Jundishapur Journal of Natural Pharmaceutical Products
Volume 17 · Issue 1 · e109906

OPEN PEER REVIEW

Salvia Officinalis Protects Pancreatic Beta-cells Against Streptozotocin-Induced Damage; A Stereological Study

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SUBMITTED	REVISED	ACCEPTED	DOI
2 Oct 2020	13 May 2021	14 May 2021	10.5812/jjnpp.109906

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

Contents

1 **Original submission** Mohamadreza Rashidi Nooshabadi, Leila Zeidooni, Mehrnoosh Zakerkish 2
2 **Revision 1** Referee 1, Leila Zeidooni 3
Authors' reply to reviewers 4
Reviewer and editor comments 8
3 **Revision 2** Editor-in-Chief 9
Authors' reply to reviewers 10
Reviewer and editor comments 12

1 Original submission

3 comments · 1 Jan 2021 – 7 Feb 2021

Mohamadreza Rashidi Nooshabadi Reviewer

ACCEPT 1 Jan 2021

By name of holy GOD
There are valuable data for publication with respect to the natural source of the material.

Leila Zeidooni Reviewer

MAJOR REVISION 28 Jan 2021

. The statistical analysis should be rewritten and checked grammatically.
2. The results of tissue staining are not explained. In the results section, explain the results of the Figures separately.
3. "Hence we did not test the mice regarding other inflammatory factors which could have been helpful regarding the DM status".
In this sentence, “mice” is used, but your study is on rats. Correct or explain.
4. Why were the blood sugar levels of the groups and their GTT not measured?
5. Why were the glucose tolerance test (GTT) levels of the groups not measured?
6. Why was hematoxylin and eosin (H&E) staining not performed on pancreatic tissue?
7. To evaluate the toxicity of the highest SVO dose, why has the dose of 400 mg/kg alone not been studied in a separate group? Maybe the highest dose of SVO alone causes toxicity.
8. 12 rats per group is an ethically high number. Why was this number used for each group?
9. References are old; new studies should be referenced. Use studies from 2021, 2020, 2019, ...

Mehrnoosh Zakerkish Reviewer

MAJOR REVISION 7 Feb 2021

1- Most of the references are out of date. They must be updated.
2- Line 48: The number of people affected by diabetes must be corrected. It is now much more than 450 million. Please refer to new references.
3- Line 95: A reference is needed. Please add a relevant reference.
4- Line 78-79: The definitions of the C1 and C2 groups are different in the text and in the caption of Table 1. Based on the wrong definition, some of the results need to be reconsidered and completely revised.
5- Line 85, section “Subjects and Experimental Design”: It is mentioned that “All groups received a single of STZ on day 7”. What is the reason for choosing day 7 for the treatment? Please explain in detail.
6- The method of the study is not clearly explained and a lot of questions come to mind regarding the procedure used in the study. Please clarify the matter.
7- The length of the treatment is not clearly mentioned in the manuscript.
8- It is not clear when the BS levels of the rats were tested. Please explain.
9- Please explain the diet used for the rats during the study and also the living conditions of the rats.
10- In the “Result” section, it is necessary that the BS levels of the different groups be explained and compared.
11- The “Discussion” section is not convincing and needs to be extended much more. The results of this study must be compared to those of other studies conducted in this area.

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear editor,

I really appreciate for your kind coordination and thank the reviewers for constructive suggestions. I have addressed the reviewers' suggestions and modified accordingly. The changed sentences are highlighted in the revised manuscript. Please find the list below point-by-point responses to the reviewers' and editor's suggestions. Please let me know if you have any further recommendations. I am looking forward to hearing back from you.

We again appreciate the kindness of the Editor and Reviewers in helping improve the manuscript. All authors have reviewed and agreed to the submission of the revised manuscript. We hope that the manuscript is now acceptable for publication. Please do not hesitate to contact me if there are any questions.

Best regards,

Point-by-point responses:

Reviewer 1:

1- Most of the references are out of date. They must be updated.

The references have been updated.

2- Line 48: The number of population affected by diabetes must be corrected. It is now much more than 450 million. Please refer to new references.

Corrected.

3- Line 95: reference is needed. Please add a relevant reference.

Reference was added.

4- Line 78-79: definition of C1 and C2 groups are different in the text and in the caption of Table 1. Based on the wrong definition, some of the results needs to be reconsidered and completely revised.

Corrected.

5- Line 85, section “Subjects and Experimental Design”: It is mentioned that “All groups received a single of STZ on day 7”. What is the reason of choosing day 7 for the treatment? Please explain in detail.

The clarification was added to the text.

6- The method of the study is not clearly explained and a lot of questions come to mind regarding the procedure used in the study. Please clarify the matter.

We added some more details into method section.

7- The length of the treatment is not clearly mentioned in the manuscript.

Clarified.

8- It is not clear when BS level of the rats was tested. Please explain.

Mentioned in the manuscript.

9- Please explain the diet used for the rats during the study and also the living conditions of the rats.

Added to the text, method section.

10- In the “Result” Section, It is necessary that BS level of the different groups be explained and compared.

Mentioned.

