

Reviewer's code: 03976790

Specific comments to authors

Comments about the manuscript: "Gut microbiota and Female health" It is currently accepted that the intestinal microbiota acts on anatomically distant organs, with repercussions in particular on female health which can lead to diseases such as polycystic ovarian syndrome, endometriosis, breast and cervical cancer. uterus or ovary. However, the mechanisms involved are not yet well understood. The aim of the editorial proposed here is to explore the mechanisms by which dysbiosis of the intestinal microbiota impacts the development of these female diseases. This interesting and useful update could be published. Here are some minor remarks regarding the manuscript. Page 5, Metabolic pathway. Write "microbiota" instead of "mircobiota". Page 6, line 2. "The study by Qiao et al. reported": Indicate the reference number of Qiao et al. here, and add it to the list of references. The closest reference (ref 30) is not in the name of Qiao. Page 6, CHANGES OF GUT MICROBIOTA IN PATIENTS - 1. Polycystic ovarian syndrome, PCOS. "Tremellen and Pearce": Also give the reference number (32) here. Page 6. "(...) and Tyzzerella 4 were identified as the characteristic genera in obese patients with PCOS." (three lines before the end of page): Is this study still the previous one (ref. 32), or is it another study? In this case, provide a number and include the reference in the list. Page 7, line 1. "(...) for the treatment of PCOS": same: what is the reference? Page 7. Endometriosis. Write "childbearing age [34]." (in superscript) instead of "childbearing age [34]." Page 10, line 8. Write "Huang et al. performed ovariectomy on 12-week-old mice and..." instead of "Jia Huang et al. performed ovariectomy on 12-week-old mice and..." (do not give the first name of the author).

Response: Thank you very much for your careful reading of the manuscript and thank you for your valuable comments on our manuscript. According to your comments, we

made a point-to-point response, we hope to be able to meet the requirements for publication, if you are not satisfied with the revised manuscript, we will make a second revision.

1: Page 5, Metabolic pathway. Write “microbiota” instead of “mircobiota”.

Response: Yes, we gratefully thanks for your careful reading, we have corrected “mircobiota” to “microbiota” on page 6, paragraph 2, line 1. And it was marked in yellow.

2: Page 6, line 2. “The study by Qiao et al. reported”: Indicate the reference number of Qiao et al. here, and add it to the list of references. The closest reference (ref 30) is not in the name of Qiao.

Response: Yes, we appreciate your valuable suggestions and apologize for our mistakes, the correct reference should be “Qi X, Yun C, Sun L, Xia J, Wu Q, Wang Y, Wang L, Zhang Y, Liang X, Wang L, Gonzalez FJ, Patterson AD, Liu H, Mu L, Zhou Z, Zhao Y, Li R, Liu P, Zhong C, Pang Y, Jiang C, Qiao J. Gut microbiota-bile acid-interleukin-22 axis orchestrates polycystic ovary syndrome. Nat Med. 2019; 25: 1225-1233”, we have modified “Qiao et al.” to “Qi et al.” and annotated the correct reference on page 6, paragraph 3, line 2. And it was marked in yellow.

3: Page 6, CHANGES OF GUT MICROBIOTA IN PATIENTS - 1.Polycystic ovarian syndrome, PCOS. “Tremellen and Pearce”: Also give the reference number (32) here.

Response: Yes, we gratefully thanks for your careful reading, we have added the reference number on page 7, paragraph 2, line 3. And it was marked in yellow.

4: Page 6. “(...) and Tyzzerella 4 were identified as the characteristic genera in obese

patients with PCOS.” (three lines before the end of page): Is this study still the previous one (ref. 32), or is it another study? In this case, provide a number and include the reference in the list.

Response: Yes, we appreciate your valuable suggestions and apologize for our mistakes., it is another study, the correct reference should be “Zhou L, Ni Z, Yu J, Cheng W, Cai Z, Yu C. Correlation Between Fecal Metabolomics and Gut Microbiota in Obesity and Polycystic Ovary Syndrome. Front Endocrinol (Lausanne). 2020; 11: 628”. We have added the reference number on page 7, paragraph 2, line 12. And it was marked in yellow.

5: Page 7, line 1. “(...) for the treatment of PCOS”: same: what is the reference?

Response: Yes, we gratefully thanks for your careful reading and apologize for our mistakes, we have added the correct references on page 7, paragraph 2, line 15, and it was marked in yellow. (34. He Y, Wang Q, Li X, Wang G, Zhao J, Zhang H, Chen W. Lactic acid bacteria alleviate polycystic ovarian syndrome by regulating sex hormone related gut microbiota. Food Funct. 2020; 11: 5192-5204. 35. Guo Y, Qi Y, Yang X, Zhao L, Wen S, Liu Y, Tang L. Association between Polycystic Ovary Syndrome and Gut Microbiota. PLoS One. 2016; 11: e0153196.).

6: Page 7. Endometriosis. Write “childbearing age [34].” (in superscript) instead of “childbearing age [34].”

Response: Yes, thank you for your careful reading, we apologize for our negligence. We have adopted the reference to the superscript format on page 7, paragraph 3, line 3. And it was marked in yellow.

7: Page 10, line 8. Write “Huang et al. performed ovariectomy on 12-week-old mice

and..." instead of "Jia Huang et al. performed ovariectomy on 12-week-old mice and..."
(do not give the first name of the author).

Response: Yes, we appreciate your valuable suggestions and apologize for our mistakes.
We have corrected "Jia Huang et al." to "Huang et al." on page 10, paragraph 2, line 11.
And it was marked in yellow.