

## **List of Responses**

Dear Editors and Reviewers,

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "Insights of stem cell treatment for intervertebral disc degeneration: aiming at endogenous repair (Manuscript NO: 03269373)". Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied the comments carefully and made necessary correction which we hope meet with approval. Revised portion are marked in red in the paper. The corrections in the paper and the responds to the reviewer's comments are as following:

### **Responds to the reviewer's comments:**

Reviewer #1:

Comments: Well written review. But the authors failed to outline to how exactly stem cells bring about their beneficial action in IVD.

Responses: Although this part is not our key points, we totally agree and sorry for that we failed to outline to how exactly the stem cells bring about their beneficial action in IVD. Although regarding the frequent words limit for review, we add one statement in part of "cell resource of ERS" to briefly explain how exactly the stem cells help to boost ERS and repair damaged IVD.

Reviewer #2:

Comments: This is a very comprehensive study about correlation between Maspin expression and p53 gene mutation. Table 5 may be revised to indicate more precisely about p value showing significance between Maspin expression and TP53 mutation. Proofreading is needed.

Responses: We are confused about this comment from peer-review. In our manuscript, we did not mention Maspin expression and p53 gene mutation. Moreover, we have never submitted “Table 5” to your system. Thus, we feel so confused that cannot write any response to this comment.

Reviewer #3:

Comments: Although I am not an expert on the particular topic, this manuscript effectively discusses the advances, current and future routes of investigation in stem cell-based treatment for IVD endogenous repair. The study is a review on the topic and presents all relevant research within text and tables. Limitations of this line of research and future directions of the topic are discussed. This publication may trigger further basic science and clinical studies on this topic.

Responses: We really appreciate those high comments and your interest to our work, which will encourage us to work hard and take in-depth research in this area.

**Responds to the comments in file:**

1. Comments: Meaning is not clear, what do you mean by “short duration” ?

Responses: The meaning of “short duration” is that the duration of therapeutic effect by cell-based treatment is short. Considering the reviewer’s suggestion, we have change it into “short duration of therapeutic effect”.

2. Comments: Repair? Existence? Acidic?

Responses: We are really sorry for there are some spell mistakes and we have checked the manuscript carefully to revise this mistake which are marked in red.

3. Comments: Obviously Ref 1 is not properly presented- please state the authors correctly

Responses: The authors’ names of reference 1 were wrong cited by ENDNOTE, so we rewrote the authors names of reference 1 which was marked in red.

**Other Changes:**

1. The short of authors' name before the running title was written wrong which were revised and marked in red.

2. We revised the form of references according to the authors' guidelines for manuscript and marked in red.

We tried our best to improve the manuscript and made some changes in the manuscript. These changes will not influence the content and framework of the paper. And here we did not list the changes but marked in red in revised paper.

We would like to express our great appreciation to you and reviewers for comments on our paper. Looking forward to hearing from you.

Once again, thank you very much for your comments and suggestions.

Yours sincerely,

Liang Zhang