



DIVISION OF
CORPORATION FINANCE

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

May 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. 2 to Form 8-K
Filed April 24, 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. The second paragraph of this section appears to imply that IHCV continues to be a shareholder of Metamorefix. Please explain or revise to clarify.
2. We note your response to prior comment 1. Please revise this section to clarify the impact of the transactions on Dr. Ascher Shmulewitz's control of the registrant.
3. Additionally, we note the last sentence of the second paragraph in this section. If Medgenesis and Dr. Shmulewitz owned shares of Metamorefix before the company acquired interest in Metamorefix, please revise to clearly state so. Also, clarify the prohibition disclosed in the last bullet on page 2, including whether the shares subject to the prohibition were held by the company or by Medgenesis or otherwise. In this regard, also disclose how Medgenesis and Dr. Shmulewitz would have transferred to IHCV all of

the shares in Metamorefix, as disclosed in the last bullet on page 2, given that they were not party to the agreement between the company and IHCV.

4. Please revise the second paragraph on page 3 to disclose, as noted in the second paragraph of your response to prior comment 1, that Dr. Shmulewitz and Medgenesis entered the transactions to avoid the loss of value they believed would be associated with delisting from TASE.

TopSpin's History, page 4

5. Please revise your disclosure to include the substance of the first four sentences of your response to prior comment 3. With regard to the final sentence of your response, please revise to disclose what steps must occur before you are eligible to receive additional grants from the Office of the Chief Scientist given your disclosure in the filing identifying OCS as a primary source of liquidity and your current financial condition. Lastly, please further revise your disclosure to provide additional explanation of your decision to discontinue the development of your intellectual property in January 2010, as previously requested.

FDA Approval for the Marketing Wound Treatment Product, page 10

6. We note your response to prior comment 5 and your revised disclosure. Please revise this section to clarify how you determined that you are "allow[ed]" to "use the 510(k) track." For example, please clarify if this determination is based upon communication to you by the FDA. Also, please address how you have made this determination given that you have not determined how to package your wound treatment product and revise to specifically state that you have not produced the final wound treatment product.

Clinical Studies, page 12

7. We note your statement in the first paragraph on page 13 that you obtained permission to extend the clinical study based upon positive results. Please clarify the nature of any positive and negative results and from whom you obtained permission to extend the study. Please also revise this section to clarify how these clinical studies affect your applications for FDA approval and CE Mark.

Competition, page 15

8. It appears you have not fully addressed our prior comment 7. Please provide substantiation for claims in this section and on pages 6 and 7 regarding the competitive landscape and the drawbacks of your competitor's products, including the drawbacks of the other technologies and methods you discuss. Please also provide us with substantiation for your statement on page 13 that approximately 60% of patients are not pleased with the healing of the surgical incisions. In this regard, we note that the

supporting materials you provided in response to prior comment 7 appear to indicate that this percentage is lower. Furthermore, please revise to provide the industry sources referenced in the last sentence of the first paragraph under “Wound Treatment” on page 16.

Executive Compensation, page 27

9. We note the Option Awards column in the Summary Compensation Table. Please add disclosure required by Item 402(p) of Regulation S-K, as applicable.
10. Please revise your disclosure to clarify the nature of the amounts set forth under All Other Compensation in the Summary Compensation Table.

Compensation of Directors, page 28

11. We note your revised disclosure on page 29 in response to prior comment 16. Please further revise to clarify whether your directors’ compensation falls within the statutory range set by Israeli Companies Law or, alternatively, whether the compensation has been increased by shareholder vote. Also, please disclose whether any director has been categorized as an expert and is therefore entitled to receive additional expert compensation.

Exhibits

12. We note your response to prior comment 18. However, we note the references to Schedule 3 in Section 3 of Exhibit 10.8 and the reference to Schedules in Section 1.1 of Exhibit 10.16. Please clarify to us why these schedules were not filed with the exhibits.

Exhibit 99.1

13. We note that you previously included as Exhibit 99.1 the financial statements of Metamorefix Ltd. for the fiscal years ended December 31, 2010 and 2009 and for the nine months ended September 30, 2011. We note that you are no longer including those financial statements but instead you are incorporating by reference the financial statements of Topspin Medical for the years ended December 31, 2011 and 2010 as filed on Form 10-K on March 30, 2012. Please explain to us your basis for no longer including the standalone financial statements of Metamorefix Ltd. for the fiscal years ended December 31, 2010 and 2009 and for the nine months ended September 30, 2011. Alternatively, please amend the Form 8-K to include the financial statements of Metamorefix Ltd. for the fiscal years ended December 31, 2010 and 2009 and for the nine months ended September 30, 2011.

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

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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/ Kevin L. Vaughn

Kevin L. Vaughn
Accounting Branch Chief

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