Reviewer’s report

Title: Up-regulating autophagy by targeting the mTOR-4EBP1 pathway: a possible mechanism for improving cardiac function in mice with experimental dilated cardiomyopathy

Version: 1 Date: 06 Dec 2019

Reviewer: Harshal Waghulde

Reviewer's report:

The manuscript by Jin et al, focuses on the role of autophagy in DCM. As per the data presented, the authors have demonstrated that autophagy, potentially though mTOR-4EBP1 pathway, improves the cardiac function in mice. The manuscript is well written and sufficient number of animals have been used to support the hypothesis. Appropriate statistics have also been applied for analyzing the experimental data. I just have few minor comments:

1. When did you start the treatment with Rapamycin/3-MA, after day 0 of treatment with cardiac myocin or day 7? Please clarify in the methods.

2. The word "respectively" on line 10 doesn't fit in the sentence.

3. In the "Animal model of DCM and experimental design" section authors have mentioned that the animals were randomly divided in 4 groups (n=8), in results section however under "General characteristics" they have mentioned that total 24 animals were divided into three groups. Again, in results figure, there are four groups. Please be consistent with the data throughout the manuscript.

4. What do the colored lines in Figure 4 indicate? Please explain in figure legends.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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