Reviewer’s report

Title: Effects of concentration of amyloid β (Aβ) on viability of cultured retinal pigment epithelial cells

Version: 1 Date: 03 Feb 2019

Reviewer: Winfried Amoaku

Reviewer’s report:

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The revised manuscript is significantly improved. However, further changes are required to make it fit for purpose.

The rationale for the choice of AB-40 instead of 42 is stated in the rebuttal. These statements in the rebuttal should be incorporated into the Introduction (with more detail than exists in the current version). We believe that the 1-40 form is also very important. For example, Liu et al. demonstrated that NF-κB/RelA activation was enhanced in RPE cells after the stimulation of Aβ1-40 (Exp Eye Res. 2014 Oct;127:49-58). In addition, Sun et al. showed that intravitreally injected Aβ1-40 mice develop AMD-like pathologic changes (Cell Death Dis. 2017 Oct 12;8(10): e3115.). These findings suggested that Aβ1-40 plays important roles in the pathogenesis of AMD. As we mentioned, we believe that high concentrations of Aβ are important for the pathogenesis of AMD. Compared to other forms of Aβ, the concentration of Aβ1-40 is the highest among the different forms of Aβ (Invest Ophthalmol Vis Sci. 2010 Mar;51(3):1304-10.). That is why we chose Aβ 1-40 for this study. We have added comments and references about why the Aβ 1-40 was used in this study in the Discussion section.

Pg 19 lines 14-17: The sentence ('This represents atrophy....') represents an unjustified leap! This is an in vitro study, as indicated earlier. That statement is unjustified, and not supported. Please remove.

Pg 20 lines 27-30: 'Cross talk between RPE cells and choroidal cells' has not been investigated here. The sentence 'But cross talk between the RPE cells and choroidal cells has not been conclusively determined.' needs revision or re-wording.

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
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Needs some language corrections before being published

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