

OPEN PEER REVIEW REPORT 1

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Title: Improved prognosis of subarachnoid hemorrhage by L-Cysteine depends on H₂S-attenuated neuro-inflammation, complement deposition, oxidative stress and endoplasmic reticulum stress

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COMMENTS TO AUTHORS

This manuscript reported the differential expression of Fos protein, a marker for neuronal activity, in 5-HT cells in different regions of dorsal raphe nuclei following a restraint stress after neonatal HI. The overall study design and writing is sound. Some issues need to be addressed.

1. The biggest concern of the data is the method of using the antibodies to identify co-localization of 5-HT cells and Fos⁺ cells. Both antibodies used were anti-rabbit origin, thus the secondary antibody is the same, thus the staining specificity is a concern.
2. Some other minor issues.
 - 1) Abstract, page 1, line 22, "serotonergic neurons have reduced and differential functional viability...", the sentence does not flow, perhaps, "and" needs to be removed.
 - 2) P3, line 54. The sentence that "in five dorsal raphe nuclei before and after P3 HI" should be "with or without P3 HI" since all animals were assessed way post P3 HI not before P3 HI.
 - 3) Results section, page 8, line 54-55. The sentence is somewhat confusion. The sentence described Fos⁺ /5-HT cells following restraint stress in control animals without P3 HI, thus without experiencing ligation, so it should not be "both the non-ligated and ligated sides", rather should be "both hemispheres".
 - 4) In the results section, the figure legends for both fig1. and 2 should describe the data that the figure represented.
 - 5) Figure 2 B-D, bar scale is missing.