Reviewer’s report

Title: MiR-125b promotes proliferation and migration of type II endometrial carcinoma cells through targeting TP53INP1 tumor suppressor in vitro and in vivo

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Reviewer: Burton Yang

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In this manuscript, Jiang et al. report that miR-125b overexpression enhanced proliferation and migration of type II endometrial carcinoma cells. It also reported that miR-125b down-regulated TP53INP1 expression in vitro and in vivo. The manuscript contains results from extensive experiments. Before being accepted for publication, some clear defects need to be fixed.

Major comments:

1/ As indicated the title ‘miR-125b promotes proliferation and migration of type II endometrial carcinoma cells through targeting TP53INP1 tumor suppressor in vitro and in vivo’, the authors, however, failed to provide sufficient evidence to reach this conclusion. The authors only demonstrated that TP53INP1 is the target of miR-125b. There is no data to show that the role of miR-125b on cell proliferation and migration occurred through TP53INP1. To draw this conclusion, the authors need to use siRNA against to confirm a similar result could be derived and over expression of TP53INP1 can rescue the effects of miR-125b. It is noted that the authors have performed a large amount of work. These comments are trying to help the authors to improve their manuscript.

2/ On the wound healing assay and tumor formation assay, ishikawa cells transfected with miR-125bm should be compared with AN3CA-NC cell, as it might be worthy to see the difference between the miR-125b-overexpressed ishikawa cells with high endogenous miR-125b AN3CA cells.

3/ In luciferase assays, a scrambled sequence is needed as a negative control.

4/ In tumor formation assay that shown in Fig. 6B, injection of non-treated cells and vector cells (2 and 3) should be performed onto the same mouse in order to compare if there is any effect in vector transfection of cells or not.

5/ Fig 6E, the Ki67 staining appears to have much non-specific staining. A good staining should produce clear-cut result, rather than a gradient from strong to weak staining.

Minor points:

1/ On page 11, line 261, was ‘aslo’ performed...

2/ On page 17, line 328, ‘using archival archival primary ECs tissue samples’...

3/ On page 18, line 347, ‘we nest asked’.....
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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