Reviewer’s report

Title: Effect of P21WAF1/CIP1 on retinal pigment epithelial cells and experimental proliferative vitreoretinopathy

Version: 2 Date: 11 August 2014

Reviewer: Shikun He

Reviewer’s report:

It is an interesting study; the authors show that P21 may play a role in the parthenogenesis of PVR. However, in order to get the manuscript to be published in the BMC ophthalmology, following issues has to be addressed:

Major points:

1. There is no evidence of the connection between P21 and PVR in the paper; at least the authors should show some result of P21 expression in human PVR membranes by IHC.

2. The major part of the research is the inhibition of experimental PVR in rabbit by P21 vector injection, but this part is too weak to support their conclusion. First, what kinds of RPE cells were used for the induction of PVR, human RPE or rabbit RPE? If it is human RPE cell, how did you take care of the immune response? Second, the authors did not give enough description of methods of the vitreous injecting; third, the authors should make a fig to show the outcome of experimental PVR after the vector injection and also include statistical analysis according the PVR classifications; Forth, we want to know which cell is the target cell by the P21 vector intra-vitreous injection, RPE, glia cell or others. Fifth, authors should indicate if there is any difference of the expressions of the major fibrosis factors (TGF-# and CTGF) after p21 vector application in the rabbit PVR model.

Minor:

1. In the introduction, the parthenogenesis of PVR should be briefly reviewed and then indicated what is the significant of your study.

2. How the density of the western blot was measured?

3. Why the migration was lasted for 24 hours, regularly it only takes 4-6 hours.

4. The writing of the manuscript needs to be re-written, check the grammars carefully and try to use Standard English.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.