Reviewer's report

Title: MicroRNA-146a expresses in interleukin-17 producing T cells in rheumatoid arthritis patients

Version: 3 Date: 6 July 2010

Reviewer: DIMITRIOS ILIOPOULOS

Reviewer's report:

Niimoto et al., identified that six microRNAs are significantly up-regulated in IL-17 T cells. Also, it is shown that miR-146a is highly expressed in RA synovium. The authors very nicely have shown miR-146a and IL-17 staining by immunohistochemistry. However, there are some important points that need to be addressed.

Major Compulsory Revisions

1) The authors have identified that miR-155 and SOCS1 are both up-regulated in IL-17 T cells. Previous studies have shown that miR-155 targets directly SOCS1 expression, thus it is expected that miR-155 up-regulation would decrease SOCS1 expression levels. What is the explanation for this discrepancy?

2) The main finding of this manuscript is that miR-146a is highly expressed in RA. One important direct target of miR-146a is IRAK1. The authors should check IRAK1 protein levels during differentiation of IL-17 T cells.

3) MicroRNAs exert their function through regulation of their down-stream targets. The authors should identify by using any microRNA prediction program (for example TargetScan) the down-stream targets of the six important microRNAs that are expressed in T cells. These genes should be presented in a table.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests