Reviewer’s report

Title: Intrathecal injection of fluorocitric acid inhibits the activation of glial cells causing reduced mirror pain in rats

Version: 4
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Reviewer: jana sawynok

Reviewer’s report:

This report describes experiments which implicate glial cells and upregulation of Nav1.7 channels in dorsal root ganglia in mirror image pain following unilateral spinal nerve ligation and section. The results are novel and of interest. However, the report requires considerable revision to be more accurate, more complete and more readable.

1. Legends to figures need attention. These need to be separated from the text, and legends for all figures need to be provided. At the moment, they are interspersed in the text, the legend for Fig 2 is missing, and those for Figs 5 and 6 appear abbreviated.

2. There are many, many errors throughout the text that need to be corrected. Abbreviations are not consistently used (when defined, are not used subsequently), there are numerous spaces between words and punctuation marks (commas, periods), there are many instances of words in a sentence being inappropriately capitalized, and there are many instances of a space missing between a word and information in brackets. The entire manuscript needs to be scrutinized line by line for such errors.

3. Title: ....mirror pain in rats following spinal nerve section. The methods section indicates the nerve is both ligated and sectioned. Much of the text simply mentions ligation. Section is the more severe procedure. The procedure used needs to be accurately depicted in the title and throughout.

4. Abstract. The Background section contains results and conclusions. Move these to the appropriate subsections. Conclusions: (not “Conclutions”)

5. Results. Mention the ipsilateral and contralateral changes for outcomes (thermal and pressure tests) side-by-side and comment on their relative magnitudes. At the moment, ipsilateral changes are described completely, then the contralateral ones, and there is no sense of comparative magnitude.

6. Heading 3.2. This does not make sense, and needs to be rephrased. Headings do not need to be punctuated. At present, some are and some are not – be consistent.

7. Discussion. The first paragraph should contain a short summary of results. At the moment, it is hard to understand what that first part is about as it contains
many different bits of information. Methodology does not need to be included when it is well established.

8. Referencing. On several occasions, one or two recent papers are cited, yet there is a more extensive literature relevant to the point. Referencing should be more complete.

9. page 8, lines 42-43. Delete the mention of the next research aim.

Figures. Fig. 1. Insert a space between the procedure and ips or con (as in some cases). Perhaps ips data could be in solid symbols, and con data in hollow symbols. Sham should be sham in all cases (sometimes it is capitalized). Fig 3. Panels need to be labelled (A,B,C,E – only D appears to be labelled). Fig 4. Use solid symbols for ips, and hollow symbols for con data (as in Fig 1). At the moment, there are lots of lines and symbols, and some further coding would help interpret the figure.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

no competing interests