Reviewer's report

Title: IGF-1 attenuates portal hypertension by decreasing portal vein endotoxin via regulating intestinal tight junctions in cirrhotic rats

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Reviewer: Jesus S Prieto

Reviewer's report:

The paper addresses an important issue with great clinical relevance, that is the fact that IGF-I restores the deranged intestinal barrier present in cirrhotic rats and that this hormone may have a relevant role in the treatment of liver cirrhosis.

Major compulsory revisions:

1) Association of two findings do not indicate causal relationship among them. Thus, although portal hypertension in cirrhotic rats is associated with reduced occludin and claudin expression and IGF1 restores intestinal barrier function accompanied by occludin and claudin upregulation, this mere coindence of effects is no proof of a causal relationship. Therefore the text of the manuscript should mention that improvement of tight junctions might be one possible mechanism, together with reduced enterocyte apoptosis, explaining the restoration of intestinal barrier function mediated by IGF-1.

2) PCR data should be presented by means of real-time quantitative PCR using the appropriate instruments (and not by densitometry of the PCR bands). If the authors do not have access to this methodology they should present only WB data.

3) The authors should revise the bibliography. In page 9 (fourth line from the bottom) they state that IGF-1 displays trophic effects on intestinal endothelium. Is this correct or do they refer to the intestinal epithelium?

4) page 10 (second paragraph) : IGF-1 instead of HGF-1

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

None