
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 December 31, 2021

Or

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

For the Transition Period from ___ to ___.

Commission File Number 333-88480

NEUBASE THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

46-5622433

(I.R.S. Employer Identification No.)

350 Technology Drive, Pittsburgh, PA 15219

(Address of principal executive offices and zip code)

(646) 450-1790

(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, \$0.0001 par value per share	NBSE	The Nasdaq Stock Market LLC

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

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

As of February 4, 2022, 32,768,184 shares of the common stock, par value \$0.0001, of the registrant were outstanding.

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PART I.

ITEM 1. FINANCIAL STATEMENTS

NeuBase Therapeutics, Inc. and Subsidiaries
Condensed Consolidated Balance Sheets
(Unaudited)

	December 31, 2021	September 30, 2021
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 47,326,060	\$ 52,893,387
Prepaid insurance	313,577	499,061
Other prepaid expenses and current assets	844,404	1,536,186
Total current assets	<u>48,484,041</u>	<u>54,928,634</u>
EQUIPMENT, net	<u>2,464,643</u>	<u>2,463,882</u>
OTHER ASSETS		
Investment	—	415,744
Right-of-use asset, operating lease asset	5,841,696	5,945,295
Security deposit	253,615	253,615
Other long-term assets	—	160,423
Total other assets	<u>6,095,311</u>	<u>6,775,077</u>
TOTAL ASSETS	<u>\$ 57,043,995</u>	<u>\$ 64,167,593</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 1,193,713	\$ 1,807,885
Accrued expenses and other current liabilities	2,412,880	1,747,746
Insurance note payable	—	148,385
Operating lease liabilities	429,507	382,576
Finance lease liabilities	111,513	107,632
Total current liabilities	<u>4,147,613</u>	<u>4,194,224</u>
Long-term operating lease liability	5,683,192	5,794,096
Long-term finance lease liability	78,987	109,500
TOTAL LIABILITIES	<u>9,909,792</u>	<u>10,097,820</u>
COMMITMENTS AND CONTINGENCIES		
STOCKHOLDERS' EQUITY		
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized; no shares issued and outstanding as of December 31, 2021 and September 30, 2021	—	—
Common stock, \$0.0001 par value; 250,000,000 shares authorized; 32,768,184 and 32,721,493 shares issued and outstanding as of December 31, 2021 and September 30, 2021, respectively	3,276	3,272
Additional paid-in capital	123,827,646	123,034,404
Accumulated deficit	(76,696,719)	(68,967,903)
Total stockholders' equity	<u>47,134,203</u>	<u>54,069,773</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 57,043,995</u>	<u>\$ 64,167,593</u>

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

NeuBase Therapeutics, Inc. and Subsidiaries
Condensed Consolidated Statements of Operations
(Unaudited)

	Three Months Ended	
	December 31,	
	2021	2020
OPERATING EXPENSES		
General and administrative	\$ 2,935,710	\$ 2,641,470
Research and development	4,369,257	2,019,924
TOTAL OPERATING EXPENSES	7,304,967	4,661,394
LOSS FROM OPERATIONS	(7,304,967)	(4,661,394)
OTHER INCOME (EXPENSE)		
Interest expense	(15,219)	(9,737)
Interest income	1,254	—
Change in fair value of warrant liabilities	—	630,112
Equity in losses on equity method investment	(415,744)	(25,412)
Other income, net	5,860	-
Total other (expense) income, net	(423,849)	594,963
NET LOSS	\$ (7,728,816)	\$ (4,066,431)
BASIC AND DILUTED LOSS PER SHARE	\$ (0.24)	\$ (0.18)
WEIGHTED AVERAGE SHARES OUTSTANDING:		
BASIC AND DILUTED	32,725,718	23,174,168

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

NeuBase Therapeutics, Inc. and Subsidiaries
Condensed Consolidated Statements of Stockholders' Equity
For the Three Months Ended December 31, 2021 and 2020
(Unaudited)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance as of September 30, 2020	23,154,084	\$ 2,315	\$ 74,850,935	\$ (43,558,602)	\$ 31,294,648
Stock-based compensation expense	—	—	1,176,585	—	1,176,585
Issuance of restricted stock for services	1,931	—	—	—	—
Exercise of stock options	21,576	2	112,444	—	112,446
Net loss	—	—	—	(4,066,431)	(4,066,431)
Balance as of December 31, 2020	23,177,591	\$ 2,317	\$ 76,139,964	\$ (47,625,033)	\$ 28,517,248
Balance as of September 30, 2021	32,721,493	\$ 3,272	\$ 123,034,404	\$ (68,967,903)	\$ 54,069,773
Stock-based compensation expense	—	—	793,204	—	793,204
Issuance of restricted stock for services	4,441	—	—	—	—
Exercise of stock options	42,250	4	38	—	42
Net loss	—	—	—	(7,728,816)	(7,728,816)
Balance as of December 31, 2021	32,768,184	\$ 3,276	\$ 123,827,646	\$ (76,696,719)	\$ 47,134,203

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

NeuBase Therapeutics, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Three Months Ended December 31,	
	2021	2020
Cash flows from operating activities		
Net loss	\$ (7,728,816)	\$ (4,066,431)
Adjustments to reconcile net loss to net cash used in operating activities		
Stock-based compensation	793,204	1,176,585
Change in fair value of warrant liabilities	—	(630,112)
Depreciation and amortization	181,490	68,117
Loss on marketable securities	30	14,970
Loss on disposal of fixed assets	7,595	—
Equity in losses on equity method investment	415,744	25,412
Non-cash expense from right-of-use assets	103,599	—
Changes in operating assets and liabilities		
Prepaid insurance, other prepaid expenses and current assets	877,266	(25,132)
Long-term prepaid insurance	—	48,417
Security deposit	—	(253,565)
Other long-term assets	160,423	—
Accounts payable	(680,142)	(327,087)
Accrued expenses and other current liabilities	665,134	187,965
Operating lease liability	(63,973)	—
Net cash used in operating activities	<u>(5,268,446)</u>	<u>(3,780,861)</u>
Cash flows from investing activities		
Purchase of laboratory and office equipment	(123,876)	(193,571)
Purchase of marketable securities	(14,986,818)	(15,003,771)
Sale of marketable securities	14,986,788	14,988,801
Net cash used in investing activities	<u>(123,906)</u>	<u>(208,541)</u>
Cash flows from financing activities		
Principal payment of financed insurance	(148,385)	(138,557)
Principal payment of finance lease liability	(26,632)	—
Proceeds from exercise of stock options	42	112,446
Net cash used in financing activities	<u>(174,975)</u>	<u>(26,111)</u>
Net decrease in cash and cash equivalents	<u>(5,567,327)</u>	<u>(4,015,513)</u>
Cash and cash equivalents, beginning of period	<u>52,893,387</u>	<u>31,992,283</u>
Cash and cash equivalents, end of period	<u>\$ 47,326,060</u>	<u>\$ 27,976,770</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ —	\$ 10,400
Cash paid for income taxes	\$ —	\$ —
Non-cash investing and financing activities:		
Purchases of laboratory and office equipment in accounts payable	\$ 65,970	\$ —

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

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Organization and Description of Business

NeuBase Therapeutics, Inc. and subsidiaries (the “Company” or “NeuBase”) is developing a modular peptide-nucleic acid (“PNA”) antisense oligo (“PATrOL™”) platform to address genetic diseases, with a single, cohesive approach. The PATrOL™-enabled anti-gene therapies are designed to improve upon current genetic medicine strategies by combining the advantages of synthetic approaches with the precision of antisense technologies. NeuBase plans to use its platform to address diseases which have a genetic source, with an initial focus on Myotonic Dystrophy Type 1 (“DM1”), Huntington’s Disease (“HD”) and oncology applications.

