Reviewer's report

Title: Impact of a probiotic fermented milk in the gut ecosystem and in the systemic immunity using a non-sever protein-energy-malnutrition model in mice

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Reviewer: HARIOM YADAV

Reviewer's report:

Galdeano and colleagues reported the immunomodulatory effects of probiotic fermented milk in non-severe protein energy-malnourished mice model. Although the study is interesting, but before final acceptance of this article, few improvements must be made:

1. There are abundant typographical and grammatical errors all over the running text, which must be corrected carefully

2. Although these findings are interesting in relation with malnutrition, but probiotics and probiotic containing fermented milk products have shown health-beneficial effects in high-energy fed animal models (i.e. Yadav et al Nutrition. 2007 Jan;23(1):62-8, described this effect), and reviewer wonders how does you explain your findings in reference of high energy induced obesity vs malnourished animal models.

3. The gut flora has been closely correlated with obesity in recent era, I am wondering while mice fed with probiotic-fermented milk gained fat mass in comparison to control mice.

4. Recently Jain et al (J Med Food. 2009 Jun;12(3):576-83) also have reported that probiotic containing fermented milk product improved immunological parameters in normal mice, how does your findings are different than Jain et al findings, please discuss.

Minor points:

1. Please replace ‘sever’ with ‘severe’ in title

2. Abstract: In 17-21; please complete the sentence

3. Background: In 34-37; complete/correct the sentence

4. In 46; insert ‘known’ by replacing ‘know’

5. In 56; define what is ‘PFM’, or Is that PEM and PFM is the same, if it is than keep one consistent in whole text

6. Methods: In 74, replace ‘experience’ with ‘experiments’ and other places too in the text

7. In 89; correct temperature

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