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

DIVISION OF
CORPORATION FINANCE

February 15, 2012

Via E-mail
Seth Lederman
President, Chief Executive Officer and Chairman
Tonix Pharmaceuticals Holding Corp.
509 Madison Avenue, Suite 306
New York, New York 10022

Re: Tonix Pharmaceuticals Holding Corp.
Current Report on Form 8-K
Response dated February 3, 2012
File No. 333-150149

Dear Mr. Lederman:

We have reviewed your response to our comments and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing an amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Business Overview, page 4

1. We note your response to prior comment 1 of our letter dated January 10, 2012. We also note references on pages 15, 16, 29 and elsewhere to the "generally lengthy" and "substantial time" associated with the FDA approval process, the FDA's "established performance goals for review of NDAs" and the statement that "[p]roduct sales in the United States may commence only when an NDA is approved." With a view to clarifying disclosure, advise us in approximate quantified terms of the minimum amount of time—for example, in quarters or years—you believe is required to bring your principal products to market. It is unclear if you plan, for example, to apply for and receive FDA approval within 1 year, 2 years or a certain amount of time that is shorter or longer than 1 or 2 years. We understand, as indicated in your response, that other factors, including "financial" and "research results," likely affect the time it takes to

reach commercialization. Please include with your estimate any material assumptions underlying such factors as you deem necessary.

2. Please refer to prior comment 2. Given the apparently existing use by your competitors of cyclobenzaprine as a treatment for fibromyalgia syndrome, please clarify what new uses you currently target. Also in this regard, please refer to the 8-K disclosure that you "pursue development and regulatory approval pathways by reformulating versions of approved drugs for new uses and by using the Section 505(b)(2) pathway for FDA approval." It is unclear if the reference in your response letter to the "specific therapeutic use targeted for the active ingredient that relates to cyclobenzaprine" would be a "new use." If not, please revise the cited 8-K disclosure accordingly.

Intellectual Property, page 14

3. We note your response to comment 4 from our letter dated January 10, 2012. It is unclear why you disclose that the intellectual property was "granted." Please revise or advise.

Risk Factors, page 20

4. We note your response to prior comment 5 regarding the assumption that there will be a significant market-wide increase in the use of muscle relaxants for the treatment of FM. Although your business plan may not be "wholly-dependent upon the assumption," it is unclear why you believe the substantially increased use is not a material assumption that should be addressed in Risk Factors or Business. Please revise or advise.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Joanna Lam, Staff Accountant, at (202) 551-3476 or John Archfield, Senior Staff Accountant, at (202) 551-3315 if you have questions regarding comments on the

financial statements and related matters. Please contact Ruairi Regan, Staff Attorney, at (202) 551-3269 or James Lopez, Branch Chief, at (202) 551-3536 with any other questions.

Sincerely,

/s/ James Lopez (for)

John Reynolds
Assistant Director

cc: (via e-mail) Harvey Kesner, Esq.
Sichenzia Ross Friedman Ference Anslow LLP