development Company of the Hebrew University of Jerusalem Ltd ("Yissum") (the "January 2023 Yissum Research Agreement") on substantially similar terms and conditions as detailed above under the June 2021 Yissum Research Agreement. Under the January 2023 Yissum Research Agreement, the Company agreed to provide funding for research and development studies to be performed by researchers at Hebrew University related to the optimization of the Liposomal Bupivacaine formulation (Probudur) and to increase stability for manufacturing purposes. In consideration for the research services, the Company agreed to pay research service fees of $326,000 in four equal quarterly installments ($ 81,500 per calendar quarter).

On January 1, 2024, the Company entered into an Agreement for Rendering of Research Services with Yissum (the "January 2024 Yissum Research Agreement") for additional work on formulation, method development, animal studies and patent related work. In consideration for the research services, the Company will pay research service fees of $343,467 in four equal quarterly installments. The Company may terminate the agreement at any time and will only be responsible to pay Yissum for work performed through the date of termination.

The Company incurred $85,867 and $81,500 in research and development expenses, respectively, for the three months ended March 31, 2024 and 2023 associated with these Yissum agreements.

Lipocure

On February 1, 2023, the Company entered into an Agreement for Rendering of Research Services with Lipocure on similar terms and conditions and for similar services - optimization of the Liposomal Bupivacaine formulation, manufacture of pre-clinical batches including batches for stability testing, animal studies, toxicology, and patent related work. In consideration for the research services, the Company agreed to pay research service fees of $1,286,000 in four equal quarterly installments ($321,500 per calendar quarter), as well as reasonable pass-through expenses.

On March 27, 2024, the Company entered into an Agreement for Rendering of Research Services (the "January 2024 Lipocure Research Agreement") with Lipocure for optimization of the Liposomal Bupivacaine formulation, manufacture of pre-clinical and GMP batches including method development, stability testing, animal studies and toxicology work. In consideration for the research services, the Company will pay research service fees of $1,845,260 in twelve equal installments. The Company may terminate the agreement at any time upon 30 days written notice and shall be only responsible to pay Lipocure for work performed through the date of such notice and any non-cancellable contract cost.

The Company incurred $711,315 and $270,000 in research and development expenses, respectively, for the three months ended March 31, 2024 and 2023 associated with these Lipocure agreements.

NCATS-NIH Cooperative Research and Development Agreement

On August 25, 2020, the Company entered into a Cooperative Research and Development Agreement ("CRADA") with the National Center for Advancing Translational Science ("NCATS"). This collaboration is for the continued development of the Company's product candidate, Envelta, an intranasal peptide, to control severe pain, including post cancer pain. The term of the CRADA is for a period of four years from May 6, 2020 (the effective date of the agreement) and can be terminated by both parties at any time by mutual written consent. In addition, either party may unilaterally terminate the CRADA at any time by providing written notice of at least sixty (60) days before the desired termination date. The agreement provides for studies that are focused on the pre-clinical characterization of Envelta as a novel analgesic to control severe pain, including post cancer pain, and for studies to further develop Envelta through IND enabling studies. There are certain development "Go/No Go" provisions within the agreement whereby, if certain events occur, or do not occur, NCATS may terminate the CRADA. These "No GO" provisions include: i) lack of efficacy in all animal pain models, ii) no reliable and sensitive bioanalytical method can be developed, iii) manufacturing failure due to inherent process scalability issues, iv) unacceptable toxicity or safety profile to enable clinical dosing, and v) inability to manufacture the Envelta dosage form. As of May 10, 2024 the Company has not received any Go/No Go notifications from NCATS.

With respect to NCATS rights to any invention made solely by an NCATS employee(s) or made jointly by an NCATS employee(s) and the Company's employee(s), the CRADA grants to the Company an exclusive option to elect an exclusive or nonexclusive commercialization license. For inventions owned solely by NCATS or jointly by NCATS and the Company, and licensed pursuant to the Company's option, the Company must grant to NCATS a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the United States government. For inventions made solely by an employee of the Company, it grants to the United States government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the United States government for research or other government purposes.

U.S Army Institute of Surgical Research

On April 28, 2022, the Company entered into a CRADA with the U.S. Army Institute of Surgical Research (USAISR) to evaluate Probudur as a potential

novel analgesic for battlefield injury-induced pain solution. The research project will evaluate the analgesic effectiveness and physiologic effects of Probudur. The initial term of this agreement was to expire on September 30, 2023 unless it was revised by mutual written agreement. The CRADA was modified and signed on October 10, 2023, and extended the terms of the agreement until September 2024. No funding is being provided by either party to the other party under the agreement. Each party is responsible for funding its own work performed and other activities undertaken for the research project under this agreement. The parties may elect to terminate this agreement, or portions thereof, at any time by mutual consent. Either party may unilaterally terminate this entire agreement at any time by giving the other party written notice, not less than thirty (30) days prior to the desired termination date.

Note 9. Subsequent Events

The Company has evaluated subsequent events from the balance sheet date through May 13, 2024.

Nasdaq

On April 2, 2024, the Company received a notification letter from the Listing Qualifications Staff of the Nasdaq Stock Market LLC ("Nasdaq") notifying the Company that its stockholders' equity as reported in its Annual Report on Form 10-K for the period ended December 31, 2023 (the "Annual Report"), did not meet the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market. Nasdaq Listing Rule 5550(b)(1) requires companies listed on the Nasdaq Capital Market to maintain stockholders' equity of at least $2,500,000. In the Annual Report, the Company reported stockholders' equity of $1,934,321, which is below the minimum stockholders' equity required for continued listing pursuant to Nasdaq Listing Rule 5550(b)(1). Additionally, as of the date of the letter, the Company did not meet the alternative Nasdaq continued listing standards under Nasdaq Listing Rules.

This notice of noncompliance has had no immediate impact on the continued listing or trading of the Company's common stock on The Nasdaq Capital Market, which will continue to be listed and traded on Nasdaq, subject to its compliance with the other continued listing requirements. Nasdaq has given the Company until May 17, 2024 to submit to Nasdaq a plan to regain compliance. If its plan is accepted, Nasdaq may grant an extension of up to 180 calendar days from the date of Nasdaq's letter to evidence compliance.

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

The following discussion and analysis of our financial condition and results of operations should be read together with our financial statements and the related notes and the other financial information included elsewhere in this Quarterly Report on Form 10-Q (the "Quarterly Report"). This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this Quarterly Report, particularly those under "Risk Factors" and those identified under Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly report contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential" and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our lack of operating history;
- the expectation that we will incur significant operating losses for the foreseeable future and will need significant additional capital;
- the requirement to fund the remaining portion of $2.5 million pursuant to the Settlement Agreement as well as the ultimate resolution of any potential litigation with our former Chief Executive Officer (See Risk Factors and Legal Proceedings);
- our current and future capital requirements to support our development and commercialization efforts for our product candidates and our ability to satisfy our capital needs;
- our ability to raise additional capital;
- our dependence on our product candidates, which are still in preclinical or early stages of clinical development;
- our, or that of our third-party manufacturers, ability to manufacture current good manufacturing practice ("cGMP") quantities of our product candidates as required for preclinical and clinical trials and, subsequently, our ability to manufacture commercial quantities of our product candidates;

- our ability to complete required clinical trials for our product candidates and obtain approval from the US Food and Drug Administration ("FDA") or other regulatory agencies in different jurisdictions;
- our lack of a sales and marketing organization and our ability to commercialize our product candidates if we obtain regulatory approval;
- our dependence on third parties to manufacture our product candidates;
- our reliance on third-party contract research organizations ("CROs") to conduct our clinical trials;

- our ability to maintain or protect the validity of our intellectual property;
- our ability to internally develop new inventions and intellectual property;
- interpretations of current laws and the passages of future laws;
- acceptance of our business model by investors;
- the accuracy of our estimates regarding expenses and capital requirements; and
- our ability to maintain our Nasdaq listing; and
- our ability to adequately support organizational and business growth.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in our forward-looking statements. Please see "Risk Factors" for additional risks which could adversely impact our business and financial performance.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report, or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

Overview

Company Overview

We are a preclinical-stage pharmaceutical company focused on developing novel and proprietary drug delivery systems across various pain indications in order to enhance compliance and optimize each product candidate in our pipeline. Our drug-delivery systems and drug-releasing technologies being developed are focused on advancing non-opioid and non-addictive pain management treatments and treatments for central nervous system ("CNS") disorders to enhance patients' quality of life.

We have exclusive global rights to the following proprietary patented technologies: (i) Molecular Envelope Technology ("MET") that uses an intranasal device to deliver enkephalin to control severe pain, including post cancer pain (Envelta) and PTSD, (ii) Injectable "local anesthetic" Liposomal Technology for postoperative pain management (Probudur), and (iii) Investigational formulation delivered via the nasal route to enhance pharmaceutical-grade cannabidiol ("CBD") transport to the brain ("NobrXiol", formerly VRP324) to potentially treat seizures associated with Lennox-Gastaut syndrome and Dravet syndrome in patients two years of age and older. We are also exploring value creative opportunities for our two nonprescription product candidates: AnQlar, which is being developed as a 24 hour prophylactic viral barrier to inhibit viral infection by influenza or SARS-CoV-2, and Epoladerm, which is a topical diclofenac epolamine metered dosed spray film formulation being developed to manage pain associated with osteoarthritis.

Probudur

Probudur, our lead product candidate, uses a unique liposomal delivery platform that incorporates large multi-lamellar vesicles ("LMLVs") to encapsulate high doses of bupivacaine. Early preclinical animal studies produced data that demonstrated that Probudur provided significantly improved onset and duration of analgesic effect as compared to a similar product on the market. The animal studies were conducted by infiltrating the surgical/wound site with Probudur. Probudur's prolonged effectiveness is due to the formulation's ability to keep the local anesthetic at the surgical/wound site for an extended period of time (at least 96 hours). Four nonclinical trials were conducted using three animal models.

We plan to market Probudur to general surgeons, anesthesiologists, and orthopedic surgeons within the $35 billion postoperative pain management market. Based on head-to-head preclinical studies compared to an approved liposomal bupivacaine formulation, if used appropriately, we believe Probudur has the potential to eliminate or significantly reduce the need to prescribe opioids for postoperative pain relief. As a result of our pre-IND meeting, the FDA has indicated that it is reasonable for us to pursue a 505(b)(2) NDA for Probudur. There can be no assurance that we will be successful in securing regulatory approval under the 505(b)(2) pathway or that we will be successful in mitigating risks associated with the clinical development of this product candidate. The development of the Probudur formulation was successfully completed in the third quarter of 2023. We anticipate relevant provisional patents will be filed in the first half of 2024. Lipocure RX, Ltd. ("Lipocure") is currently in the process of working through the scale up of Probudur to a larger batch size. IND enabling studies have started. The FDA minutes indicated that we are to initiate our clinical studies in targeted patient populations following the completion of our nonclinical toxicity studies. We anticipate filing an IND in 2024; however, we may need to adjust this timeline if Lipocure, a company based in Israel, becomes unable to continue development work due to the war in the Middle East.

Yissum Research Agreements

On January 31, 2023, we entered into an Agreement for Rendering of Research Services with Yissum Research Development Company of the Hebrew University of Jerusalem Ltd ("Yissum") (the "January 2023 Yissum Research Agreement") on substantially similar terms and conditions as detailed above under the June 2021 Yissum Research Agreement. Under the January 2023 Yissum Research Agreement, we will provide funding for research and development studies to be performed by researchers at Hebrew University related to the optimization of the Liposomal Bupivacaine formulation and to increase stability for manufacturing purposes. We may terminate the agreement at any time and will only be responsible to pay Yissum for work performed through the date of termination. In consideration for the research services, we agreed to pay aggregate research service fees of $326,000 in four equal quarterly installments ($81,500 per calendar quarter).

On January 1, 2024, we entered into an Agreement for Rendering of Research Services with Yissum (the "January 2024 Yissum Research Agreement") for additional work on formulation, method development, animal studies and patent related work. In consideration for the research services, we will pay research service fees of $343,467 in four equal quarterly installments. We may terminate the agreement at any time and will only be responsible to pay Yissum for work performed through the date of termination.

We incurred $85,867 and $81,500 in research and development expenses, respectively, for the three months ended March 31, 2024 and 2023 associated with these Yissum agreements.

Lipocure Research Agreements

On February 1, 2023, we entered into an Agreement for Rendering of Research Services with Lipocure RX, Ltd ("Lipocure") on similar terms and conditions and for similar services - optimization of the Liposomal Bupivacaine formulation, manufacture of pre-clinical batches including batches for stability testing, animal studies, toxicology, and patent related work. In consideration for the research services, we agreed to pay research service fees of $1,286,000 in four equal quarterly installments ($321,500 per calendar quarter), as well as reasonable pass-through expenses.

On March 27, 2024, we entered into an Agreement for Rendering of Research Services (the "January 2024 Lipocure Research Agreement") with Lipocure for optimization of the Liposomal Bupivacaine formulation, manufacture of pre-clinical and GMP batches including method development, stability testing, animal studies and toxicology work. In consideration for the research services, we will pay research service fees of $1,845,260 in twelve equal installments. We may terminate the agreement at any time upon 30 days written notice and shall be only responsible to pay Lipocure for work performed through the date of such notice and any non-cancellable contract cost.

We incurred $711,315 and $270,000 in research and development expenses associated with these agreements for the three months ended March 31, 2024 and 2023, respectively.

Envelta

We believe Envelta may provide prescribers, regulators, and patients alternative non-addictive treatment options to control severe pain, including post cancer pain and potentially manage symptoms related to PTSD. We plan to utilize these delivery technologies to selectively develop a portfolio of patented NCE candidates for commercialization. Four planned in vitro studies were successfully completed as well as the in vivo acute efficacy studies.

In February 2022, we completed a 14-day intranasal dose range finding toxicity study of Envelta in rats with a 14-day recovery period which showed no adverse related findings in hematology, coagulation and serum chemistry data, with no treatment related toxicology findings or mortality noted. A 14-day intranasal dose range finding toxicity study of Envelta in dogs with a 14-day recovery period was also conducted and showed no adverse toxicologic findings. The preclinical studies under the CRADA are expected to continue over the next nine months. We anticipate filing an IND in 2024. However, the IND timing is subject to risks in manufacturing of the MET/LENK, COA for GMP material and filling of cartridges for a 28-day dog bridging study and may be extended into 2025.

NobrXiol

NobrXiol is being developed by Nanomerics Ltd., a company organized and existing under the laws of the United Kingdom ("Nanomerics"). Nanomerics as an investigational formulation delivered via the nasal route that uses MET as its delivery system to enhance Cannabidiol ("CBD") transport to the brain. CBD acts on CB receptors of the endocannabinoid system in the brain, which regulates neuronal excitability response relevant to the pathophysiology of epilepsy. NobrXiol uses a proprietary preassembled delivery device that holds single use cartridges that are sealed in inert gas and pressurized for easy activation that can be self-administered. Activation of the cartridge propels the CBD powder formulation into the nose and to the brain via the olfactory nerve/bulb. This product candidate will be formulated to potentially treat seizures associated with Lennox-Gastaut and Dravet syndromes in patients two years of age and older. Lennox-Gastaut syndrome and Dravet syndrome are rare central nervous system diseases considered serious epileptic encephalopathies that cause different types of epileptic seizures as well as cognitive and behavioral changes and are generally resistant to treatment. The FDA previously granted Orphan Drug Designation for another drug for the treatment of the same diseases. Therefore, NobrXiol may also be able to receive Orphan Drug Designation for the treatment of Lennox-Gastaut syndrome LGS and Dravet syndrome DS in pediatric patients. NobrXiol has many potential competitive advantages including fast onset of action, reduced peripheral side effects, no liver first-pass metabolism, avoidance of drug to drug interactions, no gastrointestinal interaction, and the potential to eliminate enzymatic deactivation. On September 17, 2021, we entered into a collaboration and license agreement with Nanomerics (the "Nanomerics License Agreement - NobrXiol") for the exclusive worldwide license to develop and commercialize the product candidate. We plan to target our marketing and selling efforts to healthcare practitioners specializing in epilepsy within the $16.5 billion market for managing epilepsy in pediatrics and adults. We have engaged Destum Partners to search for a Global Animal Healthcare sublicensing partner.

On April 21, 2022, we notified Nanomerics that the study aim of demonstrating the ability of Nanomerics platform technology delivering CBD to the brain via nasal administration in an animal model was met. Pursuant to the Nanomerics License Agreement - NobrXiol, we paid a milestone payment of $500,000 upon meeting this study aim in April 2022. We submitted the pre-IND Briefing Book with the FDA in October 2022 and received comments back from the FDA in December 2022. Upon our review of the FDA minutes, we now believe we have the appropriate guidance from the FDA to move forward with our overall development plan for this new product candidate and the ability to identify any need for further data prior to submitting the IND. Our current plan is to utilize potential grant awards to fund the development of NobrXiol through to an IND filing while we focus our cash resources on more immediate needs with regard to our lead product candidates. In April, 2023, we entered into a participant agreement with the National Institute of Neurological Disorders and Stroke ("NINDS"), a part of NIH, to supply our product candidate compounds to the NINDS's Epilepsy Therapy Screening Program ("ETSP"). NINDS ETSP will test our compounds in epilepsy animal models to determine whether our compounds have activity against resistant epilepsy and related disorders.

Epoladerm

We believe the Topical Spray Film Delivery Technology, which we refer to as Epoladerm, could provide a pathway for additional proprietary spray formulations with strong adhesion and accessibility properties upon application, especially around active joints and contoured body surfaces to manage pain associated with osteoarthritis. Osteoarthritis, which we believe to be a significant global market opportunity for us, is a painful condition that results in reduced physical function and quality of life and increased risk of all-cause mortality. A recent large meta-analysis on pharmacologic treatments for knee and hip osteoarthritis indicated that topical diclofenac had the largest effect on pain and physical function with a better safety profile than oral diclofenac. Based on this meta-analysis it was recommended that topical diclofenac should be considered as a first-line pharmacological treatment for knee osteoarthritis. Pursuant to a Research and Option Agreement with MedPharm Limited (the "MedPharm Research and Option Agreement"), MedPharm will conduct certain research and development activities of proprietary formulations incorporating certain MedPharm technologies and certain of our proprietary molecules. Under the agreement, we were granted an option to obtain an exclusive, world-wide, sub-licensable, royalty bearing, irrevocable license to research, develop, market, use, commercialize, and sell any product utilizing MedPharm's spray formulation technology.

As a result of our pre-investigational new drug ("IND") meeting, we believe it is reasonable for us to pursue a 505(b)(2) or OTC accelerated new drug application ("NDA") for Epoladerm. There can be no assurance that we will be successful in securing regulatory approval or mitigating risks associated with the clinical development of this product candidate.

We made the determination to delay our First-in-Human study investigating Epoladerm for pain associated with chronic osteoarthritis due to: (i) a delay in procuring the active pharmaceutical ingredient necessary for the drug product candidate, (ii) delays related to supply chain disruptions, and (iii) an

extensive review of the formulation and potential degradants resulting in MedPharm exploring alternatives to mitigate the formation of the potential degradant. This additional formulation work and permeation testing may enable the patent coverage of this asset to be extended until at least 2042 and provide an Over the Counter ("OTC") pathway. MedPharm is anticipated to complete the formulation work and permeation testing in the first half of 2024.We are seeking to license out or partner this asset as we continue to focus our efforts on our prescription drug pipeline.

AnQlar

AnQlar is a high-density molecular masking spray we plan to develop as a viral barrier to potentially reduce the risk or the intensity of respiratory viral infections in humans. We intend for this formulation to be delivered using a metered dose nasal spray to propel the high-density molecular formulation into the nose and potentially prevent viral binding to epithelial cells in the nasal cavity and the upper respiratory tract, potentially reducing respiratory related infections.

We submitted and received a written pre-IND meeting response from the FDA for AnQlar. In its pre-IND response, the FDA provided guidance on our pathway to pursue prophylactic treatment against SARS-CoV-2 and influenza for daily use as an Over the Counter ("OTC") product. We believe the results of the pre-IND response support further research on AnQlar as a once daily intranasal prophylactic treatment of viral infections. The FDA has indicated that, upon successful completion of all necessary preclinical and clinical trials, we may pursue an NDA drug approval with the Office of Non-Prescription Drugs.

We have engaged a previous Deputy Director of the Division of Antivirals (DAV), Center for Drug Evaluation and Research (CDER), Food and Drug Administration (FDA) to assist with the design of the optimal clinical trial to facilitate an efficient regulatory and development timeline for AnQlar. We have also entered into a commercial manufacturing and supply agreement with Seqens, an integrated global leader in pharmaceutical solutions with 24 manufacturing sites worldwide and seven research and development facilities throughout the U.S. and Europe. The agreement with Seqens provides for both the supply material for our clinical studies as well as the long-term commercial supply of AnQlar. We submitted and received a written pre-investigational new drug ("pre-IND") response from the FDA for AnQlar. In its pre-IND response, the FDA provided guidance on our pathway to pursue prophylactic treatment against SARS-CoV-2 and influenza for daily use as an OTC product. We believe the results of the pre-IND response support further research on AnQlar as a once daily intranasal prophylactic treatment of viral infections. The FDA has indicated that, upon successful completion of all necessary preclinical and clinical trials, we may pursue an NDA drug approval with the Office of Non-Prescription Drugs.

We recently conducted an initial review of the results from a preclinical virology study conducted by one of our CROs where we were evaluating the viral barrier properties of AnQlar™ versus two variants of the SARS CoV-2 virus. This review conducted by our external consultants indicates that the test article (AnQlar) supports the proposed mechanism of action for a prophylactic viral barrier product candidate, which was the outcome we were expecting.

We are seeking to license out or partner this asset as we continue to focus our efforts on our prescription drug pipeline.

We continue to seek opportunities to exploit our product portfolio through licensing and other strategic transactions to further develop our drug product candidates. This includes seeking potential partners in further developing our drug product candidates and responding to inquiries of interest we have received concerning our product portfolio.

Recent Developments

Litigation

On February 29, 2024, we entered into a Settlement Agreement and Mutual Release (the "Settlement Agreement") with Sorrento Therapeutics, Inc. ("Sorrento"), and Scilex Pharmaceuticals Inc. ("Scilex" and together with Sorrento, the "Plaintiffs") to fully resolve all issues related to the litigation with Plaintiffs captioned *Sorrento Therapeutics, Inc. and Scilex Pharmaceuticals Inc. v. Anthony Mack and Virpax Pharmaceuticals, Inc* ., Case No. 2021-0210-PAF (the "Action"), subject to the entry by the United States Bankruptcy Court for the Southern District of Texas, which is handling the Sorrento bankruptcy filing (the "Bankruptcy Court"), of an order approving the Settlement Agreement (the "Settlement Order"). On March 1, 2024, the Plaintiffs filed a motion to approve the Settlement Agreement and grant the related relief with the Bankruptcy Court. On March 14, 2024, the Bankruptcy Court entered an order approving the Settlement Agreement and on March 20, 2024 the Plaintiffs filed a Stipulation of Dismissal with the Chancery Court dismissing the Action. See "Part II—Item 1—Legal Proceedings" for additional information regarding the litigation with the Plaintiffs.

As settlement consideration, we agreed to pay Sorrento and Scilex a total cash payment of $6 million, of which $3.5 million was paid two business days after the date that the Settlement Order was entered by the Bankruptcy Court (the "Effective Date"), which payment was made on March 18, 2024, and the remaining $2.5 million is to be paid on or before July 1, 2024. Additionally, we agreed to pay to Plaintiffs royalties of 6% of annual net sales of products developed from drug candidates Epoladerm, Probudur and Envelta until the earlier of the expiration of the last-to-expire valid patent claim of such product and the expiration of any period of regulatory exclusivity for such product.

Pursuant to the Settlement Agreement, each of the Plaintiffs and we provided mutual releases of all claims as of the Effective Date, whether known or unknown, arising from any allegations set forth in the Action. Plaintiffs' release relates to claims against us only. Plaintiffs' release as to us was effective upon our initial payment of $3.5 million, and our release of the Plaintiffs was effective on the Effective Date.

Critical Accounting Estimates

We have based our management's discussion and analysis of financial condition and results of operations on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements as well as the reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate our estimates and judgments, including those related to clinical development expenses and stock-based compensation. We base our estimates on historical experience and on various other factors that we believe to be appropriate under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully discussed in Note 2 to our audited financial statements contained within our Annual Report on Form 10-K for the year ended December 31, 2023, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our financial statements.

Research and Development ("R&D") Expenses

We rely on third parties to conduct our preclinical studies and to provide services, including data management, statistical analysis and electronic compilation. Once our clinical trials begin, at the end of each reporting period, we will compare the payments made to each service provider to the estimated progress towards completion of the related project. Factors that we will consider in preparing these estimates include the number of patients enrolled in studies, milestones achieved, and other criteria related to the efforts of our vendors. These estimates will be subject to change as additional information becomes available. Depending on the timing of payments to vendors and estimated services provided, we will record net prepaid or accrued expenses related to these costs.

Stock-Based Compensation

Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which is generally the vesting period. Our policy permits the valuation of stock-based awards granted to non-employees to be measured at fair value at the grant date rather than on an accelerated attribution basis over the vesting period.

Determining the appropriate fair value of share-based awards requires the use of subjective assumptions, including the excepted life of the option and expected share price volatility. We use the Black-Scholes option pricing model to value its option awards. The assumptions used in calculating the fair value of share-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. As a result, if factors change and management uses different assumptions, share-based compensation expense could be materially different for future awards. See Note 7 to condensed consolidated financial statements.

Legal and Other Contingencies

The outcomes of legal proceedings and claims brought against us and other loss contingencies are subject to significant uncertainty. We accrue a charge against income when our management determines that it is probable that an asset has been impaired, or a liability has been incurred and the amount of loss can be reasonably estimated. In determining the appropriate accounting for loss contingencies, we consider the likelihood of loss or impairment of an asset or the incurrence of a liability, as well as our ability to reasonably estimate the amount of loss. We regularly evaluate current information available to us to determine whether an accrual should be established or adjusted. Estimating the probability that a loss will occur and estimating the amount of a loss, or a range of loss involves significant judgment. As noted in Note 5 Commitments and Contingencies, we have accrued an estimated $711,000 for payments to be made to our former Chief Executive Officer with respect to his separation from employment with us. While the Company believes this estimated expense related to the separation agreement to be reasonably possible, actual results may materially vary from these estimates. As part of the consideration for the separation agreement, Mr. Mack will be expected to release, discharge and waive any rights to indemnification, and/or contribution related to the Action. The accrual does not include any amounts that we may be required to pay for indemnification claims or contribution that he may seek against us and such claims may be significant.

Results of Operations

Three Months Ended March 31, 2024 and 2023

Operating expenses:

	Three Months Ended March 31,		Change	
	2024	2023	Dollars	Percentage
Operating expenses:				
General and administrative	$ 1,689,182	$ 415,451	$ 1,273,731	307%
Research and development	1,613,275	1,235,614	377,661	31%
Total operating expenses	$ 3,302,457	$ 1,651,065	$ 1,651,392	100%

General and administrative expenses increased by $1.3 million, or 307%, to $1.7 million for the three months ended March 31, 2024, from $0.4 million for the three months ended March 31, 2023. The primary reason for the increase in general and administrative costs was a reimbursement of legal defense costs of $1.25 million during the three months ended March 31, 2023 pursuant to our Directors and Officers' insurance policy, which offset general and administrative expenses.

Research and development expenses increased by $0.4 million, or 31%, to $1.6 million for the three months ended March 31, 2024, from $1.2 million for the three months ended March 31, 2023. The increase was primarily attributable to $0.8 million related to Probudur preclinical activities, which is our lead asset. This was partially offset by a decrease in AnQlar preclinical activities of $0.3 million, and a decrease in NobrXiol preclinical activities of $0.1 million.

The following table presents R&D expenses tracked on a program-by-program basis for the three months ended March 31, 2024 and 2023:

	Three Months Ended March 31,	
	2024	2023
Program expenses:		
Envelta	$ 70,250	$ 69,529
Probudur	1,348,139	516,714
Epoladerm	109,972	152,054
AnQlar	53,243	320,938
NobrXiol	10,533	131,738
Total program expenses	1,592,137	1,190,973
Unallocated expenses:		
Stock based compensation	21,138	44,641
Total other research and development expense	21,138	44,641

Total research and development expenses	$ 1,613,275	$ 1,235,614

Other income:

	Three Months Ended March 31,		Change	
	2024	2023	Dollars	Percentage
Other income:				
Other income	$ 82,033	$ 130,531	$ (48,498)	(37)%
Total other income:	$ 82,033	$ 130,531	$ (48,498)	(37)%

Other income decreased by $48,498 primarily due to interest income declining due to lower cash balances.

Liquidity and Capital Resources

As of March 31, 2024 and December 31, 2023

Capital Resources

	March 31, 2024	December 31, 2023	Change Dollars	Change Percentage
Current assets	$ 3,130,407	$ 9,628,345	(6,497,938)	(67)%
Current liabilities	$ 4,343,791	$ 7,694,024	(3,350,233)	(44)%
Working (deficit) capital	$ (1,213,384)	$ 1,934,321	(3,147,705)	(163)%

As of March 31, 2024, our principal source of liquidity was our cash, which totaled approximately $1.9 million. As of April 30, 2024, our cash position totaled approximately $1.4 million and will not be sufficient to sustain operations through the second quarter of 2024. On March 18, 2024, we paid $3.5 million to the Plaintiffs pursuant to the terms of the Settlement Agreement and we are obligated to pay an additional $2.5 million to the Plaintiffs on July 1, 2024. We need to raise additional capital to fund operations and make the $2.5 million payment. We accrued $0.7 million for estimated payments to be made to our former Chief Executive Officer with respect to his separation from employment with us, which does not include accrual for any potential indemnification or contribution claims that he may seek from us that are related to the Action, which may be significant.

We have not generated revenues and have not yet achieved profitable operations, nor have we ever generated positive cash flow from operations. There is no assurance that profitable operations, if achieved, could be sustained on a continuing basis. We are subject to those risks associated with any preclinical stage pharmaceutical company that has substantial expenditures for research and development. There can be no assurance that our research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable.

To continue to grow our business over the longer term, we plan to commit substantial resources to research and development, pre-clinical and clinical trials of our product candidates, other operations and potential product acquisitions and in-licensing.

Cash Flows

Three Months Ended March 31, 2024 and 2023

The following table summarizes our cash flows from operating activities:

	For the Three Months Ended March 31,	
	2024	2023
Statement of cash flow data:		
Net cash used in operating activities	$ (7,729,332)	$ (2,008,367)
Net cash provided by financing activities	453,951	—
Net change in cash	$ (7,275,381)	$ (2,008,367)

Operating Activities

For the three months ended March 31, 2024, cash used in operations was $7.7 million compared to $2.0 million for the three months ended March 31, 2023. The increase in cash used in operations was primarily the result of the payment of $3.5 million related to the legal settlement in March of 2024 and the increase in our net loss as we collected $1.25 million in reimbursement of legal costs pursuant to our directors' and officers' insurance in March of 2023. No further reimbursements are permitted from the insurance policy with respect to the litigation which has been settled.

Financing Activities

For the three months ended March 31, 2024, cash provided by financing activities was $0.5 million, this was due to the insurance financing agreement we entered into during the quarter.

Future Capital Requirements

It is difficult to predict our spending for our product candidates prior to obtaining FDA approval. Moreover, changing circumstances may cause us to expend cash significantly faster than we currently anticipate, and we may need to spend more cash than currently expected because of circumstances beyond our control. Notwithstanding the difficulty in predicting and/or estimating our spending, we need to raise substantial capital in order to sustain operations as well as continuing to develop our products.

We have no current understandings, agreements or commitments for any material acquisitions or licenses of any products, businesses or technologies. We will need to raise substantial additional capital in order to engage in any of these types of transactions.

We expect to continue to incur substantial additional operating losses for at least the next several years as we continue to develop our product candidates and seek marketing approval and, subject to obtaining such approval, the eventual commercialization of our product candidates. If we obtain marketing approval for our product candidates, we will incur significant sales, marketing and outsourced manufacturing expenses. In addition, we expect to incur additional expenses to add operational, financial and information systems and personnel, including personnel to support our planned product commercialization efforts. We also expect to continue to incur significant costs to comply with corporate governance, internal controls and similar requirements applicable to us as a public company.

Our future use of operating cash and capital requirements will depend on many forward-looking factors, including the following:

- the requirement to fund the remaining portion of $2.5 million pursuant to the Settlement Agreement as well as the ultimate resolution of any potential litigation with our former Chief Executive Officer (See “Legal and Other Contingencies” and “Liquidity and Capital Resources” above);
- initiation, progress, timing, costs and results of clinical trials for our product candidates;
- the clinical development plans we establish for each product candidate;
- the number and characteristics of product candidates that we develop or may in-license;
- the terms of any collaboration agreements we may choose to execute;
- the outcome, timing and cost of meeting regulatory requirements established by the U.S. Drug Enforcement Administration, the FDA, the European Medicines Agency or other comparable foreign regulatory authorities;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us;
- costs and timing of the implementation of commercial scale manufacturing activities; and
- the cost of establishing, or outsourcing, sales, marketing, and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own.

Our capital resources are currently insufficient to meet our future operating and capital requirements, and therefore we must finance our cash needs through public or private equity offerings, debt financings, collaboration and licensing arrangements or other financing alternatives. We have no committed external sources of funds. Additional equity or debt financing or collaboration and licensing arrangements may not be available on acceptable terms, if at all.

If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Debt financing, if available, would result in increased fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our technologies, future revenue streams or product candidates or to grant licenses on terms that may not be favorable to us.

Liquidity

Since inception, we have been engaged in organizational activities, including raising capital and research and development activities. We have not generated revenues and have not yet achieved profitable operations, nor have we ever generated positive cash flow from operations. There is no assurance that profitable operations, if achieved, could be sustained on a continuing basis. We are subject to those risks associated with any preclinical stage pharmaceutical company that has substantial expenditures for research and development. There can be no assurance that our research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, we operate in an environment of rapid technological change and is largely dependent on the services of its employees and consultants. Further, our future operations are dependent on the success of our efforts to raise substantial additional capital.

We incurred a net loss of $3.2 million and $1.5 million for the three months ended March 31, 2024 and 2023, respectively, and had an accumulated deficit of $62.8 million as of March 31, 2024. We anticipate incurring additional losses until such time, if ever, that we can generate significant revenue from our product candidates currently in development. Our primary source of capital has been the issuance of debt and equity securities.

At March 31, 2024, we had cash of approximately $1.9 million. As of April 30, 2024, our cash position totaled approximately $1.4 million and will not be sufficient to sustain operations through the second quarter of 2024. On March 18, 2024, we have paid the Plaintiff $3.5 million pursuant to the terms of the Settlement Agreement, and we are obligated to pay an additional $2.5 million on or before July 1, 2024. We accrued $0.7 million for estimated payments to be made to our former Chief Executive Officer with respect to his separation from employment with us. The accrual does not include any amounts that we may be required to pay for indemnification claims or contribution that he may seek against us, which may be significant. We need to raise additional capital to fund operations and make the $2.5 million payment. Due to our continuing losses and our cash position, there exists substantial doubt about our ability to continue as a going concern. The accompanying financial statements do not include any adjustments to the carrying amounts and classification of assets, liabilities, and reported expenses that may be necessary if we were unable to continue as a going concern.

Our future operations are dependent on the success of our efforts to raise substantial additional capital. We currently do not have sufficient capital to fund the commercialization of any of our product candidates. Additional financing will be needed by us to fund our operations, including making payment of the $2.5 million pursuant to the Settlement Agreement, and to complete clinical development of and to commercially develop our product candidates. There is no assurance that such financing will be available when needed or on acceptable terms. Our ability to raise capital to date has been impacted by the uncertainty of both our likelihood of being able to complete clinical development of any of our products or to commercially develop our products, as well as the amount of damages we may be required to pay and it is likely that we will be unable to raise capital, if at all, until all uncertainties are resolved. Further, our ability to raise additional capital may be adversely impacted by potential worsening of global economic conditions, potential future global

pandemics or health crises, and the recent disruptions to, and volatility in, the credit, banking, and financial markets in the United States. We also may be forced to curtail spending in research and development activities in order to conserve cash.

Substantial additional financings will be needed by us to fund our operations, including making the $2.5 million payment on or before July 1, 2024 pursuant to the Settlement Agreement or pursuant to any indemnification or contribution that may be required for any damages claim sought by Mr. Mack, and to complete clinical development of and to commercially develop our product candidates. There is no assurance that such financing will be available when needed or on acceptable terms. We also may be forced to curtail spending in research and development activities in order to conserve cash.

We cannot be certain that such funding will be available on favorable terms or available at all. If we are unable to raise additional capital in the near future, of which there can be no certainty, we may be forced to liquidate assets or initiate bankruptcy proceedings.

Global Macroeconomic Environment

The global macroeconomic environment could be negatively affected by, among other things, resurgence of COVID-19 or other pandemics or epidemics, instability in global economic markets, increased U.S. trade tariffs and trade disputes with other countries, instability in the global credit and banking markets, supply chain weaknesses, instability in the geopolitical environment as a result of the withdrawal of the United Kingdom from the European Union, the ongoing conflict between Russia and Ukraine, the war in the Middle East, other political tensions, and foreign governmental debt concerns. Such challenges have caused, and may continue to cause, uncertainty and instability in local economies and in global financial markets.

While expected to be temporary, these disruptions may negatively impact our results of operations, financial condition, and liquidity in 2024 and potentially beyond.

Factors that May Affect Future Results

You should refer to Part I, Item 1A “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2023, for a discussion of important factors that may affect our future results.

ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4: CONTROLS AND PROCEDURES

Evaluation of 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, 2024. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2024, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Evaluation of Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the quarter ended March 31, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. From time to time, we make changes to our internal control over financial reporting that are intended to enhance its effectiveness, and which do not have a material effect on our overall internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1: LEGAL PROCEEDINGS

On March 12, 2021, the Company and our former Chief Executive Officer, Anthony P. Mack (together, the “Defendants”), were named as defendants in a complaint (the “Complaint”) filed by Plaintiffs in the Court of Chancery of the State of Delaware captioned *Sorrento Therapeutics, Inc. and Scilex Pharmaceuticals Inc. v. Anthony Mack and Virpax Pharmaceuticals, Inc.*, Case No. 2021-0210-PAF (the “Action”). In the Complaint, Plaintiffs alleged (i) Mr. Mack breached a Restrictive Covenants Agreement, dated as of November 8, 2016, between himself and Sorrento (the “Restrictive Covenants Agreement”), (ii) the Company tortiously interfered with the Restrictive Covenants Agreement, and (iii) the Company tortiously interfered with Scilex’s relationship with Mr. Mack. On May 7, 2021, Plaintiffs filed an Amended Complaint asserting the same three causes of action. On September 28, 2021, Plaintiffs filed a Second Amended Complaint asserting the same three causes of action as the prior complaints, as well as claims in which Plaintiffs alleged (i) Mr. Mack breached an Employment, Proprietary Information and Inventions Agreement, dated as of October 25, 2016, between himself and Sorrento (the “Employment Agreement”), (ii) the Company tortiously interfered with the Employment Agreement, (iii) Mr. Mack breached his fiduciary duties to Scilex, and (iv) the Company aided and abetted Mr. Mack’s alleged breach of fiduciary duties to Scilex. On April 1, 2022, Plaintiffs filed a Third Amended Complaint. The Third Amended Complaint asserts the same causes of action as the Second Amended Complaint, as well as claims for (i) misappropriation of trade secrets by Defendants under Delaware law, and (ii) misappropriation of trade secrets by Defendants under California law. On April 18, 2022, Defendants filed answers to the Third Amended Complaint. Trial was held before Vice Chancellor Paul Fiorvanti from September 12 through September 14, 2022.

In March 2023, the Company collected $1,250,000 in reimbursement of legal costs pursuant to the Company's directors' and officers' insurance policy, and recorded it as a reduction of general and administrative expense on the condensed consolidated statements of operations. No further reimbursements are permitted from the insurance policy with respect to the litigation.

On September 1, 2023, the Chancery Court issued a memorandum opinion addressing liability in the Action and found in favor of Plaintiffs on all but three counts, which the Court found were waived. The Chancery Court found it proper to attribute Mr. Mack's knowledge and actions to the Company, which Mr. Mack used to effectuate the tortious interference and breach of fiduciary duty. The Chancery Court found that Mr. Mack breached the Restrictive Covenants Agreement he entered into with Sorrento by developing Epoladerm the Company is liable for tortious interference with contract; Plaintiffs were deemed to have waived their claims for breach of Mr. Mack's Employment Agreement and for tortious interference with prospective economic advantage; Mr. Mack breached his fiduciary duty of loyalty to Scilex; the Company aided and abetted Mr. Mack's breach of fiduciary duty; and Mr. Mack misappropriated certain Scilex trade secrets. The Court, however, stated that the question of an appropriate remedy must await further briefing.

On October 18, 2023, in accordance with the Chancery Court's supplemental briefing schedule, Plaintiffs filed their supplemental brief requesting the following relief: an injunction, in the first instance, enjoining Mr. Mack from having any relationship with Virpax for a period of 18 months and 27 days; enjoining Virpax from further developing or marketing Epoladerm for a period of 18 months and 27 days; alternatively, if these two injunction requests were not granted, Plaintiffs requested a judgement of joint and several liability against Mr. Mack and Virpax of $14,684,833. In addition to these requests for injunctive relief (or in, the alternative, damages), Plaintiffs sought a constructive trust over the revenues of Epoladerm, Probudur and Envelta, or, in the alternative to a constructive trust, a royalty of 5 per cent of net sales of Epoladerm, 8-11 percent of net sales of Probudur and 7.5 percent of net sales of Envelta. In addition to the requests for injunctive relief, imposition of a constructive trust and/or royalties, Plaintiffs also requested additional damages, jointly and severally, against Mr. Mack and Virpax as follows: $1.3 million for misuse of Scilex resources, $6.7 million for misappropriation of trade secrets, $13.4 million for exemplary damage (trade secrets damage x2) and attorney's fees in an unspecified amount. Finally, Plaintiffs sought injunctive relief, enjoining Mr. Mack and Virpax from further accessing Scilex's trade secrets; requiring Mr. Mack and Virpax to return Scilex's trade secrets to Plaintiffs; and enjoining Mr. Mack and Virpax from marketing or selling any products derived from or incorporating Scilex's trade secrets.

On November 29, 2023, in accordance with the Chancery Court's supplemental briefing schedule, Defendants filed their supplement brief on damages rebutting Plaintiffs' damages analysis. Throughout the brief, Defendants argued Plaintiffs failed to meet their burden to prove damages, and as such, should be precluded from any damages award. However, given the Court's instruction, Defendants proffered a reasonable damages analysis as follows. As for the injunctive relief requested against Mr. Mack, the Company took no position, as the request was directed to Mr. Mack personally. Concerning Plaintiffs' request for an injunction against further development of Epoladerm for a period of 18 months and 27 days, Defendants opposed this request, arguing lack of irreparable harm, given Plaintiffs' request for money damages. Defendants also argued a constructive trust is inappropriate, given Plaintiffs failed to articulate the parameters of such relief and, additionally, the lack of sales for the drug candidates preclude such relief. In terms of the money damages related to the three drug candidates, Defendants proffered a reasonable royalty rate of 1-3% of the net profits of the drug candidates, as opposed to lump sum damages, as such rate would alleviate the speculative nature of the damages requested by Plaintiffs. As for the misappropriation of trade secrets request of $6.7 million, given the Court found only 5 of the proffered 1,182 documents were trade secrets, Defendants contend Plaintiffs should receive no monetary damages (given the reasonable royalty would encompass use of these documents and, alternatively, Defendants would return such documents). However, if the Court were to award damages, such damages should be pro rata for the documents, or roughly $28,382. And, finally, Defendants opposed the request for attorneys' fees and exemplary damages.

On December 21, 2023, Plaintiffs filed their reply brief on damages, generally reasserting their prior arguments on damages and rebutting Defendants' arguments. Plaintiffs also asserted they supported their damages claims with sufficient evidence.

On February 29, 2024, Plaintiffs and the Company entered into a Settlement Agreement to fully resolve all claims by the Plaintiffs against the Company related to the litigation, subject to the entry by the United States Bankruptcy Court for the Southern District of Texas, which is handling the Sorrento bankruptcy filing, of an order approving the Settlement Agreement. On March 1, 2024, the Plaintiffs filed a motion to approve the Settlement Agreement and grant the related relief with the Bankruptcy Court. On March 14, 2024, the Bankruptcy Court entered an order approving the Settlement Agreement and on March 20, 2024 the Plaintiffs filed a Stipulation of Dismissal with the Chancery Court dismissing the Action.

As settlement consideration, the Company agreed to pay Sorrento and Scilex a total cash payment of $6.0 million, of which $3.5 million was paid on March 18, 2024, two business days after the Effective Date, and the remaining $2.5 million is to be paid on or before July 1, 2024. Additionally, the Company agreed to pay to Plaintiffs royalties of 6% of annual net sales of products developed from drug candidates Epoladerm, Probudur and Envelta until the earlier of the expiration of the last-to-expire valid patent claim of such product and the expiration of any period of regulatory exclusivity for such product.

Pursuant to the Settlement Agreement, each of the Plaintiffs and the Company provided mutual releases of all claims as of the Effective Date, whether known or unknown, arising from any allegations set forth in the Action. Plaintiffs' release relates to claims against the Company only. Plaintiffs' release as to the Company was effective upon the Company's initial payment of $3.5 million, and the Company's release of the Plaintiffs was effective upon the Effective Date.

The Plaintiffs can still pursue claims against Mr. Mack. The Company's Bylaws require the Company to "indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that such person is or was a director or officer of the Corporation, or, while a director or officer of the Corporation…." Such indemnification, however, is limited to circumstances where the covered person "acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation…." Mr. Mack may attempt to claim he is entitled to indemnification, should the Court find him liable for damages in the Action. Given the findings in the Memorandum Opinion issued in the Action, the Company believes it has a strong position that Mr. Mack would not be entitled to indemnification. There is a risk, however, that a Court could find he is entitled to such indemnification. Additionally, per Section 7.6 of the Bylaws, the Company has been advancing Mr. Mack's attorneys' fees and costs for the Action. It is likely Mr. Mack will contend he is still entitled to advancement of any fees and/or costs for the Action going forward and may seek judicial intervention. However, as per the Bylaws, Mr. Mack is only entitled to advancement of expenses for indemnifiable actions. As noted above, given the Memorandum Opinion in the Action, the Company believes that it has a strong position that Mr. Mack is not entitled to indemnification, and therefore, not entitled to advancement of expenses. However, there is a risk that a Court could find that Mr. Mack is entitled to such advancement. Further, Mr. Mack may attempt to seek damages from the Company based on the Court's final judgment on damages under the theory of joint and several liability and seek contribution from the Company for any monetary judgment. (See Item 1A-Risk Factors)

The Court is aware that Plaintiffs have settled with the Company and that the Settlement Agreement fully releases the Company from any claims or

damages, the Plaintiff has against the Company, related to the Action. Given the Settlement Agreement does not release Mr. Mack from liability related to the Action, the Court has requested supplemental briefing as to whether the Court can dismiss the Company from the lawsuit, as well as any claims Mr. Mack has against the Company arising from the Action. While the Company believes that any damages assessed may be awarded against Mr. Mack alone, Plaintiffs cannot seek additional damages from Virpax. However, there is a risk that Mr. Mack will still seek contribution from the Company for any damages claim arising from the Action and, there is a risk that the Court will rule in Mr. Mack's favor. Any such amounts for indemnification, contribution or other amounts awarded by the Court in Mr. Mack's favor could be significant.

No further reimbursements are permitted from our insurance policy with respect to the litigation. Accordingly, if Mr. Mack was successful in seeking indemnification from us, we would have to pay such amounts in cash which would further reduce our cash position.

From time to time, we are subject to claims by third parties under various legal disputes. The defense of such claims, or any adverse outcome relating to any such claims, could have a material adverse effect on our liquidity, financial condition, and cash flows.

ITEM 1A: RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2023 filed with the Securities and Exchange Commission on March 26, 2024. Except as set forth below, there have been no other material changes to our risk factors since our Annual Report on Form 10-K for the year ended December 31, 2023.

We have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We are not currently profitable, and we may never achieve or sustain profitability.

We are a preclinical stage biopharmaceutical company with a limited operating history and have incurred losses since our formation. We incurred net losses of approximately $3.2 million and $1.5 million for the three months ended March 31, 2024 and 2023, respectively. As of March 31, 2024, we had an accumulated deficit of approximately $62.8 million. We have not commercialized any product candidates and have never generated revenue from the commercialization of any product. To date, we have devoted most of our financial resources to research and development, including our preclinical work, general and administrative expenses, including, but not limited to, legal defense costs and general corporate purposes, as well as to intellectual property.

We expect to incur significant additional operating losses for the next several years, at least, as we advance Probudur, Envelta, AnQlar, Epoladerm and NobrXiol through preclinical development, complete clinical trials, seek regulatory approval and commercialize Probudur, Envelta, AnQlar, Epoladerm and NobrXiol (collectively, "Product Candidates"), if approved. The costs of advancing product candidates into each clinical phase tend to increase substantially over the duration of the clinical development process. Therefore, the total costs to advance any of our product candidates to marketing approval in even a single jurisdiction will be substantial. Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to begin generating revenue from the commercialization of any products or achieve or maintain profitability. Our costs and expenses will also increase substantially if and as we:

- Fund the remaining portion $2.5 million pursuant to the Settlement Agreement, make related indemnification and/or contribution payments, which payment, if any, may be material, or estimated separation payments we agree to make to our former Chief Executive Officer, which may be material (See Part II-Item1 Legal Proceedings);

- are required by the FDA, to complete Phase 2 trials to support an NDA for our Product Candidates;
- are required by the FDA to complete Phase 3 trials to support NDAs for our Product Candidates;
- establish a sales, marketing and distribution infrastructure to commercialize our drugs, if approved, and for any other product candidates for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, scientific and commercial personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts, as well as to support our transition to a public reporting company; and
- acquire or in-license or invent other product candidates or technologies.

Furthermore, our ability to successfully develop, commercialize and license any product candidates and generate product revenue is subject to substantial additional risks and uncertainties, as described under "Risks Related to Development, Clinical Testing, Manufacturing and Regulatory Approval" and "Risks Related to Commercialization." As a result, we expect to continue to incur net losses and negative cash flows for the foreseeable future. These net losses and negative cash flows have had, and will continue to have, an adverse effect on our stockholders' equity and working capital. The amount of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues. If we are unable to develop and commercialize one or more product candidates, either alone or through collaborations, or if revenues from any product that receives marketing approval are insufficient, we will not achieve profitability. Even if we do achieve profitability, we may not be able to sustain profitability or meet outside expectations for our profitability. If we are unable to achieve or sustain profitability or to meet outside expectations for our profitability, the value of our common stock will be materially and adversely affected.

We require substantial additional capital to fund our operations, and if we fail to obtain necessary financing, we will not be able to complete the development and commercialization of our drugs.

As of March 31, 2024, our cash position totaled approximately $1.9 million and as of April 30, 2024, our cash position totaled approximately $1.4 million. Our current cash position and our current burn rate of approximately $1 million per month is not sufficient to enable us to fund our operations through the second quarter of 2024, and will not be sufficient to make the $2.5 million payment under the Settlement Agreement. There can be no assurance that we will be able to raise capital when needed. Our failure to raise such additional capital could result in us being forced to liquidate assets or initiate bankruptcy proceedings.

Recent litigation has also negatively impacted our cash position. As a result of the $3.5 million payment that has been made, and the $2.5 million payment that will be required to be made on or before July 1, 2024, to the Plaintiffs pursuant to the Settlement Agreement our cash position has been and will be significantly decreased. Moreover, the payment of the royalties to the Plaintiffs pursuant to the terms of the Settlement Agreement, will significantly impact our future revenue and may make it more difficult for us to engage in collaborations, licenses or the acquisition of certain product candidates, and may result in us ceasing to develop certain product candidates or all of our product candidates if we determine that it will not be

financially profitable to do so. In addition, litigation-related indemnification and/or contribution payments, if any, that we make to our former Chief Executive Officer, and which may be significant, will further reduce our cash position.

We will need to spend substantial amounts to advance the clinical development of and launch and commercialize our product candidates.

For example, we estimate that we will require at least a total of approximately $8.5 million for the completion of our planned Investigational New Drug "IND" filing for Probudur and other expenditures that we will need to incur in order to develop our other product candidates, our ongoing operations, and potential cash separation payments to our former Chief Executive Officer. We may need substantially more funds to complete our planned IND filing for Probudur. We will need to raise additional capital in order to file our IND. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts. In addition, our strategy for AnQlar and Epoladerm is to license out or partner these assets as we continue to focus our efforts on our prescription drug pipeline. If we are unsuccessful in our partnering activities and/or financing activities, we may be unable to develop AnQlar and Epoladerm.

At March 31, 2024, we had cash of approximately $1.9 million. On March 18, 2024, we paid $3.5 million to the Plaintiffs and we have agreed to pay the Plaintiffs an additional $2.5 million on or before July 1, 2024. In addition, litigation related indemnification and/or contribution payments, if any, and which may be significant, and any cash estimated separation payments that we make to our former Chief Executive Officer, which may be material, will further reduce our cash position. See Note 5 to the Notes to Financial Statements included in this Quarterly Report for additional information regarding these payments. We have incurred losses since inception, including a loss of $3.2 million for the three months ended March 31, 2024 and $15.2 million for the year ended December 31, 2023. Our future funding requirements, both near and long-term, will depend on many factors, including, but not limited to the:

- costs associated with litigation, adverse judgments and/or settlements.
- initiation, progress, timing, costs and results of preclinical studies and clinical trials, including patient enrollment in such trials, for our Product Candidates or any other future product candidates;
- clinical development plans we establish for our Product Candidates and any other future product candidates;
- obligation to make royalty and non-royalty sublicense receipt payments to third-party licensors, if any, under our licensing agreements;
- number and characteristics of product candidates that we discover or in-license and develop;
- outcome, timing and cost of regulatory review by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or comparable foreign regulatory authorities to require that we perform more studies than those that we currently expect;
- costs of filing, prosecuting, defending and enforcing any patent claims and maintaining and enforcing other intellectual property rights;
- effects of competing technological and market developments;
- costs and timing of the implementation of commercial-scale manufacturing activities;
- costs and timing of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval; and
- cost associated with being a public company.

Our failure to meet the continued listing requirements of The Nasdaq Capital Market could result in a de-listing of our common stock.

Our shares of common stock are listed for trading on The Nasdaq Capital Market under the symbol "VRPX." If we fail to satisfy the continued listing requirements of The Nasdaq Capital Market such as the corporate governance requirements, the stockholder's equity requirement or the minimum closing bid price requirement, The Nasdaq Capital Market may take steps to de-list our common stock or warrants.

On April 10, 2023, we received a written notice Nasdaq indicating that we are not in compliance with the $1.00 Minimum Bid Price requirement set forth in Nasdaq Listing Rule 5550(a)(2) for continued listing on The Nasdaq Capital Market (the "Bid Price Requirement"). On November 16, 2023, we received a notice from Nasdaq notifying that we were not in compliance with the continued listing requirements of Nasdaq Listing Rule 5250(c)(1) because our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 had not yet been filed with the Securities and Exchange Commission ("SEC"). On December 8, 2023, we received a notice from Nasdaq that we regained compliance with Nasdaq Listing Rule 5250(c)(1) and the matter was closed. On March 15, 2024, we received a notice from Nasdaq that we regained compliance with Nasdaq Listing Rule 5500(a)(2) and the matter was closed. Although, we have regained compliance with the $1.00 Minimum Bid Price requirement set forth in Nasdaq Listing Rule 5550(a)(2) by effecting a reverse stock split and we have regained compliance with the Form 10-Q filing delinquency, there can be no assurance that we will continue to maintain compliance with the Nasdaq continued listing requirements.

On April 2, 2024, we received a notification letter from the Listing Qualifications Staff of Nasdaq notifying us that our stockholders' equity as reported in our Annual Report for the year ended December 31, 2023, did not meet the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market. Nasdaq Listing Rule 5550(b)(1) requires companies listed on the Nasdaq Capital Market to maintain stockholders' equity of at least $2,500,000. In the Annual Report for the year ended December 31, 2023, we reported stockholders' equity of $1,934,321, which is below the minimum stockholders' equity required for continued listing pursuant to Nasdaq Listing Rule 5550(b)(1). Additionally, as of the date of the Annual Report for the year ended December 31, 2023 and currently, we do not meet the alternative Nasdaq continued listing standards under Nasdaq Listing Rules. In our Quarterly Report on Form 10-Q for the three months ended March 31, 2024, we reported stockholders' deficit of $1,213,384.

This notice of noncompliance has had no immediate impact on the continued listing or trading of our common stock on The Nasdaq Capital Market, which will continue to be listed and traded on Nasdaq, subject to our compliance with the other continued listing requirements. Nasdaq has given us until May 17, 2024 to submit to Nasdaq a plan to regain compliance, which we plan to submit. If our plan is accepted, Nasdaq may grant an extension of up to 180 calendar days from the date of Nasdaq's letter to evidence compliance.

We intend to attempt to take actions to restore our compliance with Nasdaq's listing requirements, but we can provide no assurance that we will regain

compliance. There can be no assurance that we will be able to comply with the minimum stockholders' equity requirement.

Any perception that we may not regain compliance or a delisting of our common stock by Nasdaq could adversely affect our ability to attract new investors, decrease the liquidity of the outstanding shares of our common stock, reduce the price at which such shares trade and increase the transaction costs inherent in trading such shares with overall negative effects for our stockholder. In addition, delisting of our common stock from Nasdaq could deter broker-dealers from making a market in or otherwise seeking or generating interest in our common stock and might deter certain institutions and persons from investing in our common stock.

The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as "covered securities." Because our common stock is listed on The Nasdaq Capital Market, our common stock is covered securities. Although the states are preempted from regulating the sale of covered securities, the federal statute does allow the states to investigate companies if there is a suspicion of fraud, and, if there is a finding of fraudulent activity, then the states can regulate or bar the sale of covered securities in a particular case. Further, if we were to be delisted from The Nasdaq Capital Market, our common stock would cease to be recognized as covered securities and we would be subject to regulation in each state in which we offer our securities.

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

(a) Unregistered Sales of Equity Securities

We did not sell any equity securities during the three months ended March 31, 2024 in transactions that were not registered under the Securities Act other than as disclosed in our filings with the SEC.

(b) Use of Proceeds

Not applicable.

(c) Issuer Purchases of Equity Securities

Not applicable.

ITEM 3: DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5: OTHER INFORMATION

During the three months ended March 31, 2024, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

ITEM 6: EXHIBITS

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Virpax Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K (File No. 001-40064) filed on March 31, 2021)
3.2	Amended and Restated Bylaws of Virpax Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.2 to the Company's Annual Report on Form 10-K (File No. 001-40064) filed with the SEC on March 31, 2021)
3.3	Amendment to By-Laws dated June 5, 2023 (incorporated by reference to Exhibit 3.1 to Company's Current Report on Form 8-K (File No. 001-40064) filed with the SEC on June 7, 2023)
3.4	Certificate of Amendment to the Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 001-40064) filed with the SEC on March 1, 2024)
3.5	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of Virpax Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 001-40064) filed with the SEC on March 1, 2024)
10.1	Settlement Agreement and Mutual Release between Virpax Pharmaceuticals, Inc. and Sorrento Therapeutics, Inc. and Scilex Pharmaceuticals Inc. (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-40064) filed with the SEC on March 1, 2024)
10.2	Separation Agreement between Virpax Pharmaceuticals, Inc. and Jeffrey Gudin, MD, dated May 2, 2024 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 001-40064) filed with the SEC on May 2, 2024)
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).
31.2	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).
32.1**	Certification of Principal Executive Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).

32.2**	Certification of Chief Financial Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

** This certification will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, except to the extent specifically incorporated by reference into such filing.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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 on May 13, 2024.

VIRPAX PHARMACEUTICALS, INC.

Date: May 13, 2024

By: */s/ Gerald Bruce*
Gerald Bruce
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Vinay Shah
Vinay Shah
Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gerald Bruce, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Virpax Pharmaceuticals, Inc. (the "Registrant");

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

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

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

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

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

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

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

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

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

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

Date: May 13, 2024

/s/ Gerald Bruce
Gerald Bruce
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Vinay Shah, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Virpax Pharmaceuticals, Inc. (the "Registrant");

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

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

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

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

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

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

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

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

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

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

Date: May 13, 2024

/s/ Vinay Shah
Vinay Shah
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

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

I, Gerald Bruce, Chief Executive Officer (Principal Executive Officer) of Virpax Pharmaceuticals, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2024 (the "Form 10-Q") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented.

Date: May 13, 2024

By: /s/ Gerald Bruce
Gerald Bruce
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

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

I, Vinay Shah, Chief Financial Officer (Principal Financial and Accounting Officer) of Virpax Pharmaceuticals, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2024 (the "Form 10-Q") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented.

Date: May 13, 2024

By: /s/ Vinay Shah
Vinay Shah
Chief Financial Officer
(Principal Financial and Accounting Officer)