

## OPEN PEER REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research

**Manuscript NO:** NRR-D-20-00887

**Title:** Mechanisms implicated in the contralateral effect after unilateral injury in the central nervous system

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**Reviewer's country:** USA

### COMMENTS TO AUTHORS

The manuscript "Mechanisms implicated in the contralateral effect after unilateral injury in the central nervous system " summarize the inflammatory response and neuronal degeneration of the contralateral uninjured site in the CNS unilateral lesions, discuss the mechanism of the contralateral effect, and conclude the contralateral retinas should be taken extreme care rather than as controls in neurodegenerative models.

Minor comments:

1. In clinic, the sympathetic ophthalmia is typical of the contralateral inflammatory response of the monocular enucleation patient, which was a valuable evidence to the manuscript. Please consider discussing the sympathetic ophthalmia in the introduction.
2. In the line 37-42 of the 3rd paragraph of the introduction, the author summarized that the glaucoma disease produces the RGC and axon loss, however, some other wide-used OHT mouse models are not cited, such as David Calkins et al., 2018 microbeads model and Jie Zhang et al., 2019 silicone oil model. Please consider their contribution to the glaucoma.
3. In the line 39 of the 3rd paragraph of the introduction, please note the Nadal et al., 2015 citation as 2015a or 2015b, and Galindo-Romero et al., 2013 as 2013a or 2013b.
4. If the author can discuss the retinal functional change of the contralateral uninjured retinas in unilateral injury, such as PERG and VEP, it would be more strong support to the conclusion. Please consider.