June 25, 2021

VIA EDGAR TRANSMISSION

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Life Sciences
Washington, D.C. 20549
Attention: Sasha Parikh, Kevin Vaughn

RE: Tonix Pharmaceuticals Holding Corp.

Dear Ms. Parikh and Mr. Vaughn:

I am writing on behalf of Tonix Pharmaceuticals Holding Corp. (the "Company"), in response to the letter from the Staff of the Division of Corporation Finance (the "Staff"), of the U.S. Securities and Exchange Commission (the "Commission"), dated June 14, 2021 (the "Comment Letter") relating to the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (the "2020 10-K"). Set forth below is the Company's response to the comment raised in the Comment Letter. For the convenience of the Staff, the comment in the Comment Letter is reprinted in bold and is followed by the Company's response.

Unless otherwise noted, the page numbers in the bold headings and the responses below refer to pages in the 2020 10-K. Capitalized terms used but not defined herein have the meaning given to such terms in the 2020 10-K.

Form 10-K for the Year Ended December 31, 2020

Results of Operations
Fiscal year Ended December 31, 2020 Compared to Fiscal year Ended December 31, 2019
Research and Development Expenses, page 85

1. You identify various factors here that led to the increase in your research and development expenses for the periods presented. Please provide us proposed disclosure to be provided in your future interim and annual periodic reports that quantifies each of the items identified that explains the changes in your research and development expenses from the prior periods.

Response: The Company respectfully acknowledges the Staff's comment and will undertake to provide the following disclosure in its future periodic reports filed with the Commission.

Research and Development Expenses.

Research and development expenses for the [period] ended [date] were $xx million, an increase/decrease of $xx million, or xx%, from $xx million for the [period] ended [date]. R&D expenses increased/decreased mainly due to [acquisition/licensure of [●] for $xx million; higher/lower clinical development expenses of approximately $xx million, higher/lower nonclinical expenses of approximately $xx million; higher/lower manufacturing expenses of $xx million and higher/lower employee compensation of approximately $xx million. We expect R&D expenses to increase/decrease during [period] as we move our clinical development programs forward and continue to invest in our development pipeline.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Estimates
Research and Development, page 95

2. Please 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 Consolidated Statements of Operations.

Response: The Company respectfully acknowledges the Staff's comment and will undertake to provide the following disclosure in its future periodic reports filed with the Commission.

Research and Development. We outsource our research and development efforts and expense the related costs as incurred, including the cost of manufacturing products for testing, licensing fees and costs associated with planning and conducting clinical trials. The value ascribed to patents and other intellectual property acquired was expensed as research and development costs, as it related to particular research and development projects and had no alternative future uses.

The table below summarizes our direct research and development expenses for our product candidates and development platform for the years ended December 31, [●] and [●].

	Years Ended December 31, (in thousands)		
	[●]	[●]	Change
Research and development expenses:			
Direct expenses – TNX -102 SL	$ xxxx	$ xxxx	$ xxxx
Direct expenses – TNX - 1800	xxxx	xxxx	xxxx
Direct expenses – Other	xxxx	xxxx	xxxx
Internal staffing, overhead and other	xxxx	xxxx	xxxx
Total research & development	$ xxxx	$ xxxx	$ xxxx

Our direct research and development expenses consist principally of external costs for clinical, nonclinical and manufacturing, such as fees paid to contractors, consultants and CROs in connection with our development work. Included in "Internal Staffing, Overhead and Other" is overhead, supplies, research and development employee costs (including stock option expenses), travel, regulatory and legal. We operate in a cross-functional manner across projects and do not separately allocate facilities related costs, compensation expenses, depreciation and amortization expenses, and other expenses for research and development activities.

We estimate our accrued expenses. Our clinical trial accrual process is designed to account for expenses resulting from our obligations under contracts with vendors, consultants and clinical research organizations and clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to us under such contracts. We account for trial expenses according to the progress of the trial as measured by participant progression and the timing of various aspects of the trial. We determine accrual estimates that take into account discussions with applicable personnel and outside service providers as to the progress or state of completion of trials, or the services completed. During the course of a clinical trial, we adjust our clinical expense recognition if actual results differ from our estimates. We make estimates of our accrued expenses as of each balance sheet date based on the facts and circumstances known to us at that time. Our clinical trial accruals and prepaid assets are dependent upon the timely and accurate reporting of contract research organizations and other third-party vendors.

Should the Staff have additional questions or comments regarding the foregoing, please contact me at 973-597-2564.

Very truly yours,

By: /s/Alan Wovsaniker
Alan Wovsaniker

By:

cc: Seth Lederman
Tonix Pharmaceuticals Holding Corp.

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