Reviewer's report

Title: miR-302b inhibits tumorigenesis by targeting EphA2 via Wnt/β-catenin/EMT signaling cascade in gastric cancer

Version: 0 Date: 06 Aug 2017

Reviewer: Kwang-Huei Lin

Reviewer's report:

The authors aimed to study the function of miR-302b in GC cells. They show that miR-302b is a suppressor of GC cell growth and metastasis both in vitro and in vivo, to inhibit its downstream pathways by directly targeting EphA2.

1. The authors mentioned that "the role of miR-302b in GC has not been fully documented, we thus chose miR-302b for further investigation". However, there have at least 4 articles (PMID: 28743112; 27465546; 25904219; 23508453) focused on the study of miR-302b in gastric cancer.

2. Overexpression of EphA2 in gastric cancer has been reported. Also, Huang et al (the same group of the current study) reported that EphA2 promotes epithelial-mesenchymal transition through the Wnt/β-catenin pathway in gastric cancer cells. Based on the above two points, the current study is short of novelty.

3. The authors reported that miR-302b is a suppressor of GC cell growth and metastasis. Its function is mediated by directly targeting EphA2. Since the target genes of miR-302b are several, can authors design experiments to validate the EphA2 but not others is the most critical gene to exert its inhibitory effects.

4. Khodayari et al (PMID: 27725905) reported that Ephrin-A1 treatment induced miR-302b expression. I wonder whether EphA2 can induce miR-302b expression in GC also? If yes, the authors may need to consider the reciprocal effects of two genes? Whether Ephrin-A1 is also the target of miR-302b?

5. The study is based on the EphA2 overexpression and miR-302b down-expression in GC. However, the authors should provide the data to validate the same results in the clinical specimens.
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.

No

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

No

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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

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