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OPEN PEER REVIEW

Comparison the Hippocampal Stathmin and TFEB Proteins Level in Animal Models of PTSD and Depression

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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

1 comment · 23 Sep 2024

Elham Shakerian Reviewer

MAJOR REVISION 23 Sep 2024

1-Why did you choose male rats?

2-Please write more about the distinctive features of anxiety and depression in the introduction part.

3-Why did you not evaluate the gene expression of TFEB and stathmin?

4-Please write more about PTSD in line 27.

5-In the Brain tissue collection part, write how the rats were sacrificed.

6-In the discussion, line 193, you write "it is clear that...the hippocampus". Please write why this mechanism happens.

7-If autophagy does not occur, apoptosis will occur. How do you explain this?

8-Did any rat die during the experiment because of shocks?

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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.

Ref. No.: 155637

We thank the reviewers for their useful and thoughtful comments, and we will be grateful if opportunity to respond to the comments. We believe that by addressing each of the points raised by them, the new manuscript is significantly improved.

Reviewer 1:

Question: *1-why did you choose male rats?*

Reply: In previous studies on sex differences in depression and anxiety, it has been established that there are gender differences in their prevalence and more women are affected by depression / anxiety than men (Bangasser, 2021:Vetter, 2021: Eid, 2019) which may depend on the estrogen levels. This issue is an intriguing one and we are studying it in an ongoing project.

Question: *2-Please write more about distinctive features of anxiety and depression in the introduction part*

Reply:We would like to thank the reviewer for the valuable and constructive comment. It has has been added to the introduction (page, 4; paragraph 3)

Question: *3-Why did you not evaluate the gene expression of TFEB and stathmin?*

Reply: It was better that our study would have encompassed both mRNA and protein expression levels to provide a more comprehensive understanding of the underlying molecular mechanisms. However, due to budgetary constraints and insufficient institutional support, our investigation was restricted to the protein level. It is important to note that not all mRNA molecules are translated into proteins, and various post-transcriptional regulatory mechanisms can influence protein expression levels. Nevertheless, by examining protein levels, we were able to directly assess the final effects of signaling pathways.

Question: *4-please write more about PTSD in line 27*

Reply: *It has been adde.*

Question: *5-In the Brain tissue collection part, write how the rats were sacrificed.*

Reply: It has been added in “Brain tissue collection**”** section.

Question: *6-in discussion, line193, you write it is clear that.....the hippocampus. Please write why this mechanism happens*

Reply: It has been explained in discussion section.

Question: *7-if autophagy does not occur, apoptosis will occur. how do you explain this?*

Reply*:* In previous studies on apoptosis and autophagy, it has been specified that the interplay between autophagy and apoptosis is a seemingly complex process whose outcome depends on cell type and environmental conditions. Situations have been described in which autophagy acts to antagonize apoptosis, whereas in other cases, autophagy acts as an agonist of apoptosis. Still yet, there are cases where autophagy seemingly induces cell death irrespective of apoptosis (Fan et al, 2013). Therefore, we cannot predict it.

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2 Revision 1

1 comment · 16 Dec 2024

Elham Shakerian Reviewer

ACCEPT 16 Dec 2024

The authors answered all questions and corrected the manuscript.