Reviewer’s report

**Title:** Colony Stimulating Factor-1 and Leukemia Inhibitor Factor expression from current-cycle cannula isolated endometrial cells are associated with increased endometrial receptivity and pregnancy

**Version:** 0 **Date:** 21 Mar 2017

**Reviewer:** Naguib Salleh

Reviewer's report:

A study by Camargo-Diaz et al, attempted to overcome the difficulties in determining with high accuracy the reliable markers for endometrial receptivity, which is an indicator of a successful embryo implantation which ultimately lead to establishment of pregnancy. Their study is simple, yet interesting, drawn from adequate number of women which showed a strong association between significantly elevated expression of LIF and CSF-1 in endometrial cells with successful pregnancy rate in women underwent IVF due to various reasons.

The rationales for identifying these 2 markers have been provided and the aims were well outlined. The methods were adequate. It would be interesting to stain the endometrial cells with antibodies against LIF and CSF-1, in order to confirm their mRNA findings. These would further strengthened the overall conclusions. However, if this is not possible, then can be put under further studies for validation.

Limitations of this study should be further discussed. Were these cells only derived from the luminal epithelium, or did this include the glandular epithelium as well, in which the glands are known to be the main source for LIF?. What about the stromal / decidual cells? Could they secrete LIF and CSF-1 too?

Can the author briefly described the IVF treatment regime received by these women? Would progesterone treatment causes increased in LIF and CSF-1?

Or these women received different treatment based on their conditions?

Authors concluded that determining the levels of LIF and CSF-1 can be used to predict endometrial receptivity development in women. Would these be too late to determine as the embryo is at the same time being transferred? Uterine flushing prior to embryo transfer can be done and endometrial cells retrieved and assessed for their LIF and CSF-1 levels, if in case they were high, then embryo can be transferred. These would be more practical rather than transferring the embryo and at the same time determining the development of endometrial receptivity.
I think all these limitations etc should be included prior publication in order to make the findings more meaningful.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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