NeuBase is a preclinical-stage biopharmaceutical company and continues to develop its clinical and regulatory strategy with its internal research and development team with a view toward prioritizing market introduction as quickly as possible. NeuBase’s programs are NT-0100 in HD, NT-0200 in DM1 and NT-0300 in KRAS-driven cancers:

- The NT-0100 program is a PATrOL™-enabled therapeutic program being developed to target the mutant expansion in the HD messenger ribonucleic acid (“mRNA”). The NT-0100 program includes proprietary PNAs which have the potential to be highly selective for the mutant transcript vs. the wild-type transcribed allele and the expectation to be applicable for all HD patients as it directly targets the expansion itself and has the potential to be delivered systemically. PATrOL™-enabled drugs also have the unique ability to open RNA secondary structures and bind to either the primary nucleotide sequences or the secondary and/or tertiary structures.
- The NT-0200 program is a PATrOL™-enabled therapeutic program being developed to target the mutant expansion in the DM1 disease mRNA. The NT-0200 program includes several proprietary PNAs which have the potential to be highly selective for the mutant transcript versus the wild-type transcribed allele and the expectation to be effective for nearly all DM1 patients as it directly targets the expansion itself.
- The NT-0300 program is a PATrOL™-enabled therapeutic program being developed to target the mutated *KRAS* gene. The program is comprised of candidate compounds that target two activating mutations in the *KRAS* gene: G12D and G12V. NeuBase believes these candidate compounds, and subsequent further optimized compounds, have the potential to inhibit transcription and/or translation of the oncogenic mutations and slow or stop tumor growth.

NeuBase believes its three aforementioned programs address unmet needs for diseases that currently have no effective therapeutics that target the etiologies of these conditions. NeuBase further believes there is a large opportunity in the U.S. and European markets for drugs in these areas.

Liquidity

The Company has had no revenues from product sales and has incurred operating losses since inception. As of December 31, 2021, the Company had \$47.3 million in cash and cash equivalents, and during the three months ended December 31, 2021, incurred a net loss of \$7.7 million and used \$5.3 million of cash in operating activities.

The Company expects to continue to incur significant operating losses for the foreseeable future and may never become profitable. As a result, the Company will likely need to raise additional capital through one or more of the following: the issuance of additional debt or equity or the completion of a licensing transaction for one or more of the Company’s pipeline assets. Management believes it has sufficient working capital on hand to fund operations through at least the next twelve months from the date these consolidated financial statements were available to be issued. There can be no assurance that the Company will be successful in acquiring additional funding, that the Company’s projections of its future working capital needs will prove accurate, or that any additional funding would be sufficient to continue operations in future years.

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

2. Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited financial statements and notes thereto as of and for the year ended September 30, 2021 included in the Company's Annual Report on Form 10-K (the "Annual Report") filed with the U.S. Securities and Exchange Commission ("SEC") on December 23, 2021. The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated during the consolidation process. The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The accompanying unaudited condensed consolidated financial statements have been prepared by the Company in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted. In the opinion of management, the accompanying unaudited condensed consolidated financial statements for the periods presented reflect all adjustments, consisting of only normal, recurring adjustments, necessary to fairly state the Company's financial position, results of operations and cash flows. The unaudited condensed consolidated financial statements for the interim periods are not necessarily indicative of results for the full year. The preparation of these unaudited condensed consolidated financial statements requires the Company to make estimates and judgments that affect the amounts reported in the financial statements and the accompanying notes. The Company's actual results may differ from these estimates under different assumptions or conditions.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's unaudited condensed consolidated financial statements relate to the valuation of stock-based compensation, the valuation of licenses, the fair value of warrant liabilities and the valuation allowance of deferred tax assets resulting from net operating losses. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources.

The Company assesses and updates estimates each period to reflect current information, such as the economic considerations related to the impact that the novel coronavirus disease ("COVID-19") could have on its significant accounting estimates. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

Fair Value Measurements

Fair value measurements are based on the premise that fair value is an exit price representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the following three-tier fair value hierarchy has been used in determining the inputs used in measuring fair value:

Level 1 – Quoted prices in active markets for identical assets or liabilities on the reporting date.

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Level 2 – Pricing inputs are based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Pricing inputs are generally unobservable and include situations where there is little, if any, market activity for the investment. The inputs into the determination of fair value require management’s judgment or estimation of assumptions that market participants would use in pricing the assets or liabilities. The fair values are therefore determined using factors that involve considerable judgment and interpretations, including but not limited to private and public comparables, third-party appraisals, discounted cash flow models, and fund manager estimates.

Financial instruments measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. Management’s assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. The use of different assumptions and/or estimation methodologies may have a material effect on estimated fair values. Accordingly, the fair value estimates disclosed, or initial amounts recorded may not be indicative of the amount that the Company or holders of the instruments could realize in a current market exchange.

Marketable Securities

Marketable securities are classified as trading and are carried at fair value. The Company’s marketable securities consist of corporate bonds and highly liquid mutual funds and exchange-traded and closed-end funds which are valued at quoted market prices. The Company had no marketable securities as of December 31, 2021 and September 30, 2021.

Net Loss Per Share

Basic net loss per share is computed by dividing net loss applicable to common stockholders by the weighted average number of shares of common stock outstanding during each period. Diluted net loss per share includes the dilutive effect, if any, from the potential exercise or conversion of securities, such as convertible debt, warrants and stock options that would result in the issuance of incremental shares of common stock. In computing the basic and diluted net loss per share applicable to common stockholders, the weighted average number of shares remains the same for both calculations due to the fact that when a net loss exists, dilutive shares are not included in the calculation as the impact is anti-dilutive.

The following potentially dilutive securities outstanding as of December 31, 2021 and 2020 have been excluded from the computation of diluted weighted average shares outstanding, as they would be anti-dilutive:

	<u>As of December 31,</u>	
	<u>2021</u>	<u>2020</u>
Common stock purchase options	7,197,404	6,633,554
Restricted stock units	10,000	—
Common stock purchase warrants	875,312	820,939
	<u>8,082,716</u>	<u>7,454,493</u>

Recent Accounting Pronouncements

In December 2019, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes” (“ASU 2019-12”), which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The adoption of this standard as of October 1, 2021, did not impact the Company’s consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments- Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments” (“ASU 2016-13”). This guidance introduces a new model for recognizing credit losses on financial

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

instruments based on an estimate of current expected credit losses. ASU 2016-13 also provides updated guidance regarding the impairment of available-for-sale debt securities and includes additional disclosure requirements. The new guidance is effective for public business entities that meet the definition of a Smaller Reporting Company as defined by the SEC for interim and annual periods beginning after December 15, 2022. Early adoption is permitted. The Company is currently evaluating the impact of this standard on its consolidated financial statements and related disclosures.

In May 2021, the FASB issued ASU No. 2021-04, “Earnings Per Share (Topic 260), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation-Stock Compensation (Topic 718), and Derivatives and Hedging-Contracts in Entity’s Own Equity (Subtopic 815-40)” (“ASU 2021-04”). This guidance reduces diversity in an issuer’s accounting for modifications or exchanges of freestanding equity-classified written call options (for example, warrants) that remain equity classified after modification or exchange. ASU 2021-04 provides guidance for a modification or an exchange of a freestanding equity-classified written call option that is not within the scope of another Topic. It specifically addresses: (1) how an entity should treat a modification of the terms or conditions or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange; (2) how an entity should measure the effect of a modification or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange; and (3) how an entity should recognize the effect of a modification or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange. ASU 2021-04 will be effective for all entities for fiscal years beginning after December 15, 2021. An entity should apply the amendments prospectively to modifications or exchanges occurring on or after the effective date of the amendments. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the impact of this standard on its consolidated financial statements and related disclosures.

