

## PEER-REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research

**Manuscript NO:** NRR-D-18-00243

**Title:** Utilizing zebrafish and okadaic acid to study Alzheimer's disease

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**Reviewer's country:** Russia

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Yes

### COMMENTS TO AUTHORS

The main idea of this manuscript is to demonstrate applicability of a combination of zebrafish and okadaic acid (OKA) for AD studies. Although the suggestion is sufficiently supported, several aspects need to be clarified:

- 1) the zebrafish brain has unique regenerative capabilities based on various compensatory mechanisms that rises doubts about applicability of the results obtained on this model for understanding of human AD;
- 2) applicability of the suggested approach seems to be limited by so-called "tau-hypotheses" of AD as OKA affects phosphatases, then, in turn, tau hyperphosphorylation and, finally, beta-amyloid production;
- 3) no information about: i) limitations/weakness of the zebrafish model, and ii) other alternative AD models using, *e.g.*, *Caenorhabditis elegans* and *Drosophila melanogaster*;
- 4) no comparative information about other substances imitating AD that rises doubts about possible advantages and perspectives in the OKA model using.