Reviewer's report

Title: Dysregulated miR-183 Inhibits Migration in Breast Cancer

Version: 2 Date: 24 June 2010

Reviewer: Aaron L

Reviewer's report:

The authors made lengthy responses to each of the points raised

Compulsory Revisions remain

1) I agree that the authors have shown that their data is statistically significant. To ensure that the size of these changes is fairly represented please show dotplots representing each tumor sample value in addition to or instead of bar charts for each of the groups in figure 1. Also include the Normals and a group composed of all tumors and use the the same scale for each. For an example look at figure 2 (Schetter et al. JAMA. 2008;299(4):425-436.) Additionally, make clear to all readers in the text the average difference between groups in terms of fold change.

2) The authors need to address this comment
"A possible interpretation of the data is that the normalization method used (normalization to Let7a and miR-16) may be leading to the changes observed. In reference 12 Figure 5 and 6 Let7A is shown to have differential expression in breast tumors dependent on clinical features" or to restate the observed changes could be occurring due to the use of let7A in the normalization. To ensure that this is not occurring determine that miR-16, when normalized using only Let7A and the delta delta method does not show statistically significant differential expression in this dataset grouped as described in the paper.

I leave the rest for an editorial decision in line with journal standards.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I am involved in miRNA research including the study of miR-183.