3. Other Prepaid Expenses and Other Current Assets

The Company’s prepaid expenses and other current assets consisted of the following:

	As of December 31, 2021	As of September 30, 2021
Prepaid research and development expense	\$ 453,706	\$ 583,267
Prepaid rent	—	172,518
Other prepaid expenses and other current assets	390,698	780,401
Total	<u>\$ 844,404</u>	<u>\$ 1,536,186</u>

4. Equipment

The Company’s equipment consisted of the following:

	As of December 31, 2021	As of September 30, 2021
Laboratory equipment	\$ 2,909,472	\$ 2,737,390
Office equipment	259,978	259,978
Leasehold improvements	10,128	—
Total	3,179,578	2,997,368
Accumulated depreciation	(714,935)	(533,486)
Property, plant and equipment, net	<u>\$ 2,464,643</u>	<u>\$ 2,463,882</u>

Depreciation expense for the three months ended December 31, 2021 and 2020 was approximately \$0.2 million and \$0.1 million, respectively.

5. Investment

The Company owns common and preferred shares of DepYmed Inc. (“DepYmed”), which represents approximately 15% ownership of DepYmed.

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

The Company accounts for its investment in DepYmed common shares using the equity method of accounting and records its proportionate share of DepYmed's net income and losses in the accompanying consolidated statements of operations.

The Company accounts for its investment in preferred shares of DepYmed at cost, less any impairment, as the Company determined the preferred stock did not have a readily determinable fair value.

The carrying value of the Company's investment in DepYmed common shares was reduced to zero, therefore, during the three months ended December 31, 2021, the Company recorded its share of equity losses to the extent of its investment in preferred shares of DepYmed. The Company will continue to monitor the operating results of DepYmed and will record equity in earnings when the equity in earnings exceeds the Company's previously unrecognized losses.

Equity in losses for the three months ended December 31, 2021 and 2020 were approximately \$0.4 million and \$0.03 million, respectively.

The carrying value of the Company's total investment in DepYmed is as follows:

	As of December 31, 2021	As of September 30, 2021
Carrying value of DepYmed common shares	\$ —	\$ —
Fair value of DepYmed preferred shares assumed in connection with acquisition of Ohr Pharmaceutical, Inc., a Delaware corporation that completed a Merger with NeuBase Therapeutics ("Ohr")	—	99,020
DepYmed preferred shares received in sale of intellectual property	—	316,724
Total Investment	\$ —	\$ 415,744

6. Accrued Expenses and Other Current Liabilities

The Company's accrued expenses and other current liabilities consisted of the following:

	As of December 31, 2021	As of September 30, 2021
Accrued compensation and benefits	\$ 1,095,617	\$ 880,707
Accrued consulting settlement	300,000	200,000
Accrued professional fees	203,816	299,557
Accrued research and development	720,875	297,047
Accrued franchise tax	77,120	30,720
Other accrued expenses	15,452	39,715
Total	\$ 2,412,880	\$ 1,747,746

7. Notes Payable

Insurance Note Payable

As of December 31, 2021 and September 30, 2021, the Company had the following insurance note payable outstanding:

	Maturity Date	Stated Interest Rate	Original Principal	Balance at December 31, 2021	Balance at September 30, 2021
Insurance Note Payable					
2021 Insurance Note	January 2022	4.99 %	\$ 391,625	\$ —	\$ 148,385

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

8. Leases

In October 2020, the Company entered into a ten-year operating lease agreement with annual escalating rental payments for approximately 14,189 square feet of office and laboratory space in Pittsburgh, Pennsylvania. The leased premises will serve as the Company's headquarters. The first and second amendments to the lease agreement were executed in December 2020 and April 2021, respectively (collectively with the lease agreement, referred to herein as the "Lease"). In November 2020, the Company prepaid rent of \$0.3 million and paid a security deposit of \$0.3 million for the Lease. The Lease commenced on May 1, 2021, and the Company was obligated to begin making rental payments on this date. The Company applied the prepaid amount toward the rental payments through December 2021. The Company is also entitled to use half of the security deposit towards rental payments in May and June 2022. The Company measured and recognized an initial right-of-use ("ROU") asset and operating lease liability upon lease commencement. The Company has the right to extend the term of the Lease for an additional five-year term; however, this extension has not been included in the calculation of the lease liability and ROU asset at the lease inception as the exercise of the option was not reasonably certain.

The Company continued to operate under its operating lease in Pittsburgh until the Company moved into its new headquarters and laboratory space, which occurred in June 2021. The Company's prior office and operating space was leased under operating leases with original terms of less than 12 months which expired at various dates through November 2021; therefore, the Company's previous operating leases are not recognized as ROU assets on the consolidated balance sheet. The Company also maintained a short-term rental of office space in San Diego and New York, which expired in November 2021. In October 2021, the Company commenced a one-year lease for the rental of office space in Boston, which extends through October 2022.

In August 2021, the Company entered into a two-year finance lease for certain laboratory equipment. The Company measured and recognized an initial right-of-use ("ROU") asset and finance lease liability upon lease commencement.

At December 31, 2021 and September 30, 2021, ROU assets and lease liabilities were as follows:

		As of December 31, 2021	As of September 30, 2021
Assets:			
	Classification		
Operating lease right-of-use-asset	Operating lease asset	\$ 5,841,696	\$ 5,945,295
Financing lease right-of-use-asset	Equipment, net	188,252	216,490
		<u>\$ 6,029,948</u>	<u>\$ 6,161,785</u>
Liabilities:			
Current			
	Classification		
Operating	Operating lease liability	\$ 429,507	\$ 382,576
Financing	Financing lease liability	111,513	107,632
Long-term			
Operating	Long-term portion of operating leases liability	5,683,192	5,794,096
Financing	Long-term portion of financing leases liability	78,987	109,500
		<u>\$ 6,303,199</u>	<u>\$ 6,393,804</u>

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

The following tables summarize quantitative information about the Company's leases for the three months ended December 31, 2021 and 2020:

	Three Months Ended December 31,	
	2021	2020
Operating cash flows - operating lease	176,578	\$ —
Operating cash flows - financing leases	3,807	—
Financing cash flows - financing leases	26,632	—
Right-of-use asset obtained in exchange for operating lease liabilities	—	—
Finance lease assets obtained in exchange for finance lease liabilities	—	—

	As of December 31,
	2021
Weighted-average remaining lease term – operating lease (in years)	9.58
Weighted-average discount rate – operating lease	7.3 %
Weighted-average remaining lease term - financing leases (in years)	1.7
Weighted-average discount rate - financing leases	7.3 %

	Three Months Ended December 31,	
	2021	2020
Operating leases		
Operating lease cost	\$ 216,204	\$ —
Variable lease costs	—	—
Operating lease cost	216,204	—
Short-term lease rent expense	13,716	28,026
Financing leases		
Amortization of leased assets	28,238	—
Interest on lease liabilities	3,807	—
Financing lease cost	32,045	—
Net lease cost	\$ 261,965	\$ 28,026

As of December 31, 2021, future minimum lease payments under the non-cancelable leases were as follows:

	Operating Lease	Financing Leases
Nine Months Ending September 30, 2022	646,083	121,752
Year Ending September 30, 2023	867,367	111,606
Year Ending September 30, 2024	874,320	—
Year Ending September 30, 2025	881,391	—
Year Ending September 30, 2026	888,627	—
Thereafter	4,401,029	—
Total	8,558,817	233,358
Less present value discount	(2,446,118)	(42,858)
Operating lease liabilities	\$ 6,112,699	\$ 190,500

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

9. Fair Value

As of December 31, 2021 and September 30, 2021, the fair value of warrants measured at fair value was \$0. The fair value of the warrant liabilities was determined using level 3 inputs and the Black-Scholes option pricing model. The following assumptions were used in determining the fair value of the warrant liabilities:

	<u>As of December 31,</u> <u>2021</u>	<u>As of September 30,</u> <u>2021</u>
Remaining contractual term (years)	0.3	0.2 - 0.5
Common stock price volatility	62.5%	60.6% - 62.5%
Risk-free interest rate	0.1%	0.04%
Expected dividend yield	—	—

The change in fair value of the warrant liabilities for the three months ended December 31, 2020 was \$0.6 million.

