Reviewer's report

Title: Prostaglandin pathway gene expression in human placenta, amnion and choriodecidua is differentially affected by preterm and term labour and by uterine inflammation

Version: 1 Date: 14 February 2014

Reviewer: Martha Lappas

Reviewer's report:

The authors have undertaken an extensive amount of work on the PG pathway in human gestational tissues. This is impressive!

Essentially, the paper is well written and the data presented properly. The summary Tables in the results is helpful as is the section comparing this to other studies.

Minor Essential Revisions

1. Full names for abbreviated genes are required (e.g. in abstract CBR1)
2. In the results section of the abstract, the following should be removed "suggesting capacity for....". Simply need to summarise the data.
3. Collection of tissues. More details are needed here.
i) Sampling of tissues - where?
ii) Inclusion/exclusion criteria e.g. asthma, smokers.
iii) BMI of the mothers is required if possible. If not, then must be addressed as a limitation of the study.
iv) how was chorioamnionitis assessed?
v) details on membranes rupture in each of the groups
vi) where any of the preterm groups on any kind of steroids?
4. Table 1 – abbreviations need to be defined
5. Not sure about the gender section. This is limited by small numbers in each group. if comparisons are to be made, then they should be made again comparing between the different groups not combining the males/females from the separate groups.
6. In the actual figures, I would put also put a legend for the colours
7. I think Figure 2 is not required. Given the amount of data, I would remove this.
8. Figure 4, summary table – need to also include the level of significance as you have for Figure 3.
9. A paragraph with the limitations of the study should be included in the discussion. This should include the low sample numbers in each group.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests