Reviewer's report

Title: Atorvastatin Treatment Attenuates Renal Injury in an Experimental Model of Ischemia-Reperfusion in the Rat

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Reviewer: Massimo Sabbatini

Reviewer's report:

The paper by Wu and coworkers describes the beneficial effects of atorvastatin on the oxidative stress induced by ischemia-reperfusion injury in rats, a topic widely investigated in these last years (see your Ref. 12-15). The Authors show that administration of ATO by i.p. route was able to partially prevent the decline of creatinine clearance compared to untreated rats, with an improvement in renal histology. Several concerns arise, when reading the paper:

Major compulsory revisions

1. An English-native person must revise the entire paper, since the present form contains several misspellings and grammar errors.

2. The surgical technique is not clear, since the Author refer to a paper by Paller and co. in which both the right nephrectomy and the left renal artery occlusion were made through two flank incisions (and all the tested drugs were given i.v.), whereas the Author state that “the abdomen was opened…” and this raises some concerns about drug absorption; since plasma drug levels were not determined, probably a new Group of rats infused i.v. with lower doses of ATO (see Lau YY, Drug Metab Dispos 2006) should be performed to validate the results of i.p. injection. What the Authors claim as a new, interesting result is rather a bias in the interpretation of data.

3. Which was 24-h urinary volume after surgery? Data should be provided in a Table.

4. Statistics: The LSD test does not correct for multiple comparisons; for the evaluation of histologic data, a different test (like Kruskall-Wallis) is probably better.

Minor essential revisionss

1. The formula for determining creatinine clearance is not clear (and probably not correct).

2. Some acronyms like AOPP, MDA should be clarified in the text (and not in the Abstract).

3. In all Figures, the statistical method must be reported.
4. In Fig. 1, the significance was not reported. In Legend, I would abolish the word “dramatically”, since there was no statistical difference between Groups IR and IR+ATO; accordingly, in Discussion the sentence “…reduced the serum levels of creatinine…” should be deleted.

5. In Fig. 2 the p values are the same (0.001) either comparing Sham to IR and IR+ATO to IR: please, check. In Fig. 2 legend treatment with ATO did not increase ClCr, rather determined a minor reduction.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

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

**Declaration of competing interests:**

I declare that I have no competing interests.