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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

September 8, 2016

Dr. Elran Haber
Chief Executive Officer
Therapix Biosciences Ltd.
5 Azrieli Center (Square Tower)
Tel-Aviv 6702501, Israel

Re: Therapix Biosciences Ltd.
Draft Registration Statement on Form F-1
Submitted August 9, 2016
CIK No. 0001611746

Dear Dr. Haber:

We have reviewed your draft registration statement 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 by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Table of Contents, page i

1. Your statements in the penultimate paragraph on this page that you have not verified the third party information regarding market and industry data imply a disclaimer of responsibility with respect to the third party information. Please either delete these statements or specifically state that you are liable for the information related to the market and industry data.

Prospectus Summary
Our Company, page 1

2. At their first use, please describe in layman's terms the meaning of "nuclear factor agonists," "endocannabinoid system," and "bioavailability."

3. Please explain the basis for your belief that sublingual and nasal administration of dronabinol are safe and effective delivery methods that will enhance the bioavailability of an ultra-low dose dronabinol.

Implications of Being an Emerging Growth Company, page 2

4. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

Risk Factors
Risks Related to Our Financial Condition and Capital Requirements
We are a development-stage specialty pharmaceutical company. . ., page 5

5. Please expand the discussion to disclose that your audit report indicates there is substantial doubt about your ability to continue as a going concern, and that you have only been focused on developing drugs based on cannabinoid molecules since August 2015. Additionally, given the uncertainty related to clinical trials please revise the phrase "until we are able to successfully commercialize our product candidates" to clarify that you might not be able to commercialize your product candidates at all.

Risks Related to Our Reliance on Third Parties
We are subject to numerous complex regulations. . ., page 12

6. We note your statements on pages 54-55 regarding the regulations of the U.S. DEA regarding dronabinol, the active ingredient in your product candidates. Please expand your disclosure in this risk factor to disclose that dronabinol is a Schedule I controlled substance, meaning that any drug containing it cannot be marketed before it is rescheduled by the DEA as a Schedule II, III, IV or V substance.

Risks Related to Our Business Operations

7. We note your disclosure on page 78 that your chairman, Dr. Ascher Shmulewitz, controls Dekel, an Israeli company with which you have a licensing agreement. Please add a risk factor discussing any specific potential conflicts of interest.

We manage our business through a small number of employees. . ., page 20

8. Based on your disclosures on page 61, it appears that your chief financial officer and chief strategy officer are part-time employees with other engagements. If true, please expand your disclosure in this risk factor to specifically indicate that these two individuals work for you on a part-time basis, and state the amount of time they devote to your business activities.

Use of Proceeds, page 31

9. Please clarify whether you expect the allocated proceeds will be sufficient for you to complete the two Phase II trials for your Joint Pharma program and the Phase IIa trial for your BrainBright Pharma program.

Capitalization, page 32

10. Please address the following comments regarding your capitalization table:
    - Tell us why it is appropriate to include total liabilities in your table when it appears that you have no long-term debt or other long-term liabilities
    - Revise your table so that total capitalization foots from the information you present. In this regard, it appears from your balance sheet on page F-54 that you do not present non-controlling interests in the table.
    - Revise to present negative numbers in parentheses.

Selected Financial Data, page 33

11. Please provide the exchange rate of the U.S. dollar and NIS for the latest practicable date and revise your table at the bottom of page 34 to disclose the high and low exchange rates for each month during the previous six months. In addition, please revise the first table on page 34 to show the average exchange rate for the most recent five years and any subsequent interim period for which you are presenting financial statements. Refer to Item 4 of Form F-1 and Item 3.A.3 of Form 20-F.

Business
Overview, page 42

12. We refer to your statements on page 43 and elsewhere that you intend to pursue a section 505(b)(2) regulatory pathway, and that this path may expedite the development of your programs. Please expand your explanation of this process to identify and describe the studies and results you intend to rely on, including the identification of the parties that performed the studies. Additionally, describe the requirements you must satisfy in order to rely on the Section 505(b)(2) pathway.

13. We note that you announced in June 2016 that you had filed an application with the FDA for orphan drug designation for THX-TS01. Please revise your disclosure in this section and elsewhere as appropriate to include a discussion regarding this application, and describe any communications you have had with the FDA regarding the application.

Clinical Strategy, page 46

14. Please disclose any serious adverse effects related to your product candidates.

15. Please provide additional disclosure regarding the preclinical trials that you have completed for THX-TS01, including a description of the trials and the results.

16. Please disclose whether you have submitted an IND for the THX-TS01 Phase IIa trial, and if not, when you expect to do so.

17. For each of the Phase II trials for THX-TS01 that you intend to conduct, please disclose the number of participants you expect to have, and how long you expect the trial to take, including the enrollment process.

18. Please describe the preclinical data supporting use of an ultra-low dose of dronabinol to improve cognitive abilities, including the source of the data.

Intellectual Property
In-Licensed Patents and Patent Applications, page 47

19. Please revise the description of your agreement with Dekel to quantify the "medial double digit rate" within a ten point range. Similarly, revise the description of your agreement with Ramot.

20. We refer to your disclosure in the first paragraph on page 48 regarding your agreement with Ramot. Please clarify whether you expect the exclusivity period under the agreement to end at the same time as the patent expiration date. If you expect the exclusivity period to end at an earlier date, please disclose such earlier date.

21. Please disclose the aggregate amount of milestone payments you may be obligated to make under your agreement with Ramot. In addition, to the extent applicable, please disclose your financial obligations under all the license agreements within the contractual obligations table or in the note therein on page 41.

22. Please revise your disclosure regarding your term sheet with Yissum to disclose the potential aggregate milestone payments to be paid under the arrangement. Additionally, you state that you will pay Yissum a medial single-digit royalty upon commercialization but that the royalty rates will decrease upon certain occurrences but will be capped by a medial double-digit rate. It is unclear how the royalty rate begins as a single digit rate and then decreases but is capped with a double digit rate. Please revise to disclose the applicable royalty rates within a ten point range and clearly explain how the rate will change depending on certain factors.

23. Please revise to identify the other pharmaceutical company that is a party to the June 2016 binding term sheet and identify the indication you plan to address using this technology.

Out-licensing of intellectual property assets, page 48

24. Please describe the material terms of your agreement with Karma Link, including the purchase price and the applicable royalty rates, within a ten point range.

Legal Proceedings, page 59

25. We refer to your discussion in the first paragraph of this section. Please expand your disclosure to explain the nature of this inquiry.

Beneficial Ownership of Principal Shareholders and Management, page 78

26. Please identify the investor in the equity investment described in the last bullet on page 79. Refer to Item 4 of Form F-1 and Item 7.A. of Form 20-F.

Description of Share Capital, page 81

27. Please clarify whether the amounts in the third and fourth paragraphs on this page are reflected on a post-reverse stock split basis.

28. We refer to the fourth paragraph in this section. Please clarify whether any of the warrants and options referenced in this paragraph remains unexercised and unexpired, and if so, please state the amount and terms of such securities. Please also clarify whether these amounts include any warrants and options that expired unexercised, and if so, such amounts.

Underwriting, page 100

29. Please identify the lead underwriter(s) on the prospectus cover page and revise this discussion to provide the information required by Item 508 of Regulation S-K. Please note that we may defer further review of any amendment to your registration statement that does not include the name(s) of the lead underwriter(s).

You may contact Keira Nakada at 202-551-3659 or Mark Brunhofer at 202-551-3638 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or me at 202-551-3675 with any other questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc: Oded Har-Even — Sullivan & Worcester LLP