Reviewer's report

Title: Early stage transplantation of bone marrow cells markedly ameliorates copper metabolism and liver function in Wilson's disease mice

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Reviewer: George J Brewer

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This paper, by Chen et al, is a followup to the work in ref 13 that shows that bone marrow embryonic stem cells can improve liver function in the toxic milk mouse model of Wilson's disease, and also to this group's own work showing that embryonic hepatocytes can do the same.

Here they use embryonic bone marrow stem cells to evaluate the timing of engraftment, and find that engraftment at 2 months gives better results than 5 months. The work is properly done and the paper adequately written except for the following:

Minor essential revisions: The authors are very loose with their phraseology, often saying Wilson's disease when they are referring to the mouse and other animal models of Wilson's disease. For example this happens in the abstract conclusions section. They should correct this throughout the paper.

Major compulsory revision: A serious misstatement occurs in the first paragraph of background where they imply that liver transplantation is useful for the neurologic symptoms of Wilson's.

Transplantation will correct neurologic symptoms, but only to the extent that anticopper drugs would correct them, which is much cheaper and safer. Transplantation should never be done for neurologic reasons.

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.