OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research
Manuscript NO: NRR-D-20-00641
Title: Inhibition of microRNA-29b suppresses oxidative stress and reduces apoptosis of ischemic stroke in mice via PI3K/Akt pathway
Reviewer's Name: Ulises Gomez-Pinedo
Reviewer's country: Spain

COMMENTS TO AUTHORS

It addresses the importance of micro RNA in specific 29b in cerebral stroke.
It is an important work since it has been described that microRNAs (miRNAs) are small RNAs that regulate the expression of their target genes through the reduction of expression of the proteins encoded by said genes, through repression of translation and / or degradation of its mRNA. miRNAs play a fundamental role in virtually all cellular processes including development, function, and survival. Recent studies have established miRNAs as critical regulators of immune tolerance and autoimmunity. These findings have revealed miRNAs as potential new therapeutic targets for the treatment of multiple diseases in the future.
In the present work the author explored the role of miR-29b in cerebral ischemic injury and its possible impact on brain nerve cell function by using a cerebral ischemia mouse model and brain nerve cells, it is an important and transcendent work that fits into the profile of the journal, but I think it lacks order and the following questions arise:

How do you calculate the numbers of the experimental groups?
How do you determine the concentrations of MiR-29b antagomir or antagomir control agent?
What reasoning do you use for the statistical analysis?
In the Nervous system score section, neurological evaluation in experimental animals (rodents) is difficult, since their great resistance makes it difficult to see neurological changes in an obvious way? If you have videotaped the post-surgical sessions, you could make more observations, you could see how this point was addressed in the following articles:

* Chen J, Li Y, Wang L, et al. Therapeutic benefit of intravenous administration of bone marrow stromal cells after cerebral ischemia in rats. Stroke. 2001; 32 (4): 1005-1011. doi: 10.1161/01.str.32.4.100
* Gómez-Pinedo U, Sanchez-Rojas L, Benito-Martin MS, et al. Evaluation of the Safety and Efficacy of the Therapeutic Potential of Adipose-Derived Stem Cells Injected in the Cerebral Ischemic Penumbra. J Stroke Cerebrovasc Dis. 2018; 27 (9): 2453-2465. doi: 10.1016/j.jstrokecerebrovasdis.2018.05.001

qPCR
What primers do you use?
Apoptosis
What quality controls do you use in flow cytometry?
To detect MDA and SOD, which kit has been used from which commercial house, could describe this and other methods in supplementary material

How do you slaughter the animals, how do you process the tissue?
In figure 4-C it describes images of brains processed by TTC, this technique does not appear in the

methodology and the second image is inverted, it is suggested that you order the image and find that they coincide in the same coordinate so that they are comparable
In results, the paragraph: MiR-29b increased expression in ischemic encephalopathy mouse brain tissue and glutamate-treated PC12 cells contains information that must be supported in the methodology (cell culture PC12, model of glutamate induced neuronal cell PC12 cell damage, must be more detailed)
In general, I only see that in the methodological section it is necessary to describe experimental procedures in greater detail

The discussion should further address the importance of the study of microRNA in neurodegenerative or vascular pathologies.
A section with study limitations is necessary, and another with abbreviations