Reviewer's report

Title: Behavioral and clinical correlates of serum bilirubin concentrations in Japanese men and women.

Version: 1 Date: 20 May 2013

Reviewer: Libor Vitek

Reviewer’s report:

The paper by Tanaka et al. entitled “Behavioral and clinical correlates of serum bilirubin concentrations in Japanese men and women” deals with the effect of behavioral and related variables on the serum bilirubin levels, an important topic with respect to the importance of bilirubin as a predictive factor of oxidative stress-mediated disease. The paper is well written, the design and the results of the study are clear. There are, nevertheless several issues, which need to be addressed prior reconsideration of the publication.

Major comments:

1) The term “inverse” relationship (y = b/x), commonly used within manuscript, is, in fact, a “negative” relationship (y = a – bx). This should be corrected within the whole text.

2) Alcohol consumption and bilirubin. This association is more likely to be due to underlying liver function deterioration mediated by ethanol. The authors should report a) AST/ALT activities within the whole cohort, b) relationship between alcohol consumption and AST/ALT activities, and c) most importantly, relationship between AST/ALT activities and bilirubin levels.

3) When referring the lipid vs. bilirubin association, the authors should cite also the most recent paper by Wallner et al published in Clin Sci just recently.

4) Tables 1-2. Alcohol consumption should be stated not as mL/d, but as g/day.

5) Table 4. It is not clear, how season affected bilirubin levels. Lower or higher during winter?

Minor comments:

1) page 11, last para: “alcohol consumption as well as smoking was an independent correlates...” should read: “alcohol consumption as well as smoking were independent correlates...”

2) page 13. “UGT1 A1” should appear as “UGT1A1”.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.