Reviewer's report

Title: Plumbagin induces RPE cell cycle arrest and apoptosis via p38MARK and PI3K/AKT/mTOR signaling pathways in PVR

Version: 1 Date: 27 Sep 2017

Reviewer: Bipin Nair

Reviewer's report:

1. Methods section has numerous typographical errors which needs to be corrected for language and context.

2. Several discrepancies in appropriate controls:
a. Figure 1: The vehicle control with no drug showing 100% viability should be included for the MTT assay.
b. Figure 2: the percentage of cells in the four quadrants at different stages of cell death are not visible
c. Figure 4: The pro-apoptotic protein (Bak) level in control sample is not clear for image analysis
d. Figure 5: The total p38 MAPK and total AKT protein levels should also be probed and compared with the respective phospho protein levels in the western blot.

3.
a. The toxic effect of Plumbagin on cells other than RPE needs to be tested
b. An in vitro model for PVR can be tested with Plumbagin to increase the significance of the findings and also to confirm the inhibition of phospho-p38 MAPK and phospho-AKT by Plumbagin.

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

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

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

No

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 recommend additional statistical review

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

Not suitable for publication unless extensively edited

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