

## **Responses to Comments**

**Re: Manuscript ID 49370**, entitled “Hair regrowth following fecal microbiota transplantation in an elderly patient with alopecia areata: A case report and review of literature”

**Dear Dr. Ma,**

**Thank you very much for your decision on the above-mentioned manuscript. We also thank the editor and the reviewers for their careful review throughout the whole text and the constructive and insightful comments and suggestions. We have revised the manuscript carefully, according to the comments. All changes/additions are highlighted in red in the revised manuscript.**

**We hope this revised manuscript is now acceptable for the publication in the journal.**

**Sincerely yours,**

**Xing-Xiang He**

**Department of Gastroenterology**

**The First Affiliated Hospital of Guangdong Pharmaceutical University**

**Guangzhou 510080, China**

**Comments from the science editor:**

1. Please provide and upload the approved grant application form(s).

**Response:** Thanks for your kind reminder. Accordingly, we have uploaded three approved grant application forms in the F6Publishing system.

2. Please re-write the Abstract:

The structured abstract should be at least 250 words. The abstract subsections will include background, case summary, and conclusion, written as:

BACKGROUND (no more than 80 words)

What does this case report add to the medical literature? Why did you write it up?

CASE SUMMARY (no more than 150 words)

What were the chief complaints, diagnoses, interventions, and outcomes?

CONCLUSION (no more than 20 words)

What is the main “take-away” lesson from this case?

**Response:** We have re-written the Abstract carefully according to the guidelines and requirements of the journal ([Page 4, Lines 1-29](#)).

3. Under the heading of Case Presentation, the following seven aspects must be presented in this order:

1) Chief complaints;

2) History of present illness;

3) History of past illness;

- 4) Personal and family history;
- 5) Physical examination upon admission;
- 6) Laboratory examination, e.g., routine blood tests, routine urine tests and urinary sediment examination, routine fecal tests and occult blood test, blood biochemistry, immune indexes, and infection indexes;
- and 7) Imaging examinations, e.g., ultrasound, plain abdominal and pelvic CT scan, high-resolution chest CT scan, and head MRI. The patient case presentation should be descriptive, organized chronologically, accurate, salient, and presented in a narrative form.

**Response:** According to your suggestion, we have rearranged the section of CASE PRESENTATION (Page 6, Lines 15-30; Page 7, Lines 1-21), including the seven aspects mentioned above.

4. Please move or add relate information under the subtitles listed below:

FINAL DIAGNOSIS

TREATMENT

OUTCOME AND FOLLOW-UP

**Response:** We have reorganized the information into the sections of FINAL DIAGNOSIS, TREATMENT and OUTCOME AND FOLLOW-UP (Page 7, Lines 23-30; Page 8, Lines 1-29).

**Comments from the reviewers:**

**Reviewer 1:**

Authors describe an interesting clinical case of a man suffering from alopecia

areata and chronic diarrhea, presumably due to colonic dysbiosis, who repopulated his scalp and re-pigmented his white scalp hair 4 weeks after fecal microbiota transplantation (FMT). In spite of the speculation about the potential benefit of FMT in dermatological disorders, it is possible that the improvement in scalp hair (alopecia areata and hair depigmentation) could be explained by nutritional disorders due to the chronic diarrhea itself that were resolved by the FMT. Nutritional deficits have been associated to alopecia areata and hair depigmentation. See, for example, references 1 and 2. Regrettably, the authors do not describe their patient's nutritional status previous and after the FMT in order to discriminate which factor could be more prominent in the alopecia areata improvement. I agree that it is necessary to look for more clinical cases showing improvement in dermatological conditions after FMT, but, putting attention to nutritional changes that could be, in fact, the true ones responsible for the improvement of hair changes. Figures, Table and Abstract are OK. 1. Jordan M. Thompson, Mehwish A. Mirza, Min Kyung Park, Abrar A. Qureshi and Eunyoung Cho. The role of micronutrients in alopecia areata: A Review. *Am J Clin Dermatol*. 2017 Oct; 18(5): 663–679. doi: 10.1007/s40257-017-0285-x 2. Trüeb RM. Effect of ultraviolet radiation, smoking and nutrition on hair. *Curr Probl Dermatol*. 2015;47:107-20. doi: 10.1159/000369411. Epub 2015 Feb 20.

**Response:** Thanks for your insightful suggestion. Accordingly, we have added the information of BMI and serum albumin of this elderly patient before and after FMT to describe his nutritional status, in the sections of CASE PRESENTATION (Page 7, Lines 8 & 14) and OUTCOME AND FOLLOW-UP (Page 8, Lines 22-23). Regrettably, we could not provide other information, including the levels of micronutrients (*e.g.* vitamin D, zinc, and folate levels), to further describe the patient's nutritional status.

We agree that nutritional deficits are associated with alopecia areata and hair depigmentation. In the original manuscript, we had discussed that the

deficiency of biotin (vitamin B7) and short-chain fatty acids, caused by gut dysbiosis, may lead to alopecia areata. According to your insightful suggestion, along with the two references you kindly provided, we have further discussed the important role of vitamin D in the development of alopecia areata and the relationship between vitamin D and gut microbiota in the revised manuscript (Page 11, Lines 20-30; Page 12, Lines 1-3).

**Reviewer 2:**

1. Title: it is nice and informative enough Keywords: Fine

**Response:** Thank you very much for your encouraging and positive comment.

2. Referencing: basically ok but need some more references to widen the primary concept presented, I will add suggestions for references in next lines.

**Response:** According to your suggestion, we have added more references (i.e. Refs. 41-53 & 58), in the revised manuscript.

3. Why some parts of paper are in RED!??? Fix it.

**Response:** We have revised it.

4. The main problem with this paper is about its rationale on the fact authors presented! FMT and this clinical presentation which healed! This needs to be elucidated. We need biologic rationale for this report otherwise the paper can not be accepted.

**Response:** Thanks for your critical and insightful suggestion. As pointed by reviewer 1, in spite of the speculation about the potential benefit of FMT in dermatological disorders, it is possible that the improvement in scalp hair (alopecia areata and hair depigmentation) could be explained by nutritional disorders due to the chronic diarrhea itself that were resolved by the FMT. Thus, we have discussed the important role of vitamin D in the development of alopecia areata and the relationship between vitamin D and gut microbiota in the revised manuscript (Page 11, Lines 20-30; Page 12, Lines 1-3). In addition, we have further added the biologic rationale for FMT restoring health and resulting in hair regrowth in the DISCUSSION section of the revised manuscript (Page 12, Lines 6-13 & Lines 21-29) according to your insightful suggestion.

5. In discussion section, we need more confirmatory and contradictory reports cited. Current version is too primary and needs revision accordingly.

**Response:** Thanks for pointing out the shortcomings. We have tried our best to look for more confirmatory and contradictory reports on this issue. Unfortunately, we could not any more reports, except for those we already cited in the manuscript (Ref. 59).

According to your thoughtful suggestion, we have added supportive comments on this issue in the DISCUSSION section (Page 11, Lines 20-30; Page 12, Lines 1-3).

6. More 2018-2019 citations should be incorporated to improve paper discussion.

**Response:** According to your suggestion, we have performed literature search and identified several relevant articles published in 2018-2019, which

have been cited in the revised manuscript (Refs. 43, 45, 46, 50 & 58).