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OPEN PEER REVIEW

Synergic Effects of Rosemary Extract and Aerobic Exercise on Sperm Parameters and Testicular Tissue in an Aged Rat Model

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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.

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1 Original submission

3 comments · 25 Aug 2022 – 8 Sep 2022

Referee 1 Reviewer

MAJOR REVISION 25 Aug 2022

In the abstract section, the authors need to write more about the results.
The keywords must not be in the title.
The aim of the article needs to be revised.
The language of the article needs to be checked and edited by an English teacher.
The results section is too short; the authors need to write more, include some tables and figures, and compare their results with previous research.
The authors need to use references from 2015-2022, and it is suggested that they use the articles below to improve their research:
1. Ahmadi S (2022) Antibacterial and antifungal activities of medicinal plant species and endophytes. Cellular, Molecular and Biomedical Reports 2 (2): 109-115. doi:https://doi.org/10.55705/cmbr.2022.340532.1042

2. Ahani H, Attaran S (2022) Therapeutic potential of Seabuckthorn (Hippophae rhamnoides L.) in medical sciences. Cellular, Molecular and Biomedical Reports 2 (1): 22-32. doi:10.55705/cmbr.2022.330326.1020

3. Doosti-Moghaddam M, Miri HR, Ghahghaei A, Hajinezhad MR, Saboori H (2022) Effect of unripe fruit extract of Momordica charantia on total cholesterol, total triglyceride and blood lipoproteins in the blood of rats with hyperlipidemia. Cellular, Molecular and Biomedical Reports 2 (2): 74-86. doi:10.55705/cmbr.2022.338806.1038

4. Tabin S, Gupta RC, kamili AN, parray JA (2022) Medical and medicinal importance of Rheum spp. collected from different altitudes of the Kashmir Himalayan range. Cellular, Molecular and Biomedical Reports 2 (3): 187-201. doi:10.55705/cmbr.2022.349901.1050
5. Arsana IN, Juliasih NKA, Ayu Sauca Sunia Widyantari AA, Suriani NL, Manto A (2022) GC-MS Analysis of the Active Compound in Ethanol Extracts of White Pepper (Piper nigrum L.) and Pharmacological Effects. Cellular, Molecular and Biomedical Reports 2 (3): 151-161. doi:10.55705/cmbr.2022.351720.1051

Referee 2 Reviewer

MINOR REVISION 8 Sep 2022

This manuscript presents a good experimental study but needs revision.
1. In the keywords section, you did not include rosemary extract. In other words, your keywords are very far from the content of your article; for example, extract and histological are not suitable for future citations of your work.
2. The Discussion section of this manuscript needs more references.

Associate Editor

MAJOR REVISION 8 Sep 2022

Dear author,
Thank you for submitting your valuable manuscript to the journal. We would like to inform you that the peer review of your manuscript is now complete and, despite several useful points, the manuscript needs "Major Revision". Below you will find the peer review comments. Please reply to them one by one and resubmit the manuscript.

Reviewer 1:
In the abstract section, the authors need to write more about the results.
The keywords must not be in the title.
The aim of the article needs to be revised.
The language of the article needs to be checked and edited by an English teacher.
The results are too brief. The authors need to write more, include some tables and figures, and compare their results with previous research.
The authors need to use references from 2015-2022, and it is suggested that they use the articles below to improve their research:
1. Ahmadi S (2022) Antibacterial and antifungal activities of medicinal plant species and endophytes. Cellular, Molecular and Biomedical Reports 2 (2): 109-115. doi:https://doi.org/10.55705/cmbr.2022.340532.1042

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5. Arsana IN, Juliasih NKA, Ayu Sauca Sunia Widyantari AA, Suriani NL, Manto A (2022) GC-MS Analysis of the Active Compound in Ethanol Extracts of White Pepper (Piper nigrum L.) and Pharmacological Effects. Cellular, Molecular and Biomedical Reports 2 (3): 151-161. doi:10.55705/cmbr.2022.351720.1051

Reviewer 2:
Dear editor, this is a good manuscript, but I have some comments that the authors should address.
1- How did you analyze the seminiferous tubular diameter, luminal diameter, and epithelial height? Describe this fully in the methods section, including the software used and the complete methods for analysis.
2- The figures are not acceptable; the quality of the pictures is not sufficient.
3- What is the difference between fig 1 and 2? In the figure legends, you describe histological images of testes in different groups (which staining?).
4- Provide pictures for the sperm count and sperm morphology.

Reviewer 3:
This manuscript is a good experimental study but needs revision.

1. In the keywords section, you did not refer to rosemary extract. In other words, your keywords are very far removed from your article's content. For example, "extract" and "histological" are not suitable for future citation of your work.

2. The discussion section of this manuscript needs to be written with more references.

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.

Reviewer 1:

1. In keyword part you didnot refer to rosemary extract, in other word your keywords are very far from your article content, for example: extract, histological not suitable for future citation in to your work.

- ✓ **Thanks, it was changed and "Rosemary" added to keywords.**

2.Disscution part of this manuscript need to write with more references.

- ✓ **Thanks for your attention, it was done.**

Reviewer 2:

1- how you analyzed the seminiferous tubular diameter, luminal diameter and epithelial height? write it completely in methods part for example which software and complete methods for analysis

- ✓ **Thanks, it was done.**

2- figures is not acceptable quality of the pictures is not sufficient.

- ✓ **Thanks, it was corrected.**

3- what is the difference between fig 1 and 2? in figure legends you write the Histological images of testes in different group (which staining?)

- ✓ **Thanks, it was corrected.**

4- give picture for sperm count and morphology of sperms.

- ✓ **Thanks, a figure was added to manuscript.**

Reviewer 3:

1-It the abstract section: the authors need to write more about the results.

- ✓ **Thanks, it was explained.**

2-The key words must not to be in the title.

- ✓ **The new keywords were added.**

3-The article aim needs to be revised.

- ✓ **Thanks, it was done.**

4-The article language needs to be checked and edited by English teacher.

- ✓ **Thanks, it was done.**

5-Result is so less, the author needs to write more and put some tables and figure in it and they have to compare their results to previous researches.

- ✓ **Thanks, it was done.**

6-The authors need to use the references from 2015-2022 and it will be suggested to them to use the below article to improve their research:

1. Ahmadi S (2022) Antibacterial and antifungal activities of medicinal plant species and endophytes. Cellular, Molecular and Biomedical Reports 2 (2): 109-115. doi:https://doi.org/10.55705/cmbr.2022.340532.1042

2. Ahani H, Attaran S (2022) Therapeutic potential of Seabuckthorn (Hippophae rhamnoides L.) in medical sciences. Cellular, Molecular and Biomedical Reports 2 (1): 22-32. doi:10.55705/cmbr.2022.330326.1020

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- ✓ **Thanks for your suggestion, it was done.**

2 Revision 1

0 comments

No public comments in this round.

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.

Reviewer 1:

the article has been revised good and can be accepted

- ✓ ***Thanks.***

Reviewer 2:

Dear author(s)

While thanking you for doing this research activity, there are several points to improve this research activity.

1. First of all, many sentences, including the ones you highlighted in yellow, have grammatical problems.

- ✓ **Thanks, it was done.**

2. The term "Gavage group" is incorrect and you should use "Gavage group" for it.

- ✓ **Thanks, it was done.**

3. In addition, if your focus in this study is the relationship between aging and reproductive changes. In addition to the structural changes, it is necessary to measure the functional changes in the testicular tissue, i.e. the testosterone level.

- ✓ **Yes, it is a good suggestion, but it was not possible due to the lack of funds**.

4. The next point is that in the materials and methods section, it is necessary to state the sampling process, including how to anesthetize the blood, etc.

- ✓ **Yes, it was done.**

5. You have used hematoxylin and eosin staining and Mallory trichrome staining. What is the difference between these two staining methods and what is their importance in your study? In other words, I need to ask, what were you looking for with these two staining methods?

- ✓ **Both staining techniques were used for better confirmation and more accuracy in cell counting.**

6. Did you buy this extract or did you prepare it? It is necessary to put this process in the manuscript.

✓ **The rosemary extract was purchased of Hunan Geneham Biomedical Technological Company of China (RAP20-110401).**

7. Your materials and methods are generally very flawed and need to be perfected. Please get help from similar articles to use how to write the method.

✓ **Thanks for your suggestion, it was done.**

8. Why was this dose of Rosemary chosen?

✓ **This dose of rosemary extract chosen based on previous study. It was referenced.**

9. You have cited reference 19, which is related to the histological evaluation method and the process of spermatogenesis. This reference is not appropriate and practically your data must have been collected with suspicion. It is necessary to re-evaluate by a histologist.

✓ **We collected our date as sections of testis tissue and then the samples stained with H & E and Mallory trichrome. However, reference was changed.**

10. How does rosemary extract dissolve in distilled water? It needs to be explained.

✓ **It was added to manuscript. In this study, 100 mg/kg of rosemary extract was dissolved in 1 ml of distilled water under thermal shaker (200 rpm) at 37 °C. This dose administrated orally five times a week for 12 weeks.**

11. What is your exercise protocol? In which part did you bring it?

✓ **Yes, it was added.**

3 Revision 2

0 comments

No public comments in this round.