Reviewer's report

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

Version: 1 Date: 16 August 2010

Reviewer: Elke Roeb

Reviewer's report:

In their work Chen and co-workers examined the effect of BM transplantation on copper metabolism and liver function in Wilson’s disease mice. They authors describe an improvement of liver function and copper metabolism one to 12 weeks after Tx..

Although dealing with an interesting theme there are major concerns which have to be eliminated before publication.

Major points:

The injection of saline does not represent an adequate control group. The transplantation of BM cells from Wilson disease mice (toxic milk mice) into Wilson disease mice, would be the right control in addition to the super control (saline).

Since liver function and copper concentration are already improved one week after transplantation it is rather speculative whether the kind of BM cells is responsible for the improvement. This point should be elaborated in additional experiments.

The statistical analysis should be recalculated by a testing appropriate for not normally distributed data (e.g. Mann-Whitney-U-Test). Alternatively the authors should show a normal distribution before using the Students t test. The exact N-number should be indicated in each single figure under each single column.

All together the manuscript seems to be too descriptive since the effect of BM transplantation on the amelioration of liver function is far from being explained.

Minor points:

The authors should demonstrate whether liver fibrosis (collagen, hydroxyprolin or sirius red staining) is influenced by BM-transplantation in toxic milk mice.

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

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.