Reviewer's report

Title: MicroRNA-mediated regulation of target genes in several brain regions is correlated to both microRNA-targeting-specific promoter methylation and differential microRNA expression

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Reviewer: Jun-ichi Satoh

Reviewer's report:

The present study identified a statistically significant correlation between miRNA-mediated regulation of target genes identified by MiRaGE, miRNA-targeting-specific promoter methylation, and differential miRNA expression in the human frontal lobe, temporal cortex, pons and cerebellum by multivariate analysis of the GEO data GSE15745 on six pairwise comparisons among distinct brains regions. The study found that the set of target genes for differentially expressed miRNAs in specific brain regions are enriched in KEGG pathway related to brain function and development. Although most of the questions proposed by the reviewer still remain unsolved, the author greatly improved the revised paper by reorganizing the figure, brushing up the English, trimming the text, and moving a non-essential part to the supplementary document.

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.