Yuan Qj

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Dear Editor,

Thank you for allowing us to resubmit our manuscript entitled "Polyethylene glycols: An effective strategy for limiting liver ischemia reperfusion injury". We have addressed the specific comments of the reviewer. Our responses to the comments are outlined point-by-point in this cover letter.

Reviewer

This is an interesting review related to the use of PEGs in situations as liver transplantation and liver surgery. Could this substance be useful in kidney, pancreas, small bowel or heart transplantation? Could this drug be useful in elderly livers? If yes it could expand donors pool?

We strongly believe that PEG could be useful in pancreas, small bowel, heart or kidney transplantation. In fact, the use of PEG as oncotic agent in preservation solutions has been already reported in these organs to attenuate injury from ischemia-reperfusion. PEGs used were: PEG of 35 kDa for pancreas, small bowel and kidney and PEG of 15-20 kDa for heart (1-7); therefore it could be an attractive strategy for the transplantation of these organs.

Regarding kidney transplantation, no significant difference in delayed graft function and rejection rates as well as in patient and graft survival was observed between kidneys preserved in IGL-1 solution versus kidneys preserved in UW solution (8). But even so, we would like to point out that the study is based in the use of PEG in preservation solution and no data is reported about intravenous route of PEG administration which is the fastest way to deliver fluids, thus it is thought to be more effective.

As we emphasize in the review, PEG35 plays a key role in reducing the higher vulnerability of fatty livers to IRI (reference 33 from the paper). Since it is generally believed that age is a risk factor for increased hepatic steatosis, the use of PEG35 could be a useful tool for elderly livers and could help to increase the donor pool.

We have no added your interesting comments in the manuscript given that we believe that the paper is focused only on the therapeutic application of PEGs against liver IRI.

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We thank you and the Reviewers for your very helpful comments and we hope that this new version of the manuscript is now suitable for publication in the Journal.

Sincerely yours,

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