Reviewer’s report

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

Version: 0 Date: 30 Sep 2018

Reviewer: Winfried Amoaku

Reviewer’s report:

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A good rationale for the choice of aB1-40 instead of 1-42 in the reported experiments is not established. It is accepted that the 1-42 is more associated with disease, although 1-40 is more commonly distributed. Furthermore the structures of the 2 forms are very different. As such, it is expected that the 1-42 form will be used in these experiments. Alternatively, the 2 different forms (1-40 and 1-42) need to be compared. These would have provided internal controls.

There are inhibitors of beta/gamma selectase available. Adopting one of these would also have established whether the observed changes were blocked by introducing such inhibitors.

The authors have attempted to explain the increased proliferation of ARPE-19 cells to 5um AB as due to increased PEDF expression by blocking a nuclear inhibitor of PEDF. This explanation needs further support. This is especially as there doesnt seem to be a difference in PEDF mRNA levels at AB concentrations of 5 and 25 uM. The rel VEGF mRNA at the different AB concentrations as shown in Fig 4A and 7A seem to be discordant.

The references need updating e.g. to include the recent review by Lynn et al. / Neural Regeneration Research. 2017;12(4):538-548.

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?
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No

Are the conclusions drawn adequately supported by the data shown?
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Yes

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