

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The authors build a rat model of status epilepticus via LiCl-pilocarpine induction and use it to investigate the protective role of possibility of Baicalin in the progress of SE. After reasonable grouping the rat models, the authors showcased that Baicalin can effectively decrease the apoptosis of hippocampus by inducing autophagy signaling, and such a protective role can be inhibited using 3-Methyladenine. This result also draws a conclusion that Baicalin is a potential drug for SE treatment. In short, the topic of this manuscript is timely and interesting. The authors have organized the manuscript rationally, with good methodology and well-written English. However, some important editing needs to be done before publication:

Response: Thanks for your comments.

1) In part 2.2, the rats are randomly divided into four groups: control, SE, SE + B100, and SE + B200. However, rats in groups SE + B100 and SE + B200 are intraperitoneally injected with 90 mg/kg and 180 mg/kg of Baicalin, respectively. So, the names of SE + B100 and SE + B200 are very confusing for the readers.

Response: Thanks for this comment. We checked the original experiment record, 100 mg/kg and 200 mg/kg of Baicalin were used in the groups SE + B100 and SE + B200, respectively. We have revised this part.

2) After testing the protective role of Baicalin for decreasing the apoptosis of hippocampus, the authors divided the rats into four groups once again, including control, SE, SE+Baicalin, and SE+Baicalin+3-MA. What is the treatment on the rats in group SE+Baicalin? Why using such a concentration of Baicalin for treating rats in this group?

Response: In the group SE+Baicalin, 200 mg/kg of Baicalin were used in the SE animal model. 200 mg/kg of Baicalin were used for the reason that 200 mg/kg of Baicalin presented a slight better apoptosis inhibition effect compared with 100 mg/kg of Baicalin. We have stated it in the part 2.2.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Status epilepticus (SE) is a complicated pathophysiological process, involving many mechanisms and lacking of effective therapy. In this study, the authors aimed at exploring the protective value of Baicalin in treating hippocampus apoptosis caused by SE. The authors used animal models, Nissl staining, TUNEL staining, Western Blotting, and immunofluorescent labelling to verify their hypothesis. The results showed that LiCl-Pilocarpine Induced rat SE successfully, and Baicalin protected nerve cells from apoptosis by increasing autophagy. So, in my opinion, this paper is well-written. The experimental design is reasonable, and the results reflects

the conclusion as well. I recommend its acceptance after the minor revision. The detailed comments are:

Response: Thanks for your comments.

1. The authors have reviewed that indications of autophagy variation are observed in several neuroprotective drugs. What are these drugs? Compared with these drugs, what is the key advantage of Baicalin?

Response: 17-allylamino-demethoxygeldanamycin and Tanshinone IIA have been proved to present neuroprotective effects. We have cited related references. Baicalin is a type of natural extract, the preparation process is mature and safe, the biggest advantage of Baicalin is that the side effects are minimal. We have discussed it in the part discussion.

2. In the section of Introduction, the authors indicated that elimination of apoptotic organelles by autophagy is potentially the mechanism of anti-epilepsy activity of Baicalin; however, the precise mechanism remains largely unknown. Since this paper did not discuss the underlying mechanism of Baicalin for inducing autophagy, the above expression is not appropriate here.

Response: Thanks for this suggestion, and we have deleted it.

3. Why the authors only used male rats in this study?

Response: Only male rats were used in this study for the reason that we want to reduce the impact of gender differences on research results. We know that these findings obtained from only male rats might be limited. We have added this part as a limitation of this research in the part discussion.