

## OPEN PEER REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research

**Manuscript NO:** NRR-D-21-01074

**Title:** Activation of mGluR1 regulates excitability of the hippocampal CA1 region in pentylenetetrazole-induced status epileptic rats by suppressing the HCN1 channel

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**Reviewer's country:** USA

### COMMENTS TO AUTHORS

The manuscript describes a well-executed study. However, manuscript needs major corrections and should be looked at, before the resubmission of the paper.

Major comments:

1. Specify if a test for outliers (and which) was conducted on the data and state if any data points were excluded. OR indicate that no test for outliers was conducted.
2. Specify the n number (n=) and specify what the "n" indicates in every figure legend (for e.g. n= number of independent cell culture preparations/number of cells/number of animals/number of participants etc.). Specify if you are referring to number of animals or independent cell culture preparations for example, i.e., how many independent cell preparations were used to achieve the n;
3. Add number of animals per experimental group, number of excluded animals and time-point of exclusion to the time-line diagram.
4. Should include experimental design in figure section.
5. Figures qualities are not good, should be minimum at 300 dpi. Highly recommended to replace all figures with high resolution or good quality.
6. Rewrite the material and methods with corrections, provide the complete address of the university including city and country, cat no. and company name of used chemicals.
7. Experiment 1, is confusing and there is no numeric number for the modified Racine's scale. Should be rewrite.
8. I am wondered that the authors used a mixture of rabbit anti-body of HCN1 and mGluR1 and showing co-localization how is it possible? How can be differentiate the target protein intensity? This is highly recommended that author use different origin of species antibodies (mouse and rabbit) and realized the images or used other brain sections for two different proteins.
9. In result section, the authors put wrong P values and some places values are missing they just put  $P < 0.000$ , that is also wrong.
10. For example,  $*P < 0.05$ ,  $**P < 0.01$ , and  $***P < 0.001$ . If previous studies showed that SE induced neuronal cell death and subsequent neuronal loss why these results are different, describe in the discussion section.
11. Discussion part is confusing, should be paragraphs not in headings or subheadings. In conclusion, authors need to elaborate more whatever they found in the current study.

Minor comments:

12. CA1 region was rapidly resected and stored at -80 unit is missing, microliter unite is missing only ul written correct all the typos and sentences according.