11- The “Discussion” section is not convincing and needs to be extended much more. The results of this study must be compared to the other studies achieved in this area.

Some more pieces of evidence were added in the discussion section to be more convinving.

Reviewer 3:

1. The statistical analysis should be rewritten and checked grammatically.

Checked and corrected.

2. The results of issue staining are not explained. In the results section, explain the results of Figures, separately.

The figures were included in the manuscript in order to explain the method that was conducted in the study. We evaluated the tissue using stereological parameters, which the results were mentioned in the paper. However, the conventional examination of pancreatic tissue could also be helpful, and should be considered for future examinations.

3. "Hence we did not test the mice regarding other inflammatory factors which could have been helpful regarding the DM status".In this sentence, mice is written, but your study is on rats. Correct or explain.

Corrected.

4. Why not measured the blood sugar levels of the groups and their GTT?

Measuring blood sugar in rats is really hard since each time you have to wound the tale and they might go through a lot of pain each time. Moreover, for GTT you have to do it three times at least a day and it leads not only to suffer the animals but also to receive unreliable data since trauma and stress can lead to an increase in the blood sugar themselves.

5. Why not measured the glucose tolerance test (GTT) levels of the groups?

Same as above.

6. Why is hematoxylin and eosin (H&E) staining not performed on pancreatic tissue?

This method showed the cells very well for our microscopic evaluation.

7. To evaluate the toxicity of the highest SVO dose, why the dose of 400 mg/kg alone has not been studied in a separate group? Maybe the highest dose of SVO alone causes toxicity.

This is a great point, since we are not able to test this we wrote it as a limitations.

8. 12 rats are ethically high for each group. Why this number is used for each group?

We usually use 12 rats in our studies on diabetes since after STZ injection we sometimes experience a number of mortalities and we don't want our groups to become small if this happens. These is solely based on experience.

9. References are old, new studies should be referenced. Use 2021, 2020, 2019, ... studies.

Done.

2 Revision 1

2 comments · 7 Apr 2021 – 16 Apr 2021

Referee 1 Reviewer

MINOR REVISION 7 Apr 2021

Dear author;
Thank you for the corrections. But there are still some comments on your revised manuscript:

1- I cannot see any difference between what C1 and C2 received, because you said both of them received normal saline in the material and methods section. Check "Subjects and Experimental Design". The names of the groups are correct, but your explanations are the same.

2- It seems that C1 & C2 are switched in the abstract. Check it carefully. It is different from the caption of table 1.

3- Regarding reviewer 3's comment 2 about mentioning the pathology results in the "result" section, you are right, and I understood the issue. But please insert the pictures of histopathology views and their explanations in the relevant section in materials and methods, not in the result section.

4- Replace this sentence:
….hence we did not test the rats regarding other inflammatory factors which could have been helpful regarding the DM status
With:
….hence we did not test the rats regarding to other inflammatory factors which could have been helpful in the studies done on DM.

Good luck!

Leila Zeidooni Reviewer

MINOR REVISION 16 Apr 2021

1. "Our study also showed a decrease in BS of STZ-induced diabetic mice after oral administration of the extract". In this sentence, "mice" is used, but your study is on rats. Correct.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear editor,

I really appreciate for your kind coordination and thank the reviewers for constructive suggestions. I have addressed the reviewers' suggestions and modified accordingly. The changed sentences are highlighted in the revised manuscript. Please find the list below point-by-point responses to the reviewers' and editor's suggestions. Please let me know if you have any further recommendations. I am looking forward to hearing back from you.

We again appreciate the kindness of the Editor and Reviewers in helping improve the manuscript. All authors have reviewed and agreed to the submission of the revised manuscript. We hope that the manuscript is now acceptable for publication. Please do not hesitate to contact me if there are any questions.

Best regards,

Sedigheh Ebrahimi, MD

Point-by-point responses:

Reviewer 1:

1- "Our study also showed a decrease in BS of STZ-induced diabetic mice after oral administration of the extract". In this sentence, mice is written, but your study is on rats. Correct.

Done.

Reviewer 2:

1- I cannot see any difference between things received by C1 and C2. Because you said both of them received normal saline in material and methods. Check "Subjects and Experimental Design". The names of groups are correct, but your explanations are the same.

Thank you for your comment. The issue was explained and resolved in the manuscript.

2- It seems that C1 & C2 are supplanted in abstract. Check it carefully. It is different from caption of table 1.

Corrected.

3- Regarding to reviewer 3, comment 2 about the mentioning the results of pathology in "result" section; you are right, and I understood the case. But please insert the pictures of histopathology views and their explanations in the relevant section in materials and methods, not result.

Done.

4- Replace this sentence:

….hence we did not test the rats regarding other inflammatory factors which could have been helpful regarding the DM status

With:

….hence we did not test the rats regarding to other inflammatory factors which could have been helpful in the studies done on DM.

Done.

3 Revision 2

1 comment · 14 May 2021

Editor-in-Chief

ACCEPT 14 May 2021

Dear Authors,

I am pleased to inform you that your manuscript has been accepted for publication in JJNPP in its current form.

We will transfer your paper to the publisher for further processing.

Yours,
JJNPP EIC