Reviewer's report

Title: MicroRNA and mRNA expression profiling in rat acute respiratory distress syndrome

Version: 1 Date: 26 February 2014

Reviewer: Djanybek Adyshev

Reviewer's report:

I think author's findings are novel and potentially important for understanding the epigenetic factors involves in ARDS. However the paper would be improved if the authors could provide additional in vitro experimental data to confirm inverse correlation between selected predicted targets and miRNAs (i.e. down regulation by miRs of the luciferase reporter, on mRNA & protein level). Also would be useful, if authors provide actual miRNA and mRNA expression profiling figures in the Results section of manuscript. Furthemore, beside direct degradation of mRNA (inverse correlation), mRNAs can inhibit translation of the target without mRNA degradation, should be explained. Also I would like to express, that ARDS characterized by profound lung inflammation, increased lung vascular permeability. MiRNAs & target genes, involved in these processes should be identified. Some minor typographical and grammatical errors should be corrected (for example dys-regulation).