

Dear editors and reviewers:

Thank you very much for your careful review and constructive suggestions with regard to our manuscript “**ESPS Manuscript NO: 18327**”. Those comments are helpful for authors to revise and improve our paper. We have studied comments carefully and tried our best to revise and improve the manuscript and made great changes in the manuscript according to the referees' good comments. Revised portion is **marked in yellow** in the paper. We appreciate for Editors/Reviewers' warm work earnestly, and hope that the corrections will meet with approval. Please feel free to contact us with any questions and we are looking forward to your consideration. The main corrections in the paper and the responds to the reviewer's comments are as flowing:

Responds to the reviewer's comments:

1. Reviewer #03258294:

Response to comment: Methods sections lack important details. Please provide full detail of mesenchymal stem cell production, rat sacrifice procedure, how samples got, also provide references for the methods used.

Responds: We have already provided details of MSCs production, rat sacrifice procedure, how samples got in methods sections and **marked in yellow** in the paper. We also have provided references as NO. 3 in references sections.

2. Reviewer #03258724:

Response to comment: Please correct the following errors Title: "improves" should be replace with "improved" Methods: provide an appropriate reference for the time of heat shock pre-treatment. Results: lines 287-296 should be removed. lines 338-339 should be removed. Line 354: "increases"

should be replace with "increased" Line 363: : "improves" should be replace with "improved" Line 404: "simulated" should be replace with "induced" Line : 423: "aiti-apoptosis" should be replace with "anti-apoptosis" -Please show an appropriate figure in addition to blots images in Figure 1.B.

Responds: We are very sorry for our negligence of in our manuscript. We have revised them and the revised part in manuscript is **marked in yellow**. Also, we have already revised Figure 1.B and provide a new figure, please check it in attachment part.

We have studied reviewer's comments carefully and have tried our best to revise our manuscript according to the comments. Attached please find the revised version, which we would like to submit for your kind consideration.

We would like to express our great appreciation to you and reviewers for comments on our paper again.

Looking forward to hearing from you.

Kind regards,

yours sincerely,

De-quan Wu