

## Point by Point “Women health and microbiota: different aspects of well-being”

We thank the Editor and Reviewer for their appreciation of our manuscript and for their constructive comments. Accordingly, we have now inserted the additional data required and made changes in the manuscript, all indicated by track changes and highlighter

### EDITORIAL OFFICE’S COMMENTS

(1) Advantages and disadvantages: The reviewer has given positive peer-review reports for the manuscript. Classification: Grade C; Language Quality: Grade B. The topic is fascinating, but a thorough restructuring of the content is necessary. Some paragraphs are quite lengthy, particularly the one starting with "In this editorial we comment on the article published by Marano et al[6]." Breaking this into smaller paragraphs could enhance readability. There are instances where simpler language could be used for broader accessibility, especially for readers who might not be specialists in this field.

(2) Main manuscript content: The author clearly stated the purpose of the study and the research structure is complete. However, the manuscript is still required a further revision according to the detailed comments listed below.

(3) Table(s) and figure(s): There are no Figures and Tables should be improved. Detailed suggestions for each are listed in the specific comments section.

(4) References: A total of 19 references are cited, including 2 published in the last 3 years. The reviewer didn't request the authors to cite improper references published by him/herself.

Reply: We thank the Editor for the comments. As suggested, we shorted some paragraphs and we simplified the used language for a better comprehension of the manuscript.

### REVIEWER 1:

Comments to the Manuscript NO: 91166

The topic is fascinating, but a thorough restructuring of the content is necessary. I kindly request the esteemed author to revise the entire article with a deeper and more coherent perspective, taking into consideration the suggested changes. Afterward, please resubmit it for further review. I believe this feedback will be valuable in improving the quality of your work. Best regards.

We thank the reviewer for appreciating our work.

**Point 1:** The abstract succinctly summarizes the editorial content, focusing on the importance of understanding sex differences in gut microbiota and their implications for health. However, it might benefit from a more precise title that directly indicates the focus on sex differences in gut microbiota.

**Reply 1:** We thank the reviewer for the suggestion but unfortunately we are unable to change the title because our manuscript is an editorial of a paper titled” Women health and microbiota: different aspects of well-being”

**Point 2:** some paragraphs are quite lengthy, particularly the one starting with "In this editorial we comment on the article published by Marano et al[6]." Breaking this into smaller paragraphs could enhance readability.

**Reply 2:** Thank you for your suggestion, we have shorted some paragraphs.

**Point 3:** In discussion it may be enhanced by including more specific examples or case studies to illustrate the points made, particularly in the discussion of the differences in gut microbiota between sexes.

**Reply 3:** Thank for the critical suggestion. As suggested, we added some specific examples

**Point 4:** there are instances where simpler language could be used for broader accessibility, especially for readers who might not be specialists in this field. For example, the sentence "In detail, the hormones are produced and secreted by commensal bacteria, and interactions between microorganisms and hormones can impact human behavior, immunity, and metabolism[5]" could be simplified for clarity.

**Reply 4:** In agreement for the appropriate reviewer suggestion, we simplified some paragraphs.

**Point 5:** Ensure consistency in terminology throughout the editorial. For instance, the terms "gut microbiota" and "intestinal microbiota" are used interchangeably. It would be beneficial to stick to one term for clarity.

**Reply 5:** As rightly suggested from the reviewer we chose the term “gut microbiota” to better clarify the text

**Point 6:** While the editorial references a range of studies, including some as recent as 2014, it would be strengthened by the inclusion of the latest research findings in the field to ensure the information is up-to-date.

**Reply 6:** As adequately suggested we added more recent studies (please see references 19 and 21)

**Point 7:** The conclusion effectively highlights the need for further research, particularly focusing on metabolites. It could be made more impactful by briefly mentioning potential applications of this research in clinical practice or public health.

**Reply 7:** In agreement with the right suggestion, we have suggested potential clinical applications.

**Point 8:** The editorial interchangeably uses 'gender' and 'sex' in discussing microbiota differences. It's important to clarify these terms, as 'sex' refers to biological differences, while 'gender' encompasses the roles, behaviours, and identities that societies attribute to individuals. This distinction is crucial in scientific writing, especially in a topic sensitive to these differences.

**Reply 8:** Thank you very much for the critical suggestion. We changed the word “gender” with “sex”, refers to biological differences