As of December 31, 2021 and September 30, 2021, the carrying value of cash and cash equivalents, accounts payable and the insurance note payable approximate fair value due to the short-term nature of these instruments.

10. Stockholders' Equity

Warrants

Below is a summary of the Company's issued and outstanding warrants as of December 31, 2021:

Expiration date	Exercise Price	Warrants Outstanding
April 10, 2022	\$ 20.00	695,312
July 6, 2023	8.73	105,000
September 20, 2024	6.50	75,000
		<u>875,312</u>

	Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
Outstanding as of September 30, 2021	895,939	\$ 18.35	
Expired	(20,627)	55.00	
Outstanding as of December 31, 2021	<u>875,312</u>	17.49	0.6
Exercisable as of December 31, 2021	<u>837,812</u>	\$ 17.98	0.5

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

11. Stock-Based Compensation

As of December 31, 2021, an aggregate of 6,018,136 shares of common stock were authorized under the Company's 2019 Stock Incentive Plan (the "2019 Plan"), subject to an "evergreen" provision that will automatically increase the maximum number of shares of common stock that may be issued under the term of the 2019 Plan. As of December 31, 2021, 1,869,770 common shares were available for future grants under the 2019 Plan. As of December 31, 2021, 291,667 shares of common stock were authorized under the Company's 2016 Consolidated Stock Incentive Plan (the "2016 Plan") and 147,041 common shares were available for future grants under the 2016 Plan.

The Company recorded stock-based compensation expense in the following expense categories of its unaudited condensed consolidated statements of operations for the three months ended December 31, 2021 and 2020:

	Three Months Ended December 31,	
	2021	2020
General and administrative	\$ 327,131	\$ 842,279
Research and development	466,073	334,306
Total	\$ 793,204	\$ 1,176,585

Stock Options

Below is a table summarizing the options issued and outstanding as of and for the three months ended December 31, 2021:

	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Total Aggregate Intrinsic Value
Outstanding at September 30, 2021	7,397,154	\$ 3.13		
Granted	105,000	3.59		
Exercised	(42,250)	0.00		
Forfeited	(262,500)	5.07		
Outstanding at December 31, 2021	<u>7,197,404</u>	3.08	6.9	\$ 9,185,031
Exercisable as of December 31, 2021	<u>5,360,067</u>	\$ 2.33	6.2	\$ 9,184,698

As of December 31, 2021, unrecognized compensation costs associated with the stock options of \$0.5 million will be recognized over an estimated weighted-average amortization period of 1.4 years.

The intrinsic value of options exercised during the three months ended December 31, 2021 and 2020 was \$0.1 million and \$0.1 million, respectively.

The weighted average grant date fair value of options granted during the three months ended December 31, 2021 and 2020 was \$2.33 and \$5.20, respectively.

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

Key assumptions used to estimate the fair value of the stock options granted during the three months ended December 31, 2021 and 2020 included:

	Three Months Ended December 31,	
	2021	2020
Expected term of options (years)	5.1 - 6.1	6.0
Expected common stock price volatility	73.8% - 74.5%	83.1% - 83.3%
Risk-free interest rate	1.1% - 1.4%	0.6% - 0.7%
Expected dividend yield	—	—

During the fiscal year ended September 30, 2021, the Company granted a stock option to purchase 225,000 shares to a consultant, which was cancelled and reissued in June 2021 in recognition of future service to the Company as an employee. The exercisability and vesting of the stock option are subject to the consultant's effective date of employment with the Company, which had not yet occurred as of December 31, 2021, and as a result, the grant-date of such option has not occurred under GAAP. Therefore, the number and fair value of the shares subject to this option are not reflected in the table summarizing the options issued and outstanding as of and for the three months ended December 31, 2021, and did not have impact on unrecognized compensation costs or the estimated weighted-average amortization period above as of December 31, 2021.

Restricted Stock

A summary of the changes in the unvested restricted stock during the three months ended December 31, 2021 is as follows:

	Unvested Restricted Stock	Weighted Average Grant Date Fair Value Price
Unvested as of September 30, 2021	—	\$ —
Granted	4,441	3.94
Vested	(4,441)	3.94
Unvested as of December 31, 2021	—	—
Total unrecognized expense remaining	\$ —	
Weighted-average years expected to be recognized over	—	

Restricted Stock Units

Below is a table summarizing the restricted stock units granted and outstanding as of and for the three months ended December 31, 2021:

	Restricted Stock Units	Weighted Average Grant Date Fair Value Price
Unvested as of September 30, 2021	10,000	\$ 5.09
Granted	—	
Unvested as of December 31, 2021	10,000	5.09
Total unrecognized expense remaining	\$ 35,580	
Weighted-average years expected to be recognized over	1.7	

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

12. Commitments and Contingencies

Litigation

The Company has become involved in certain legal proceedings and claims which arise in the normal course of business. The Company believes that an adverse outcome is unlikely, and it cannot reasonably estimate the potential loss at this point. If an unfavorable ruling were to occur, there exists the possibility of a material adverse impact on the Company's results of operations, prospects, cash flows, financial position and brand. Costs associated with the Company's involvement in legal proceedings are expensed as incurred.

Securities Class Action Lawsuit

On February 14, 2018, plaintiff Jeevesh Khanna, commenced an action in the Southern District of New York, against Ohr and several current and former officers and directors, alleging that they violated federal securities laws between June 24, 2014 and January 4, 2018. On August 7, 2018, the lead plaintiffs, now George Lehman and Insured Benefit Plans, Inc., filed an amended complaint, stating the class period to be April 8, 2014 through January 4, 2018. The plaintiffs did not quantify any alleged damages in their complaint, but, in addition to attorneys' fees and costs, they seek to maintain the action as a class action and to recover damages on behalf of themselves and other persons who purchased or otherwise acquired Ohr common stock during the putative class period and purportedly suffered financial harm as a result. We and the individuals dispute these claims and intend to defend the matter vigorously. On September 17, 2018, Ohr filed a motion to dismiss the complaint. On September 20, 2019, the district court entered an order granting the defendants' motion to dismiss. On October 23, 2019, the plaintiffs filed a notice of appeal of that order dismissing the action and other related orders by the district court. After full briefing and oral argument, on October 9, 2020, the U.S. Court of Appeals for the Second Circuit issued a summary order affirming the district court's order granting the motion to dismiss and remanding the action to the district court to make a determination on the record related to plaintiffs' request for leave to file an amended complaint. On remand, the district court denied plaintiffs' subsequent request to amend and dismissed with prejudice plaintiffs' claims. On December 16, 2020, plaintiffs filed a notice of appeal of that order denying plaintiffs leave to amend. On December 16, 2021, the Second Circuit affirmed the decision and order of the district court denying plaintiffs' motion for leave to amend, thereby dismissing the appeal and action in its entirety. Plaintiffs have not sought reconsideration of the Second Circuit's decision, and the current deadline for plaintiffs to file a writ of *certiorari* for review by the Supreme Court of the United States is March 15, 2022.

