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

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Reviewer: Patrick Leung

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The manuscript is focused on investigating whether the titers of antimitochondrial antibodies to the beta- and gamma-subunits of the F1F0-ATPase correlate with any clinical and histological parameters in PBC. The study included 59 patients with PBC, Effects of UCDA therapy on anti beta and anti-gamma subunits of F1F0-ATPase was also reported. Base on their data, the authors conclude that the antibodies may serve as a useful diagnostic tool in anti-M2 negative PBC, but do not correlate with clinical activity or prognosis. In general, this paper is highly descriptive. The observation and data substantiate their conclusion.

Minor Revisions:

1. Since the antibodies to beta- and gamma-subunits of F1F0-ATPase were abbreviated as anti-beta and gamma antibodies and widely used in the article, it must be clearly noted at the beginning.

2. How many non-PBC controls were studied? The controls should also include non-PBC, i.e. other autoimmune liver diseases?

3. Immunofluorescence was introduced in the Methods and performed to demonstrate distinct ANA staining patterns. However, no data was included.

4. Since IFT and ELISA were both performed to detect autoantibodies, the authors should discuss whether results from these two analyses correspond to each other?

5. N numbers were missing in Fig. 3 and 4. Since not all of the patients received treatment/OLT were anti-beta/gamma positive, those anti-beta/gamma negative patients should be excluded while comparing the difference of antibody reactivity before and after treatment/OLT.

6. Based on their results, The authors should discuss the clinical significance and impact on patient care moderate.

7. The authors should also discuss autoantibodies that may play important roles in diagnosis and/or prognosis of PBC, such as anti-gp210, anti-sp100

8. The authors stated that there are CD8+ T cells to the F1F0-ATPase beta subunit. Please include reference.

Level of interest: An article whose findings are important to those with closely
related research interests

**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:**

I declare that I have no competing interests.