Reviewer's report

Title: Growth factor concentrations and their placental mRNA expression are modulated in gestational diabetes mellitus: possible interactions with macrosomia

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Reviewer: Jens Fuglsang

Reviewer's report:

The authors have submitted a revised version of their manuscript "Growth factor concentrations....".

Indeed, the authors have implemented a majority of the suggestions made by the reviewers.

Still, though, the authors need to draw attention to some aspects, before the manuscript appears balanced:

Major compulsory revisions:

Blood sampling technique, p. 4: all maternal samples were drawn after the baby was born, but before the placenta. Theoretically, the metabolism of the placenta should indeed change during delivery. Please insert a note in the discussion section indicating that the effect of delivery upon circulating hormone levels in general is unknown.

Placental samples, p.5: Please insert a phrase indicating, that only one placental sample from each subject was used. Unpublished studies of GHR mRNA expression from our group revealed a tremendous variation in mRNA expression from samples from the same placenta, thus limiting the results obtained in our laboratory.

The discussion section still lacks a discussion of the relevance of coupling mRNA expression levels to serum levels of protein. Furthermore, it should be stressed that the study protocol does not allow the authors to discriminate into which compartment placentally produced hormones should be secreted. Finally, the consequences of this for the results obtained should be balancedly discussed.

Discussion, p. 10: It should be stressed that placental GH constitutes the majority of circulating growth hormone in late pregnancy, and that this hormone is not found in the fetal circulation. Any differences in pituitary GH levels might very well be statistically significant but circulating GH levels are diminutive compared to placental GH levels (, at least in mothers not having fetuses suffering from IUGR). It is therefore unknown whether it is a clinically significant finding.

In general, the discussion part of the paper is not so stringent and it could be shortened.
Discretionary revisions:

p.7, last line: Should it be pin-pointed that the GH in speaking is pituitary GH?

In my opinion, the different correlation coefficients mentioned in the discussion section should not appear in the discussion but instead in a table or the results section of the paper.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.