OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research
Manuscript NO: NRR-D-20-01106
Title: MiR-103-3p targets Ndel1 to regulate neural stem cell proliferation and differentiation via the Wnt/β-Catenin signaling pathway
Reviewer's Name: Scott Allen
Reviewer's country: UK

COMMENTS TO AUTHORS

This is generally a very interesting and well put together piece of work. However, there needs to be some clarification on a number of points and some changes made to the article before it can be accepted for publication

Methods

1. Please put primer sequences in a separate table
2. Please clarify whether normality distribution analysis was performed prior to statistical analysis and why those statistical approaches were taken. Please clarify whether the percentage data was transformed prior to statistical analysis and if not why not?

Results

1. All histogram/bar graph data should be displayed showing the individual data points used to create the graph not just block histograms. This is important especially for some of the data where the changes are very small and but show high significance levels. This will add to the transparency of the manuscript.
2. Figure 1

All the text is very small and hard to read in the figures please make bigger.

The caspase 3 picture does not match the densitometry analysis especially if you compare the difference between p53 -/+ mir 103.

The actin blot looks saturated, please provide evidence that actin is still within the linear range of the Shinetech Image System.

3. Figure 2

Please give context why the map2 and Neurod1 targets were chosen.

4. Figure 4

The authors state "As shown in Figure 4A, Ndel1 overexpression remarkably decreased the number of cells in the G1 phase of the cell cycle while increasing the number of cells in S phase" I would disagree with this statement. It's a very mild affect 10% ish. The authors need to confirm whether their percentage data was transformed accordingly before statistical analysis was performed on it.

For Figure 4B same point as above how can there be a three star significance on what looks like a 2% change. How was the data analysed?

Same point as above for Figure 4C and D. Very small changes are producing highly statistical data? How was n number determined, how was the data transformed before performing stats on percentage data?

For Figure 4H The actin looks totally saturated in H, please provide evidence this is within the dynamic linear range of capture. If not, then densitometry can not be performed.

5. Figure 5

Please explain how such small percentage differences based on an n=3 can produce that level of significance. In the figure legends the specific stats test used should be stated. All percentage data must

be transformed prior to analysis.

Discussion

1. Check formatting in the discussion

2.The authors state "One study by Yang et al. (H. Yang, Wang, Shu, & 318 Li, 2018) found that miR-103 Promotes Neurite Outgrowth and Suppresses Cells Apoptosis by Targeting Prostaglandin-Endoperoxide Synthase 2 in Cellular Models of Alzheimer's Disease" The authors have literally copied the title of the paper into their discussion, even the font is different. Please amend.

figure legends

Please state which specific statistical tests for each data set in each figure legend and whether percentage data was transformed appropriately before analysis.