Reviewer’s report

Title: Protective effects of heme oxygenase-1 against severe acute pancreatitis via inhibition of tumor necrosis factor-α and augmentation of interleukin-10

Version: 0 Date: 08 Mar 2017

Reviewer: Ulrich Peitz

Reviewer’s report:

The authors have chosen an interesting subject and performed an elaborated animal experiment. They used sophisticated molecular determinations to provide evidence that induction of Heme Oxygenase-1 might be protective in severe acute pancreatitis.

I have some concerns.

Major

Abstract

It should be mentioned in the abstract which species of animals were used.

Methods

Effects of hemin and ZnPP on rats without induction of acute pancreatitis were not tested as control. This should be commented on.

Results

The authors refer to "hemin pretreatment", but hemin was administered 30 minutes after induction of pancreatitis.

Availability of data and material

"The work described was original research that has not been published previously, and not under consideration for publication elsewhere, in whole or in part. All the authors listed have approved the manuscript that is enclosed."

Figures
Abstract

cells through the mechanism of anti-oxidation, maintaining microcirculation and anti-inflammatory ???

sentence is incomplete

Background

It is clear that such a common disease associated with mortality up to 30% in severe cases

Sentence is incomplete

If this inflammation is marked, it would lead to inappropriate activation of immune system demonstrating as systemic inflammatory response syndrome (SIRS) and eventually result in multiple organs dysfunction syndrome (MODS) [3].

Grammar: it will lead

In this procession, the therapy targeting…

Wording: In this process

are highly conserved

are a highly conserved

these proteins perform a variety of cells

Is this what you mean? these proteins induce a variety of cells

catalyzes

catalyzes
Methods
was retrograde injected

Grammar: was retrogradely injected

Promega A3500, Madison, WI
Spelling: Promega A3500, Madison, WI

Results
increased significantly
were significantly increased
decreased significantly
were significantly decreased

The pathological scores is significantly
The pathological scores were significantly

Discussion
was associated with a marked increase HO-1 gene expression in
was associated with a marked increase of HO-1 gene expression in
it can inhibit the synthetize
it can inhibit the synthesis
have demonstrated a major anti-inflammatory effect
have demonstrated a major of anti-inflammatory effect

HO-1 is the stress-inducible from which is known to…

Is this what you mean? HO-1 is the stress-inducible isoform of heme oxygenase which is known to…

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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