



DIVISION OF  
CORPORATION FINANCE

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

March 8, 2012

Via E-Mail

Uri Ben-Or  
Chief Financial Officer  
Topspin Medical, Inc.  
16 Hatidhar St.  
P.O.Box 4131  
Raanana, Israel 43652

**Re: Topspin Medical, Inc.  
Amendment no. 1 to Form 8-K  
Filed February 23, 2012  
File No. 333-144472**

Dear Mr. Ben-Or:

We have reviewed your filing 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 any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Recent Transactions, page 2

1. We note your response to prior comment 1; however, it remains unclear whether you have disclosed all aspects of this transaction. For example, please tell us the nature of all consideration received by the majority shareholder of Topspin, Inc. in exchange for transferring shares to shareholders of Metamorefix. In this regard, we note that the benefit of this transaction appears to flow most directly to Topspin's subsidiary. We also note limited discussion of the right to unwind the transaction, as set forth in section 2.5.4 of the share transfer agreement (and the related amendment), and the impact of the transactions on Mr. Ascher Shmulewitz's control of the registrant. Please advise and revise as appropriate.

Description of the Company, page 3

2. We note your response to prior comment 4 and your revised disclosure on page 4. Please revise the table showing net losses and revenues in order to specify the currency represented by these amounts. In addition, please clarify whether actual net losses and revenues are multiples of the amounts shown in the table.

TopSpin's History, page 4

3. We note your response to prior comment 5. With a view to disclosure, please tell us why the Office of the Chief Scientist of The Israeli Ministry of Industry did not pay the anticipated 2007 and 2008 grants, whether you intend to apply for future grants from the Office of the Chief Scientist of Israel and what must occur before you can be eligible for such grants. Also, expand your discussion to provide additional explanation of your decision to discontinue the development of your intellectual property in January 2010.
4. Please revise to clarify the status of the outstanding loan balance under the loan agreement entered into with Medgenesis on April 29, 2010.

Regulatory Landscape, page 8

5. We note your statement on page 9 that you believe you may be able to carry out a relatively quick clinical trial and submit your wound product for FDA approval during 2012. Given your response to prior comment 6 and your disclosure on page 6 that you have not yet produced the final wound treatment product, please revise to provide balanced disclosure regarding the status of your product and address how you determined you would be able to submit this product for FDA approval during 2012.

The United States Food & Drugs Administration, page 8

6. We note your response to prior comment 7 and your revised disclosure on page 8. Please provide us with the basis for your statements that FDA review of a 510(k) submission "must" be completed within 90 days and that the FDA is "obligated" to review 510(k) submissions within 90 days of receipt. Please also disclose the estimated time frame for approval under the Premarket Approval process.

Market Size, page 11

7. We note your response to prior comment 12. However, please provide substantiation for claims regarding the limited effectiveness and other drawbacks of your competitors' products as discussed in this section and under "Competition" on page 13. For example, and without limitation, please provide substantiation for your statement on page 11 that approximately 60% of patients are not pleased with the healing of surgical incisions and your statement on page 13 that degradable substances suffer from short term efficacy.

Please also revise to provide the industry sources referenced in the last sentence of the first paragraph under “Wound Treatment” on page 14.

Competition, page 13

8. We note your response to prior comment 13 and your added disclosure regarding wound treatment products. However, please revise to provide a balanced discussion of the positive and negative aspects of competing dermal fillers.

Liquidity and Capital Resources, page 20

9. We note your response to prior comment 14 and your added disclosure on page 20. However, please clarify how the company intends to raise capital through secondary offerings of the securities.

Results of Operations of Metamorefix, page 22

10. We note your response to prior comment 2. However, please explain your statement on page 22 that Metamorefix has financed its operations principally through private and public sales of equity securities.

Metamorefix’s Plans of Operations, page 23

11. Please revise to clarify whether the targets, goals, and developments described on page 24 relate to the wound treatment product, the dermal filler product or both. Also, please ensure that the studies and trials referred to on page 24 are appropriately described here or elsewhere in the prospectus. In this regard, revise to clarify what product the trials and studies involve, where the studies and trials are taking place and whether regulatory approval has been received.

Management, page 25

12. Given the date of the report on Form 8-K, please tell us why you removed Mr. Feldhay’s business description.
13. Please revise to ensure that the business descriptions of your executive officers and directors include the dates that these individuals served in their positions and the principal businesses of the entities listed. Please also revise to discuss the specific experience, qualifications, attributes or skills that led to the conclusion that the individual should serve as a director, in light of your business and structure.

Executive Compensation, page 27

14. We note your response to prior comment 21. However, we are unable to locate your amendment to the Form 8-K filed on October 12, 2011. Please advise.
15. We note your response to prior comment 22 and your added disclosure on page 27. However, please ensure that you include all of the information required by Item 402 of Regulation S-K for Metamorefix Ltd.'s most recently completed fiscal year. For example, we note narrative disclosure required by Item 402(o) and the disclosure regarding director compensation required by Item 402(r) of Regulation S-K. Please also revise to describe any new plans or policies the registrant may have with regards to compensation following the merger.

Compensation of Directors, page 27

16. We note your response to prior comment 23 and your added disclosure. Please further revise your disclosure to describe the relevant provisions of Companies Regulations and clarify that these regulations are under Israeli Companies Law.

Investment Agreement With Medgenesis, page 32

17. Please clarify the source of the debt obligation referenced in the second-to-last paragraph on page 32.

Exhibits

18. We note that certain of the agreements filed as material agreements do not appear to include all schedules, exhibits and appendices. For instance, we note without limitation that schedules are missing from exhibits 10.8 and 10.16. In addition, it appears that two different agreements were filed as Exhibit 10.11. Please re-file your exhibits, as necessary.

Exhibit 99.1

Metamorefix Ltd. Financial Statements as of December 31, 2010, page 1

19. We note your response to prior comment 30. We further note the disclosure in Note 2 of the financial statements that the financial statements have been prepared in accordance with U.S. GAAP. Please explain to us the basis for the disclosure that the financial statements are prepared in accordance with U.S. GAAP in light of the omission of the information required by FASB ASC 915. Alternatively, revise to include the required cumulative information.

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Topspin Medical, Inc.  
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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 Gary Newberry at (202) 551-3761 or Kevin L. Vaughn, Accounting Branch Chief, at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam at (202) 551-3316 or Daniel Morris, Special Counsel, at (202) 551-3314 with any other questions.

Sincerely,

/s/ Daniel Morris for

Amanda Ravitz  
Assistant Director

cc (by e-mail): Ben Strauss, Esq.  
Pepper Hamilton LLP