Reviewer's report

Title: MicroRNA-217 functions as a prognosis predictor and inhibits colorectal cancer cell proliferation and invasion via an AEG-1 dependent mechanism

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Reviewer: Jie Hong

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Major Compulsory Revisions

The authors carried out a study to illustrate the relationship between deregulation of miR-217 expression and colorectal carcinogenesis and metastasis. They also identified AEG-1 as a direct target of miR-217 in colorectal cancer. The story may have some hints for colorectal cancer diagnosis, survival prediction and treatment. However, the mechanisms of miR-217 and AEG-1 in colorectal cancer progression are still not clear.

1. The authors have shown that miR-217 significant inhibited cell proliferation both in vitro and in vivo. They just revealed that miR-217 may inhibit cell invasion in vitro, how about in vivo situation? The metastasis animal model in this paper should be performed. In addition, the author didn’t illustrate why transfection of miR-217 mimics increased cell apoptosis and blocked the cell cycle progression from Figure 3. Is there any molecule or pathway participating in miR-217-induced tumor cell apoptosis or cell cycle arrest? The author should discuss that at least.

2. By bioinformatical analysis, the authors identified the potential miR-217 target gene as AEG-1. They showed that miR-217 binds 3'-UTR of AEG-1 and down-regulated AEG-1 expression. What is the role of AEG-1 in CRC initiation and progression? They should explore that. Moreover, it is impossible to conclude that miR-217 deregulation contributes to cancer via AEG-1. AEG-1 might be just one of the important genes regulated by miR-217. To confirm their claim outlined in the title, the authors should show that deregulation of miR-217 can no longer cause colorectal cancer in AEG-1 knockout CRC cells or mice.

3. The text has many language issues, which need correction by an English editor.

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

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests