

## OPEN PEER REVIEW REPORT 1

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**Comments to the authors:**

In this article, the authors investigated whether 17-beta-estradiol and G protein-coupled estrogen receptor agonist G1 protect the brain against cerebral ischemia/reperfusion injury in rats. They found that the effects of 17-beta-estradiol and G protein-coupled estrogen receptor agonist G1 on ischemia/reperfusion injury can be abrogated with the addition of GPER antagonist G15 over the attenuation of infarct volume, brain edema, and apoptosis.

The article is interesting is relevant for the neural regeneration literature, but some corrections are required.

The title needs to be corrected: "GPER Agonist G1 Reduces..." instead of "Reduce".

In the Abstract, the authors should explain what for they used qRT-PCR.

In the Introduction, I could not understand the following sentence: "G1 and G15 are GPER exotic agonist and inhibitor, respectively, which promote the functional research of GPER...".