Reviewer's report

Title: CD133+ Adult Human Retinal Cells Remain Undifferentiated in Leukemia Inhibitory Factor (LIF)

Version: 3 Date: 9 October 2008

Reviewer: Sumiko Watanabe

Reviewer's report:

Major Compulsory Revisions

Since the authors did not do immunostaining and/or in situ analysis of the expression of CD133 in the retina, questions regarding the nature of CD133 remain to be clarified. The retina has well studied unique structures, and the spatial expression pattern of CD133 should yield great information on this central question.

The authors have chosen to leave Fig. 1A and B as is, claiming these panels to show a difference between sorted and non-sorted cells, but no improvement in the figures' quality has been made. Furthermore, no explanation of the "difference" is to be found in the text. (anyway, the first part of the Results section is missing from the PDF). What is the difference between the two populations that is to be observed from the photos? number of cells? shape? colour?

The authors have not explained why fluorescent intensity increased after sorting of the cells in Fig. 1B. Such a thing should not normally happen, and so it raises the question of whether something is amiss methodologically.

The authors state that they looked at markers on the CD133 negative cell population shown in Figure 2. Please add these panels instead of referring to "data not shown".

In Figure 3B, the results for the Nestin negative population were added. Please indicate the population of nestin negative cells in the FACS pattern (left panel). The authors stated the percentage of antibody positive cells in the text but no control antibody pattern was indicated.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests