

OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-23-00192

Title: The Promising Uses of Metformin in Treating Neurological Disorders: Biomarker-Guided Targeted Therapies

Reviewer's Name: Adriana Fernanda K Vizueté

Reviewer's country: Brazil

COMMENTS TO AUTHORS

The review entitled "The Promising Uses of Metformin in Treating Neurological Disorders: Biomarker-Guided Therapies" aimed to discuss the metformin treatment of several neurodegenerative diseases. Moreover, the manuscript contributes to the debate about metformin's effect on nervous tissue. Follow my considerations and concerns:

The English writing must be improved. Some mistakes were observed, such as:

At line 16, delete perturbed for

At line 45, *C. elegans* is the first description, replace for the species full name

At line 56, replace to for by regulating...

At line 93, after tyrosine hydroxylase insert "positive" and superscribe the + signal, and during the manuscript writing.

At line 121, replace turn off for down-regulate

At line 173, replace assault

At line 221, italic style for post-mortem

In order to improve the review, I suggest to the authors emphasize at abstract and introduction section that the review specifically is going to discuss the metformin effect on mitochondrial activity. And for example, I suggest insert this information after line 64. Moreover, the information about the membrane cross transport of metformin into the cells through organic cation transporters family (OCTs) is an interesting information for a review manuscript.