Derivative Lawsuit

On May 3, 2018, plaintiff Adele J. Barke, derivatively on behalf of Ohr, commenced an action against certain former directors of Ohr, including Michael Ferguson, Orin Hirschman, Thomas M. Riedhammer, June Almenoff and Jason S. Slakter in the Supreme Court, State of New York, alleging that the action was brought in the right and for the benefit of Ohr seeking to remedy their "breach of fiduciary duties, corporate waste and unjust enrichment that occurred between June 24, 2014 and the present." It does not quantify any alleged damages. We and the individuals dispute these claims and intend to defend the matter vigorously. Such litigation has been stayed pursuant to a stipulation by the parties, which has been so ordered by the court, pending the exhaustion of all appeals from the decision of the Southern District of New York dismissing the *Khanna* action discussed above. These matters could result in substantial costs and a diversion of management's resources and attention, which could harm our business and the value of our common stock.

NeuBase Therapeutics, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

Joint Proxy Statement Lawsuit

On March 20, 2019, a putative class action lawsuit was filed in the United States District Court for District of Delaware naming as defendants Ohr and its board of directors, Legacy NeuBase, and Ohr Acquisition Corp., captioned *Wheby v. Ohr Pharmaceutical, Inc., et al*, Case No. 1:19-cv-00541-UNA (the “Wheby Action”). The plaintiffs in the Wheby Action allege that the preliminary joint proxy/prospectus statement filed by Ohr with the SEC on March 8, 2019, contained false and misleading statements and omitted material information in violation of Section 14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder, and further that the individual defendants are liable for those alleged misstatements and omissions under Section 20(a) of the Exchange Act. The complaint in the Wheby Action has not been served on, nor was service waived by, any of the named defendants in that action. The action seeks, among other things, to rescind the Merger or an award of damages, and an award of attorneys’ fees and experts’ fees and expenses. The defendants dispute the claims raised in the Wheby Action. Management believes that the likelihood of an adverse decision from the sole remaining action is unlikely; however, the litigation could result in substantial costs and a diversion of management’s resources and attention, which could harm our business and the value of our common stock.

Note 13. Subsequent Events

Subsequent to December 31, 2021, the Company granted approximately 1.3 million stock options to officers and employees of the Company in accordance with the 2019 Plan. The grants have a weighted average exercise price of \$2.07 per option and, a contractual term of 10 years.

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

Disclosures Regarding Forward-Looking Statements

The following should be read in conjunction with the unaudited condensed consolidated financial statements and the related notes that appear elsewhere in this report as well as in conjunction with the Risk Factors section in our Annual Report on Form 10-K for the fiscal year ended September 30, 2021, as filed with the United States Securities and Exchange Commission (“SEC”) on December 23, 2021. This report and our Form 10-K include forward-looking statements made based on current management expectations pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended.

This report includes “forward-looking statements” within the meaning of Section 21E of the Exchange Act. Those statements include statements regarding the intent, belief or current expectations of the Company and its subsidiaries and our management team. Any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and actual results may differ materially from those projected in the forward-looking statements. These risks and uncertainties include but are not limited to those risks and uncertainties set forth in Part II, Item 1A – Risk Factors of this Quarterly Report and in Part I, Item 1A – Risk Factors of our Annual Report on Form 10-K. In light of the significant risks and uncertainties inherent in the forward-looking statements included in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K, the inclusion of such statements should not be regarded as a representation by us or any other person that our objectives and plans will be achieved. Further, these forward-looking statements reflect our view only as of the date of this report. Except as required by law, we undertake no obligations to update any forward-looking statements and we disclaim any intent to update forward-looking statements after the date of this report to reflect subsequent developments. Accordingly, you should also carefully consider the factors set forth in other reports or documents that we file from time to time with the SEC.

Summary

NeuBase Therapeutics, Inc. (“NeuBase”, “Company”, “we”, “us” and “our”) is a biotechnology company focused on significantly reducing the burden of untreatable morbidity and mortality across the globe caused by rare and common diseases.

To achieve this goal, we have designed, built, and validated a new precision genetic medicines platform technology able to uniquely drug the double-stranded human genome and address disease at the root of causality without many of the limitations of early precision genetic medicine technologies.

We are poised to file our first Investigational New Drug (“INDs”) applications with the U.S. Food and Drug Administration (“FDA”) beginning in calendar year 2022 and intend to scale into additional indications with increasing speed and efficiency.

Overview

Most diseases remain undruggable with current therapeutic modalities, leaving millions of patients with limited options. These include rare diseases, cancers, common chronic and infectious diseases. Most diseases are genetic, in whole or in part, underscoring the critical importance of new medicines that can drug the human genome for the future of health. Yet the genome has been difficult to target with therapies due to its double-stranded structure, which evolved to protect the fidelity of this essential blueprint of life.

The complexity associated with drugging proteins, each of which is a unique and often dynamic molecular entity, has resulted in a drug development process that is commonly inefficient, time-consuming, and expensive with low probabilities of success. This strategy has, in part, resulted in high drug prices and a high remaining burden of unmet patient need.

These issues could potentially be resolved by targeting the genetic material itself instead of downstream protein products. Precision genetic medicines represent a relatively new class of therapies that target genetic sequences that are the root cause of diseases.

We have designed, built, and validated a new technology platform that can uniquely Drug the Genome™ to address the three disease-causing mechanisms (*i.e.*, gain-of-function, change-of-function, or loss-of-function of a gene), without the limitations of early precision genetic medicines. The technology is predicated on synthetic peptide-nucleic acid (“PNA”) chemistry and can directly engage the genome in a sequence-specific manner and address root causality of diseases. These compounds operate by temporarily engaging the genome (or single and double-stranded RNA targets, if desired) and interfering with cellular machinery that process mutant genes to halt their ability to manifest a disease. We have repeatedly demonstrated, in proof-of-concept preclinical animal studies across FY2020 and FY2021, the ability to address multiple disease-causing genes, and different causal mechanisms, to resolve the disease state without the limitations of early genetic medicine technologies. These limitations, and the data that illustrate that we have likely engineered them out of our platform to potentially unlock broad impact across many diseases, are:

- **Delivery.** Most early precision genetic medicine technologies are large and heavily negatively charged, making it difficult for them to broadly distribute throughout the body to address tissues that are affected by many diseases. This often requires them to be locally injected such as into the brain, likely limiting their ability for broad-based impact. We have designed and developed a proprietary delivery technology that allows its small, neutral-charge and water-soluble compounds to be administered using a patient-friendly route such as subcutaneous injection and achieve broad biodistribution, including into the deep brain and nuclei of cells.
- **Tolerability.** Most early precision genetic medicine technologies trigger the innate and/or acquired immune system, limiting their ability to achieve pharmacologic doses or to be used repeatedly. For example, delivery of negatively charged nucleic acid therapies often trigger the innate immune system and delivery of proteins often trigger the acquired immune system. Our technology is comprised of fully synthetic compounds that have been shown to be “immunologically inert”, potentially allowing them to be administered chronically to temporarily Drug the Genome™ over a patient’s lifetime.
- **Selectivity.** Many technologies in the early precision genetic medicines industry cannot discriminate between mutant gene sequences and their healthy (“wild-type”) counterparts, nor between other highly similar target sequences in the cell. This potentially limits these technologies in their ability to address small disease-causing mutations such as single nucleotide changes (“point mutations”), which account for a large fraction of disease-causing mutations and functional variants. Our technology can discriminate point mutations, which increases the opportunity space. This capability comes from the “rigid” nature of the backbone which does not tolerate imperfect target engagement. In addition, this single-base selectivity reduces the likelihood that our compounds will engage with genes elsewhere in the genome that are similar but not identical, potentially reducing any adverse events triggered by off-target engagement (“OTEs”).
- **Manufacturability.** Many technologies in the early precision genetic medicines industry require significant investments in custom manufacturing infrastructure, and thus are limited in their potential impact and scalability. Our technology utilizes established and fully commoditized manufacturing processes, both for small molecule and synthetic peptide synthesis (the combination of which are required to manufacture our compounds) that are available with high redundancy and at commercial scale.
- **Durability.** Many technologies in the early precision genetic medicines industry can only be dosed a single time, are often cleared by the immune system, or are otherwise not durable in their efficacy.
- **Scalability.** Many technologies in the early precision genetic medicines industry are not truly scalable across a variety of indications, for the reasons described above. As our goal is to provide solutions to those suffering from a wide variety of diseases across the globe, we have purpose-built a scalable platform. We always address a single target type for all therapeutic programs (the genome), utilize the same delivery shuttle enabling similar pharmacokinetics (“PK”), absorption distribution metabolism and excretion (“ADME”), dose, route and regimens across programs, utilize predominantly the same chemistry yielding similar therapeutic indices, are able to predict OTEs *a priori* using bioinformatics and engineer around them before beginning development, and leverage manufacturing process development across programs such that ongoing platform learnings have already created increasing speed and efficiency.

