

**Manuscript NO:** 66080

Reviewer reports:

Reviewer #1:

**Scientific Quality:** Grade A (Excellent)

**Language Quality:** Grade A (Priority publishing)

**Conclusion:** Minor revision

**Specific Comments to Authors:** The manuscript submitted by Hillestad and cols., aims to review and discuss the role of gut microbiota per se besides therapies aiming at modulating this microbial environment in IBS. In general, the text is well written and structured. Further, the review presents a broad and in-depth critical analysis of data besides debating pros and cons of microbial modulation in IBS.

Thank you for your time spending on this review, for your positive feedback, and propositions to improve the manuscript.

Major concerns:

- Aside the difficulties of defining a microbiota as healthy or diseased, there are some aspects broadly accepted in this regard, especially concerning gut microbial ecology: resilience, resistance and diversity. Thus, authors must add this information to the text and describe the importance of each aspect in healthy and disease status.

Thank you for this important suggestion.

Action taken: We have added a more detailed explanation of gut microbial ecology (resilience, resistance and diversity) in health and disease to the text (row 122-134).

- In general, authors used the term “microbiome” to refer to “microbiota”, though similar, it is important to highlight that they don’t refer to the same thing. On one hand, microbiome is related to a set of microbial genes within a specific population, on the other hand, microbiota refers to a group of microorganisms inhabiting a specific ecological niche.

Thank you for this comment. We agree that the use of “microbiota” and “microbiome” should be more consistent.

Action taken: We have revised the whole manuscript and replaced “microbiome” with “microbiota” where appropriate (row 154, 159, 269, 450 and 453). For row 498 we removed the word “microbiome” considering the word was redundant for the sentence’s meaning.