

March 16, 2023

## VIA EDGAR

U.S. Securities and Exchange Commission Division of Corporation Finance Office of Life Sciences 100 F Street, N.E. Washington, D.C. 20549

Attention: Jenn Do Kevin Vaughn

Re: NeuBase Therapeutics, Inc. Form 10-K for Fiscal Year Ended September 30, 2022 Filed December 21, 2022 File No. 1-35963

## Ladies and Gentlemen:

This letter is submitted on behalf of NeuBase Therapeutics, Inc. (the "Company") in response to the comment of the staff of the Division of Corporation Finance (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission") with respect to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2022, filed with the Commission on December 21, 2022, as set forth in the Staff's letter to the Company dated March 8, 2023.

For your convenience, the Company has set forth below the Staff's comment in italics, followed by the Company's response thereto.

Form 10-K for the Fiscal Year Ended September 30, 2022

## Management's Discussion and Analysis of Financial Condition and Results of Operations, page 89

- 1. Given the significant fluctuations in research and development expense during the years presented as well as in the subsequent interim period, please revise your future filings to disclose the drivers of the changes. As part of your response, address the following:
- To the extent possible, quantify the impact of your October 2022 restructuring and refocusing of development projects on the amounts incurred.
- Disclose the costs incurred during each period presented for each of your key research and development projects. If you do not track your research and development costs by project, please disclose that fact and explain why you do not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that provides more transparency as to the type of research and development expenses incurred (i.e., by nature or type of expense) which should reconcile to total research and development expense on the Statements of Operations.

## Response:

The Company respectfully acknowledges the Staff's comment and advises the Staff that the Company does not have the ability to track research and development costs in sufficiently reliable detail to disclose such expenses by project. The Company is a pre-commercial discovery company, and most of the research and development costs the Company incurs are related to early-stage activities; the Company respectfully submits that to track and disclose such costs on a project-by-project basis would be unduly burdensome and potentially speculative. The Company's outsourced research and development costs are shared among various potential programs at different stages of development, often across multiple target indications in a combinatorial approach, which inhibits the Company's ability to accurately track such outsourced development costs by project.

In October 2022, the Company announced a strategic restructuring to expand its focus to include the advancement of the differentiated gene editing capabilities of its platform. As part of the development pipeline shift to gene editing, the Company has deferred preclinical activities for its myotonic dystrophy type 1 (DM1), Huntington's disease (HD), and KRAS programs.

The Company's focus is on the advancement of its gene editing platform, and in future filings the Company intends to include disclosure regarding the costs incurred for each of its key research and development categories, including such quantitative and/or qualitative disclosure that provides more transparency as to the type of research and development expenses incurred. By way of example, the Company intends to include disclosure similar to the below in the section entitled *Management's Discussion and Analysis of Financial Condition and Results of Operations* of future Annual Reports on Form10-K (form presented for the Annual Report on Form 10-K for the fiscal year ended September 30, 2022 for illustrative purposes).

The following table summarizes our research and development expenses for the years ended September 30, 2022 and 2021:

	Year Ended September 30,						
	2022		2021		Change		
Research and development	 						
Professional consultation & other analytical work	\$	\$		\$			
Lab Supplies, chemicals & manufacturing expenses							
Employee wages, benefits, & payroll taxes							
Stock-based compensation expense							
Facility, depreciation, and other expenses							
Total research and development expenses	\$ 21,448,592	\$	11,475,201	\$	9,973,391		

The increase of approximately \$10.0 million of research and development expenses was primarily attributable to \$[•] of [increased/decreased] professional consultation and other analytical work; \$[•] [increased/decreased] lab supplies, chemicals, and manufacturing expenses; \$[•] [increased/decreased] of employee wages, benefits, and payroll taxes; \$[•] of [increased/decreased] stock-based compensation expense; and \$[•] of [increased/decreased] equipment, depreciation, and facility costs, primarily related to [•].

Further, the Company intends to include disclosure similar to the below in the section entitled Management's Discussion and Analysis of Financial Condition and Results of

Operations of future Quarterly Reports on Form10-Q (form presented for the Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2022 for illustrative purposes), as well as disclosure similar to the below to quantify the applicable impact of the Company's October 2022 restructuring in future periodic reports.

The following table summarizes our research and development expenses for the three months ended December 31, 2022 and 2021:

	Three Months Ended December 31,					
	2022		2021		Change	
Research and development						
Professional consultation & other analytical work	\$		\$		\$	
Lab Supplies, chemicals & manufacturing expenses						
Employee wages, benefits, & payroll taxes						
Stock-based compensation expense						
Facility, depreciation, and other expenses						
Total research and development expenses	\$	1,351,407	\$	4,369,257	\$	(3,017,850)

The decrease of approximately \$3.0 million of research and development expenses was primarily attributable to \$[•] of [increased/decreased] professional consultation and other analytical work; \$[•] of [increased/decreased] lab supplies, chemicals, and manufacturing expenses; \$[•] [increase/decrease] of employee wages, benefits, and payroll taxes; \$[•] of [increased/decreased] stock-based compensation expense; and \$[•] of [increased/decreased] equipment, depreciation, and facility costs. The overall decrease is primarily

Restructuring charges relate primarily to the Company's strategic restructuring to expand its focus to include the advancement of the differentiated gene editing capabilities of its platform. The Company recognized restructuring costs of \$0.7 million during the three months ended December 31, 2022, comprised primarily of contract termination costs of \$0.6 million and termination benefits related to headcount reductions of \$0.1 million. Employee termination benefits were recognized at the date employees were notified and post-employment benefits were accrued as the obligation was probable and estimable.

The following table summarizes the Company's restructuring expenses incurred during the three months ended December 31, 2022:

	Re	Restructuring	
		Charges	
Employee-related costs	\$	97,627	
Research and development contract termination costs		540,058	
Other		14,766	
Total restructuring expense	\$	652,451	

We appreciate the time you have taken to review the Company's public filings. The Company's future filings will reflect the responses set forth herein, as applicable.

Sincerely,

NeuBase Therapeutics, Inc.

/s/ Todd Branning Todd P. Branning Chief Financial Officer

(Principal Financial and Accounting Officer)