Author’s response to reviews

Title: Medroxyprogesterone acetate causes the alterations of endoplasmic reticulum related mRNAs and lncRNAs in endometrial cancer cells

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Technical Comments:
1. Please include the email addresses for all authors on the title page. The corresponding author should still be indicated.
Response: We provided the email addresses for all authors on the title page in the revised manuscript.

2. In the 'Funding' statement, please declare the role of the funding body in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript.
Response: The funding body has no role in the design of the study, collection, analysis, and interpretation of data, or in writing the manuscript. This work was just financed by the funding. We included this statement in the Funding section.

Reviewer reports:

Marcelo Alarcon, PhD (Reviewer 1): In general, it is a paper with a current theme, they use appropriate methodology and the conclusions are interesting.
Response: Thanks for the positive comments.

But I have some notes:
Line 120: indicate the catalog number, used antibiotics and antifungals?
Response: Thanks for your suggestions. We provided the detailed information about catalog numbers
and antibiotics in the revised manuscript.

Line 125: Why that concentration of MPA? 
Response: Thanks for the comment. In previous studies, 10 µM of MPA was used to study the effect of MPA on the proliferation and apoptosis of Ishikawa cells and found that 10 µM of MPA exhibited appropriate effect (see Ref. 2 & 8)

Line 128: Trizol Protocol? 
Response: The Trizol protocol has been described in the method section in detail.

Response: The purity of RNA was evaluated to have a 260/280 ration of ~2.0 and a 260/230 ratio between 2.0-2.2 using NanoDrop.

Line 151: References? 
Response: Thanks for your comment. The reference was added (see Ref. 21).

Line 169: Relative expression: Housekeeping? Formula 2 Delta delta Ct? 
Response: Thanks for your comments. We used GAPDH as housekeeping and calculated the relative expression using equation: 2-∆∆Ct. We included these information in the revised manuscript.

Line 189: only refer to Figure 1, but this has part A and part B. They should explain both more deeply, if not only mention part A. 
Response: Thanks for your comments. We explained both part A and Part B in the revised manuscript.

Line 208: It is not clear why this analysis was made. 
Response: Thanks for your comments. Our GO enrichment and KEGG pathway analysis showed that differentially expressed genes were mainly involved in ER stress/unfolded protein response. Therefore, we perform this analysis to highlight the ER stress-related genes upregulated in response to MPA treatment.

Vincent Avecilla, PhD, MPH (Reviewer 2): Cao et al try and demonstrate the effects of MPA on PRB+ EC cells through an integrative laboratory and sequencing methodology. Although interesting, please try to incorporate the following: 
1) Some epidemiology information in the introduction (if applicable) to further add onto why it is important to investigate this particular area. 
Response: Thanks for your comments. We added further information about the epidemiology of EC in the Introduction (see Ref. 1). Also as mentioned in the first paragraph of Introduction, around 20% of patients develop progesterin resistance in the treatment of endometrial carcinoma with MPA. Therefore it is important to understand the mechanism underlying the progesterin resistance for the effective treatment of EC using progesterin.

2) Review and edit methodology. Some discrepancies with details described. 
Response: Thanks for your comments. We revised and added detailed information in the methodology section.

3) Please reformat figures to clearer portrayal (bar graphs & gene networks). 
Response: Thanks for your comments. Figures have been reformed.