Reviewer's report

**Title:** Mouse model of carbon tetrachloride induced liver fibrosis: Histopathological changes and expression of CD133 and epidermal growth factor

**Version:** 1 **Date:** 11 December 2009

**Reviewer:** Biserka Radosevic-Stasic

**Reviewer's report:**

The article presents interesting and novel data about expression of CD133 and epidermal growth factor (EGF) in chronically injured and neoplastic liver tissues in mice subjected to ingestion of carbon tetrachloride (CCl4). Results, based on histopathological analysis, quantitative real time-PCR determination, ELISA and Western blotting showed that intoxication with CCl4 after 15 weeks induces in the liver a fibrosis (without other signs of cirrhosis) and hepatocellular carcinomas, with high upregulation CD133 and significant downregulation of EGF protein and EGFR mRNA. The findings were followed by increased expression of representative markers of hepatic stellate cells (desmin and GFAP), suggesting these CD133+ cells contribute to liver regeneration and tumor progression in A/J mice. Since similar changes were not observed in humans and rats, it was concluded that species-specific differences exist in chronic liver diseases. The hypothesis needs to be confirmed by immunohistochemistry and FACS analysis, but the experiments were designed appropriately, the methodology was precise, and the discussion supports the results.

**Discretionary Revisions**

In the Material and Methods: (Animals and Experimental design) a link to Figure 1 should be added (probably after “Research Animal Care” …. top, second line…. “As shown on Fig. 1”

In Results: (in section EGF and EGFR expression line 8: (Fig. 3C). “And” should be deleted.

In Discussion: (line 7) did not developed although HCC….. instead of did not developed. Although HCC……

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'