As further validation of our PATrOL™ platform’s capabilities, in FY2021, we described data illustrating that our first-in-class platform technology can address various types of causal insults by Drugging the Genome™ in animal models of a variety of human diseases after patient-friendly routes of administration and does so in a well-tolerated manner.

Based on what we believe is a solid foundation, FY2021 marked a transition from a research-stage to a development-stage company. We established new research laboratories and administrative offices in Pittsburgh, PA, expanded our pipeline to include both rare disease and oncology, recruited clinical development and chemistry manufacturing and controls (“CMC”) teams, established offices in Cambridge, MA, nominated a development compound for our DM1 program, initiated good manufacturing practice (“GMP”) manufacturing scale up, finalized the formulation work for subcutaneous and intravenous routes, initiated PK/ADME studies with the DM1 development candidate, and initiated PK/pharmacodynamics (“PD”) studies to define the dosing regimen for initial human studies. In addition, we have continued to optimize candidates for our HD and KRAS programs, illustrating pharmacology *in vivo* in appropriate animal models of each. Additionally, in FY2021 we developed a proprietary genetic disease database with utility in prioritization of pipeline expansion and partnership opportunities.

We are developing precision genetic medicines targeting rare, monogenic diseases for which there are no approved therapies, as well as more common genetic disorders, including cancers that are resistant to current therapeutic approaches. Our pipeline includes therapeutic candidates for the treatment of DM1, HD, and cancer-driving point mutations in *KRAS*, G12V and G12D, which are involved in many tumor types and have historically been “undruggable”.

Based on compelling results from *in vitro* and *in vivo* preclinical studies, we plan to file an IND application for our DM1 investigational therapy in the fourth quarter of CY2022. We are targeting CY2023 to file an IND application for an investigational therapy to treat Huntington’s disease. Both are devastating systemic diseases with no effective therapies. Our oncology program has recently been announced (FY2021), together with *in vivo* activity illustrating allele-selective engagement of mutant *KRAS* at the DNA and RNA levels, with abrogation of downstream hyperactive signaling through multiple RAS pathway members, resulting in anti-tumor activity. We continue to improve upon our platform while concurrently developing programs, resulting in next-generation compounds that continue to make their way through preclinical development in a parallel manner. We have recently finalized an analysis of the entire known mutational database and selected several additional high-value indications for screening and development.

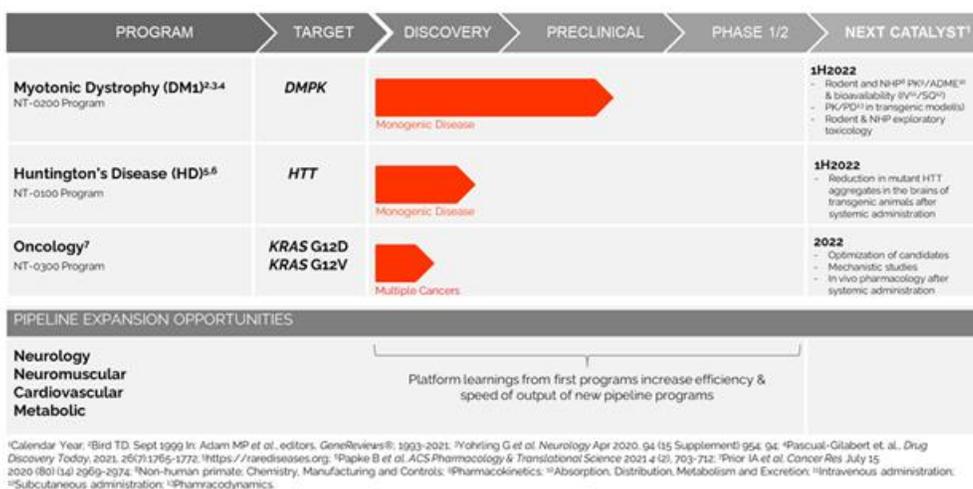


Figure 4. The initial pipeline in rare disease and oncology, with platform learnings increasing the efficiency and speed additional undisclosed programs, both internally developed and in discussions for co-development with partners.

We are poised to file a series of IND applications for indications with large unmet needs such as DM1, which is expected to reach IND application filing by the end of CY2022, HD expected to reach IND application in CY2023 and cancers (*KRAS* G12V and G12D mutations) likely thereafter.

In advance of our first IND application filing in the fourth quarter of CY2022 and our subsequent planned transition to a clinical stage company in our combined Phase 1/2 clinical trial in DM1, the following data sets are planned to be disseminated:

Program	Calendar Year	Data Set	Relevance
DM1	1H2022	Development candidate PK / ADME and bioavailability in wild-type model(s)	Defines the exposures in muscle, heart, and brain after systemic administration to enable correct dosing for a whole-body solution
		Development candidate PK / PD in transgenic murine model(s)	Defines the relationship between tissue exposures of the development candidate and molecular / functional rescue of the disease to enable dose, route, and regimen in the clinic
		Development candidate exploratory toxicology in murine and NHP models	Illustrates the safety of the development candidate and defines the maximum tolerated dose; broader platform tolerability validation for other programs
	2H2022	GLP toxicology	Formalizes and extends upon the exploratory toxicology work to enable the IND filing
		Mechanistic studies including blood-brain barrier transit	Articulates details of the mechanism by which the development compound acts and is differentiated
	4Q2022	IND filing with FDA	We have confidence that the pharmacology and tolerability data warrant a review by the FDA ideally enabling first-in-human studies within 30 days
HD	1H2022	Reduction in mutant HTT aggregates in the brain of transgenic murine models(s) with systemic route	Further proves passage across the blood-brain barrier in sufficient quantities and CNS distribution to reduce or eliminate the disease-causing neuronal HTT aggregates via a systemic route of administration
	2H2022	Functional rescue of transgenic murine models(s) with systemic route	Connects the reduction of mutant HTT protein and reduction in neuronal aggregates to a reduction in the progress of the disease after a systemic route
		Development candidate nomination	We believe the pharmacology and tolerability data support investment into CMC scale up and IND-enabling activities
	2023	IND filing with FDA	We have confidence that the pharmacology and tolerability data warrant a review by the FDA ideally enabling first-in-human studies within 30 days
KRAS	2022	Optimization of candidates and mechanistic studies	The properties of target engagement have been optimized for potency and selectivity including temporal dynamics of mutant KRAS reduction
		<i>In vivo</i> pharmacology in xenograft murine models	Articulates that systemic delivery confers beneficial pharmacologic and tolerability profiles and sets the stage for development candidate nomination

Critical Accounting Estimates and Policies

The preparation of financial statements in accordance with United States generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the amounts reported in our unaudited condensed consolidated financial statements and accompanying notes. Management bases its estimates on historical experience, market and other conditions, and various other assumptions it believes to be reasonable. Although these estimates are based on management’s best knowledge of current events and actions that may impact us in the future, the estimation process is, by its nature, uncertain given that estimates depend on events over which we may not have control. If market and other conditions change from those that we anticipate, our unaudited condensed consolidated financial statements may be materially affected. In addition, if our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material effect in our unaudited condensed consolidated financial statements. We review our estimates, judgments, and assumptions used in our accounting practices periodically and reflect the effects of revisions in the period in which they are deemed to be necessary. We believe that these estimates are reasonable; however, our actual results may differ from these estimates.

Our critical accounting policies and estimates are discussed in our Annual Report on Form 10-K for the fiscal year ended September 30, 2021, and there have been no material changes to such policies or estimates during the three months ended December 31, 2021.

Recent Accounting Pronouncements

Please refer to Note 2, Significant Accounting Policies—Recent Accounting Pronouncements, in Item 1, Financial Statements, for a discussion of recent accounting pronouncements.

Results of Operations

Results of operations for the three months ended December 31, 2021, reflect the following changes from the three months ended December 31, 2020:

	Three Months Ended December 31,		Change
	2021	2020	
OPERATING EXPENSES			
General and administrative	\$ 2,935,710	\$ 2,641,470	\$ 294,240
Research and development	4,369,257	2,019,924	2,349,333
TOTAL OPERATING EXPENSES	7,304,967	4,661,394	2,643,573
LOSS FROM OPERATIONS	(7,304,967)	(4,661,394)	(2,643,573)
OTHER INCOME (EXPENSE)			
Interest expense	(15,219)	(9,737)	(5,482)
Interest income	1,254	—	1,254
Change in fair value of warrant liabilities	—	630,112	(630,112)
Equity in losses on equity method investment	(415,744)	(25,412)	(390,332)
Other income, net	5,860	—	5,860
Total other (expense) income, net	(423,849)	594,963	(1,018,812)
NET LOSS	\$ (7,728,816)	\$ (4,066,431)	\$ (3,662,385)

During the three months ended December 31, 2021, our operating loss increased by \$2.6 million compared to the three months ended December 31, 2020. Our net loss increased by \$3.7 million for the three months ended December 31, 2021, as compared to the three months ended December 31, 2020. Until we are able to generate revenue from product sales, our management expects to continue to incur net losses.

General and Administrative Expenses

General and administrative expenses consist primarily of legal and professional fees, wages and stock-based compensation. General and administrative expenses increased by \$0.3 million for the three months ended December 31, 2021, as compared to the three months ended December 31, 2020, primarily due to increases in professional fees, settlement costs, and administrative expenses, partially offset by a decrease in stock-based compensation expense.

Research and Development Expenses

Research and development expenses consist primarily of professional fees, research, development, and manufacturing expenses, and wages and stock-based compensation. Research and development expenses increased by \$2.3 million for the three months ended December 31, 2021, as compared to the three months ended December 31, 2020, primarily due to increases in manufacturing expenses, professional fees, employee head count, and the ramp up of research and development activities.

Change in Fair Value of Warrant Liabilities

Change in fair value of warrant liabilities reflects the changes in the fair value of outstanding warrants which is primarily driven by changes in our stock price. The fair value of warrant liabilities was \$0 at December 31, 2021 and September 30, 2021, therefore, no change in fair value was recognized during the three months ended December 31, 2021. We recognized a gain of \$0.6 million from the change in fair value of warrant liabilities for the three months ended December 31, 2020.

Equity in Losses on Equity Method Investment

We account for our investment in DepYmed common shares using the equity method of accounting and record our proportionate share of DepYmed's net income and losses. The carrying value of our investment in DepYmed common shares was reduced to zero, therefore, during the three months ended December 31, 2021, we recorded our share of equity losses to the extent of our investment in preferred shares of DepYmed. We will continue to monitor the operating results of DepYmed and will record equity in earnings when the equity in earnings exceeds our previously unrecognized losses.

Liquidity, Capital Resources and Financial Condition

We have had no revenues from product sales and have incurred operating losses since inception. As of December 31, 2021, we had cash and cash equivalents of \$47.3 million. We have historically funded our operations through the sale of common stock and the issuance of convertible notes and warrants.

We expect to continue to incur significant operating losses for the foreseeable future and may never become profitable. As a result, we will likely need to raise additional capital through one or more of the following: the issuance of additional debt or equity or the completion of a licensing transaction for one or more of our pipeline assets.

Net working capital decreased from September 30, 2021 to December 31, 2021 by \$6.4 million (to \$44.3 million from \$50.7 million). Our quarterly cash burn has increased compared to prior periods due to increased research and development and corporate activities, and we expect it to continue to increase in future periods. We expect that our existing cash and cash equivalents will be sufficient to fund our operations for at least the next twelve months following the issuance of December 31, 2021 financial statements. We have based this expectation on assumptions that may prove to be incorrect, and we may use our available capital resources sooner than we currently expect. In addition, we may elect to raise additional funds before we need them if the conditions for raising capital are favorable due to market conditions or strategic considerations, even if we expect we have sufficient funds for our current or future operating plans.

At present, we have no bank line of credit or other fixed source of capital reserves. Should we need additional capital in the future, we will be primarily reliant upon a private or public placement of our equity or debt securities, or a strategic transaction, for which there can be no warranty or assurance that we may be successful in such efforts. If we are unable to maintain sufficient financial resources, our business, financial condition and results of operations will be materially and adversely affected. This could affect future development and business activities and potential future clinical studies and/or other future ventures. Failure to obtain additional equity or debt financing will have a material adverse impact on our business operations. There can be no assurance that we will be able to obtain the financing needed to achieve our goals on acceptable terms or at all.

Cash Flow Summary

The following table summarizes selected items in our unaudited condensed consolidated statements of cash flows:

	Three Months Ended December 31,	
	2021	2020
Net cash used in operating activities	\$ (5,268,446)	\$ (3,780,861)
Net cash used in investing activities	(123,906)	(208,541)
Net cash used in financing activities	(174,975)	(26,111)
Net decrease in cash and cash equivalents	<u>\$ (5,567,327)</u>	<u>\$ (4,015,513)</u>

Operating Activities

Net cash used in operating activities was approximately \$5.3 million for the three months ended December 31, 2021, as compared to approximately \$3.8 million for the three months ended December 31, 2020. Net cash used in operating activities in the three months ended December 31, 2021, was primarily the result of our net loss and a decrease in accounts payable, partially offset by stock-based compensation expense, depreciation and amortization expenses, a decrease in prepaid expenses and other current assets and an increase in accrued expenses. Net cash used in operating activities in the three months ended December 31, 2020, was primarily the result of our net loss and the change in fair value of warrant liabilities, partially offset by our stock-based compensation expense, depreciation and amortization expense and the loss on equity method investment.

Investing Activities

Net cash used in investing activities was approximately \$0.1 million for the three months ended December 31, 2021, as compared to \$0.2 million for the three months ended December 31, 2020. Net cash used in investing activities for the three months ended December 31, 2021 and 2020 was primarily due to the purchase of laboratory and office equipment.

Financing Activities

Net cash used in financing activities was approximately \$0.2 million for the three months ended December 31, 2021, as compared to \$0.03 million for the three months ended December 31, 2020. Net cash used in financing activities for both the three month periods ended December 31, 2021 and 2020 primarily reflect the principal payments of financed insurance, partially offset by the proceeds received from the exercise of stock options.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are a smaller reporting company, as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended, and are not required to provide the information required under this item.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2021. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2021, our disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the quarterly period ended December 31, 2021.

PART II.

ITEM 1. LEGAL PROCEEDINGS

The Company has become involved in certain legal proceedings and claims which arise in the normal course of business. The Company believes that an adverse outcome is unlikely, and it cannot reasonably estimate the potential loss at this point. If an unfavorable ruling were to occur, there exists the possibility of a material adverse impact on our results of operations, prospects, cash flows, financial position and brand. Costs associated with the Company's involvement in legal proceedings are expensed as incurred.

Securities Class Action Lawsuit

On February 14, 2018, plaintiff Jeevesh Khanna, commenced an action in the Southern District of New York, against Ohr (which was the name of the Company prior to the completion of the merger with NeuBase Therapeutics, Inc., a Delaware corporation, in accordance with the terms of the Agreement and Plan of Merger and Reorganization entered into on January 2, 2019, as amended, pursuant to which (i) Ohr Acquisition Corp., a subsidiary of Ohr, merged with and into Legacy NeuBase, with Legacy NeuBase (renamed as "NeuBase Corporation") continuing as a wholly-owned subsidiary of Ohr and the surviving corporation of the merger and (ii) Ohr was renamed as "NeuBase Therapeutics, Inc." and several current and former officers and directors, alleging that they violated federal securities laws between June 24, 2014 and January 4, 2018. On August 7, 2018, the lead plaintiffs, now George Lehman and Insured Benefit Plans, Inc., filed an amended complaint, stating the class period to be April 8, 2014 through January 4, 2018. The plaintiffs did not quantify any alleged damages in their complaint but, in addition to attorneys' fees and costs, they seek to maintain the action as a class action and to recover damages on behalf of themselves and other persons who purchased or otherwise acquired Ohr common stock during the putative class period and purportedly suffered financial harm as a result. We and the individuals dispute these claims and intend to defend the matter vigorously. On September 17, 2018, Ohr filed a motion to dismiss the complaint. On September 20, 2019, the district court entered an order granting the defendants' motion to dismiss. On October 23, 2019, the plaintiffs filed a notice of appeal of that order dismissing the action and other related orders by the district court. After full briefing and oral argument, on October 9, 2020, the U.S. Court of Appeals for the Second Circuit issued a summary order affirming the district court's order granting the motion to dismiss and remanding the action to the district court to make a determination on the record related to plaintiffs' request for leave to file an amended complaint. On remand, the district court denied plaintiffs' subsequent request to amend and dismissed with prejudice plaintiffs' claims. On December 16, 2020, plaintiffs filed a notice of appeal of that order denying plaintiffs leave to amend. On December 16, 2021, the Second Circuit affirmed the decision and order of the district court denying plaintiffs' motion for leave to amend, thereby dismissing the appeal and action in its entirety. Plaintiffs have not sought reconsideration of the Second Circuit's decision, and the current deadline for plaintiffs to file a writ of *certiorari* for review by the Supreme Court of the United States is March 15, 2022.

Derivative Lawsuit

On May 3, 2018, plaintiff Adele J. Barke, derivatively on behalf of Ohr, commenced an action against certain former directors of Ohr, including Michael Ferguson, Orin Hirschman, Thomas M. Riedhammer, June Almenoff and Jason S. Slakter in the Supreme Court, State of New York, alleging that the action was brought in the right and for the benefit of Ohr seeking to remedy their "breach of fiduciary duties, corporate waste and unjust enrichment that occurred between June 24, 2014 and the present." It does not quantify any alleged damages. We and the individuals dispute these claims and intend to defend the matter vigorously. Such litigation has been stayed pursuant to a stipulation by the parties, which has been so ordered by the court, pending the exhaustion of all appeals from the decision of the Southern District of New York dismissing the *Khanna* action discussed above. These matters could result in substantial costs and a diversion of management's resources and attention, which could harm our business and the value of our common stock.

Joint Proxy Statement Lawsuit

On March 20, 2019, a putative class action lawsuit was filed in the United States District Court for District of Delaware naming as defendants Ohr and its board of directors, Legacy NeuBase and Ohr Acquisition Corp., captioned *Wheby v. Ohr Pharmaceutical, Inc., et al.*, Case No. 1:19-cv-00541-UNA (the “Wheby Action”). The plaintiffs in the Wheby Action allege that the preliminary joint proxy/prospectus statement filed by Ohr with the SEC on March 8, 2019 contained false and misleading statements and omitted material information in violation of Section 14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder, and further that the individual defendants are liable for those alleged misstatements and omissions under Section 20(a) of the Exchange Act. The complaint in the Wheby Action has not been served on, nor was service waived by, any of the named defendants in that action. The action seeks, among other things, to rescind the Merger or an award of damages, and an award of attorneys’ and experts’ fees and expenses. The defendants dispute the claims raised in the Wheby Action. Management believes that the likelihood of an adverse decision from the sole remaining action is unlikely; however, the litigation could result in substantial costs and a diversion of management’s resources and attention, which could harm our business and the value of our common stock.

ITEM 1A. RISK FACTORS

We operate in a dynamic and rapidly changing environment that involves numerous risks and uncertainties. Certain factors may have a material adverse effect on our business, prospects, financial condition and results of operations, and you should carefully consider them. Accordingly, in evaluating our business, in addition to other information contained in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed under the caption “Risk Factors” that appear in Item 1A of our Annual Report on Form 10-K for the year ended September 30, 2021, filed with the U.S. Securities and Exchange Commission (“SEC”) on December 23, 2021. Other events that we do not currently anticipate or that we currently deem immaterial may also affect our business, prospects, financial condition and results of operations. There have been no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended September 30, 2021.

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

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

Exhibit Number	Description	Incorporated by Reference			
		Form	File Number	Filing Date	Exhibit
2.1+	Agreement and Plan of Merger and Reorganization, dated as of January 2, 2019, by and among Ohr Pharmaceutical, Inc., Ohr Acquisition Corp. and NeuBase Therapeutics, Inc.	8-K	001-35963	1/3/2019	2.1
2.2	First Amendment to the Agreement and Plan of Merger and Reorganization, dated as of June 27, 2019, by and among Ohr Pharmaceutical, Inc., Ohr Acquisition Corp. and NeuBase Therapeutics, Inc.	8-K	001-35963	7/3/2019	2.1
3.1	Amended and Restated Certificate of Incorporation of the Company.	8-K	001-35963	7/12/2019	3.1
3.2	Amended and Restated Bylaws of the Company.	8-K	001-35963	9/23/2019	3.1
4.1	Form of Series A Warrant issued to investors pursuant to the Securities Purchase Agreement, dated December 7, 2016, by and among Ohr Pharmaceutical, Inc. and the purchasers listed therein.	8-K	001-35963	12/8/2016	4.1
4.2	Form of Warrant issued to investors pursuant to the Securities Purchase Agreement, dated as of April 5, 2017, by and among Ohr Pharmaceutical, Inc. and the purchasers listed therein.	8-K	001-35963	4/6/2017	4.1
4.3	Form of Common Stock Certificate.	S-8	333-233346	8/16/2019	4.17
10.1+	Offer Letter of Employment, dated January 10, 2022, by and between NeuBase Therapeutics, Inc. and Todd Branning	8-K	0001-35963	1/10/2022	10.1
31.1*	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2*	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1*	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002.				
101.INS*	XBRL Instance Document.				
101.SCH*	XBRL Taxonomy Extension Schema Document.				
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.				
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.				
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.				
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.				

* Filed herewith.

Management compensatory plan or arrangement.

+ All schedules and exhibits to the agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

SIGNATURES

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

NeuBase Therapeutics, Inc.

Date: February 10, 2022

/s/ Todd Branning

Todd Branning
Chief Financial Officer
(Principal Financial Officer)

