Reviewer's report

Title: Gut Microbiota, Probiotics and Diabetes

Version: 2  Date: 7 May 2014

Reviewer: Jot Hui Ooi

Reviewer's report:

- Minor Essential Revisions

The authors attempted to correlate LPS-induced inflammation to T2D. Do diabetic patients have higher number of gram negative bacteria that express LPS? In 5th and 9th paragraphs of T2D section, please describe whether gram positive or negative bacteria were altered in diabetic and obese patients.

In 6th paragraph of T1D section, what bacterial changes have been reported in T1D patients?

Please correct the references cited on the tables. Please clarify whether wild-type C57BL/6 mice were used in studies in Table 1. For reference 98 in Table 1, do the probiotics positively or negatively modulate Th17 response? The CFU/day of L. plantarum DSM 15313 administration should be listed on Table 1 instead of CFU/g.

In 2nd paragraph of T2D section, Infant’s intestinal microbiota is mainly formed by Bifidobacteria and Enterobacteria.

In 14th paragraph of T1D section, please specify the Bacteroidetes species that reduce the intestinal inflammation and promote Treg induction.

Please correct some minor grammatical errors and typo, such as “Rikenellaceae, and Porphyromonadaceae” in T1D section and “CFU” in Table 2.

- Discretionary Revisions

Some paragraphs can be combined to improve the flow, such as the 7th paragraph and the last two paragraphs in T2D section. The first sentence of the 6th and 7th paragraph in T1D section described the same content.

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.