Reviewer's report

Title: Measurement of the total antioxidant response using a novel automated method in subjects with nonalcoholic steatohepatitis

Version: 5 Date: 17 June 2005

Reviewer: Luis A. A Videla

Reviewer's report:

General
This work investigates the oxidative stress status in blood plasma from NASH patients and control subjects, including the determination of the total peroxide level (TPL) and the total antioxidant capacity (TAR) of plasma, which allows the calculation of the TPL/TAR ratio as an oxidative stress index. The results support the involvement of oxidative stress in NASH, a provide with a suitable assay to monitor, even continuously, redox alterations that may be of importance in the control of the regression or progression of the disease.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Page 8 (lines 11-18): FFA oxidation is not the only and most important cause of Oxidative stress in the liver of NASH patients. Alternate mechanisms should be included in this paragraph, namely, (i) CYP2E1 induction, (ii) leukocyte infiltration and activation of NADPH oxidase, and (iii) mitochondrial dysfunction involving electron transfer inhibition in the respiratory chain.
2. Page 8 (lines 19-22): This paragraph should be re-writen to discuss recent data by Videla L.A. et al., Cli Sci 2004;106:261-268. Reference 35 is a book that gives a general view of oxidative stress: replace by Gawrieh S. et al., J Investig Med 2004;52:506-514, which refers to oxidative stress in NASH.
3. Page 9 (lines 5-9): This statement should be shortened and added to the Methods in page 5 (exclusion criteria), and references 36 and 37 must be re-numbered.
4. Page 9 (lines 18-19): Authors should update the references on oxidative stress realted parameters in the liver of NASH patients, now available.
5. Page 10 (line 6): Reference 41 is not required.
6. Page 10 (lines 7-18): Authors should compare the TAR values reported with the published data using the FRAP (Ferric Reducing Ability of Plasma) index.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. In general, the english needs to be improved and some spelling errors should be corrected.
2. There are several cited references that are not directly related to the statements made, and they should be replaced: (i) references No. 1, 2, 3, 4, 5, and 7 do not refer to the general features of NASH; replace them by Angulo P, New Engl J Med 2002;346:1221-1231 and Neuschwander-Tetri B.A. et al. Hepatology 2003;37:1202-1219. (ii) The discussion of oxidative stress as a concomitant of NASH is found in Videla L.A. et al., Free Radic. Biol. Med. 2004;37:1499-1507, which can replace Reference No. 14. (iii) Finally, references 15, 19, 35, and 41 are not essential for the work and should be eliminated.
3. Page 6 (line 5): FOX2 should be defined. In this respect, reference No. 33 does not seem to correpond to the FOX2 assay, whereas reference No. 32 is not cited in the text.

Discretionary Revisions (which the author can choose to ignore)
1. Correlation coefficients and the significanec values may be added to the figures.
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interest.