Reviewer's report

Title: Analysis of the clinical relevance of antimitochondrial antibodies to the beta- and gamma-subunits of the F1F0-ATPase in patients with primary biliary cirrhosis

Version: 1 Date: 25 June 2012

Reviewer: Dimitrios Bogdanos

Reviewer's report:

This is a well-written and interesting paper. It originates from an experienced group of investigators with long-lasting interest in the autoantibody serology of primary biliary cirrhosis. The major finding indicating that antibodies against the beta- and gamma-subunits of F1F0-ATPase do not have clinical significance is of interest.

Major comments

I feel that the major weakness of the paper is the current illustration of the figures which do not clearly convey the points made in the text.

Table 1 gives a summary of the results obtained related to the behaviour of the autoantibodies over time, before and after liver transplantation. I think this table could take the form of illustrated Figure showing the behaviour of the autoantibody concentrations of the samples from the same patient and could replace at least in part Figure 4.

Figure 1. The Authors state in their Results' section that "IgG antibody activity towards the beta-subunit was significantly higher in PBC patients" and refer to Figure 1. The legend of the Figure 1 also indicates reactivity of antibodies to the beta and gamma-subunits of F1F0-ATPase in PBC patients and healthy controls. However, it is not clear whether this figure includes the absorbance values of the readings obtained in the total number of 425 sera tested (before and after transplantation) or the baseline readings.

I strongly suggest the Authors to give this figure in the form of scatter plot.

Other points:

I am wondering whether antibody concentrations against beta and gamma subunits of F1F0-ATPase correlate or not with those against individuals mitochondrial antigens, and in particular that against PDC-E2, the predominant mitochondrial autoantigen. It would be great if the Authors have any data regarding this.

The ROCs are missing and the authors need to submit them as supplementary data.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

'I declare that I have no competing interests'