OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research
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Title: Hypoxia in Alzheimer's disease: effects of hypoxia induced factors
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COMMENTS TO AUTHORS

In this article (invited Perspective paper) titled "Hypoxia in Alzheimer's disease: effects of hypoxia induced factors" authors have gathered relevant and current information from several studies regarding hypoxia, HIF and hypoxia mimetic agents in Alzheimer's disease. They briefly introduce AD, main changes in the ageing brain and how hypoxia and stroke survivors could suffer from post stroke dementia. Then, they describe hypoxia, duration and extent, main mechanism, and principal consequences in brain tissue. After that, authors focus on describing main consequences of hypoxia in AD neurodegeneration. Besides, they deeply explain HIF mechanisms and main effects of hypoxic mimetics agents such as HIF hydroxylase inhibitors and iron chelators. Finally, they conclude that the restoration of normal oxygen tension in the brain would reduce or converse the neurodegeneration. They affirm that molecules targeted by hypoxia can provide therapeutic strategies and interventions against some common neurodegenerative diseases, including the AD. However, they also say that this is a complex process that merits further investigation.

There are some points that authors should address:
-Typo mistakes:
* About HIF subunit, write beta instead of alfa in page 3, row 25.
* remove one "that" in page 5, row 24.

-Figure 1: the schematic diagram should be better done. It is too simple and it could confuse readers.
-Concerning iron chelation, authors said that it has been widely studied to treat neurodegenerative diseases, including AD and PD, describing many different aspects without including references. They should cite the articles.