Reviewer's report

**Title:** Gut microbiota in children with type 1 diabetes differs from healthy children: a case-control study.

**Version:** 1  **Date:** 4 October 2012

**Reviewer:** Graciela Lorca

**Reviewer's report:**

This is an interesting manuscript that corroborates previous observations in animal studies on microbial groups negatively correlated with diabetes type 1. A positive and well-thought aspect of this study is that the diet of the patients was carefully screened.

Specific comments

Page 6. When the authors said that no probiotics or prebiotics were consumed, does it also include yogurt?

Page 11. The authors state that they have similar patterns in consumption of rice...although the diabetic children had a fast carbohydrate restriction”... BUT rice is classified as a high glycemic carbohydrate.

Page 9. Change to the past tense the description of the methodology under “Sequencing of selected bands from DGGE gels”

Page 10. The concentration of bacteria was calculated using standard curves. “Standard curves were created using serial tenfold dilutions of DNA from pure cultures, corresponding to 101–1010 copies/gram of feces”. However, the different genera analyzed have different copy number of the 16S rRNA gene. Have the results been normalized for that?

Page 12, end of the page. In this section the authors evaluated the abundance of some specific genera of bacteria NOT the “Differences in the size of the bacterial population”

Please revise this statement and conclusions based on this.

Figure 1. I couldn’t see it (it was really small). Check for formatting issues.

Page 14-19. The discussion should be summarized. It is too long and too repetitive. Recently (2011) Giongo et al. (ISME J) reported a study on children with diabetes type I where microbiota sequencing was performed. This manuscript would benefit of a discussion of similarities and differences observed between the two studies.

**Quality of written English:** Acceptable
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests