Reviewer's report

Title: Peripheral T-lymphocytes express WNT7A and its restoration in leukemia-derived lymphoblasts inhibits cell proliferation

Version: 3 Date: 27 December 2011

Reviewer: David Loose-Mitchell

Reviewer's report:

This is a greatly improved manuscript. The additional experiments support the author's hypothesis and the grammar is MUCH better.

A few comments (that I would put as Minor Criticisms)

Criticism regarding selection of GAPDH and RPL32.

The data in supplemental Figure 2 do support the notion that at least in PBMC RPL32 is a suitable reference gene, Where is the corresponding data for GAPDH? The data in supplemental Figure 1 are somewhat in support of the author’s notion that these 2 reference genes are suitable. However, both GAPDH and RPL change by at least 1Ct following DOX treatment. Sometimes there is no perfect reference for every treatment in every cell line. The authors should discuss this in the manuscript by simply indicating that SOME, but certainly not all, of the changes in WNT7a expression may be caused by changes in reference gene expression.. The citation cited in the cover letter, in fact argues AGAINST, the selected genes as reference:

“Following PHA/PMA treatment, the B2M gene was unresponsive, and the 18S rRNA, GAPDH and TBP genes showed only minimal changes in expression levels. These results indicate that the 18S rRNA and B2M genes are useful as internal controls in RTPCR with human lymphoblastoid cells because they have generally constant levels of expression across cell lines following exposure to ionizing radiation as well as to PHA/PMA.”

The authors have appropriately addressed the other major issues. The additional data in Figure 6, and the inclusion of Figures 7 and 8 have made a much stronger manuscript.

Minor Criticisms

#2. Please include the information provided in the cover letter in the Methods section
"we used the maximum volume permitted (8µL) in the kit (SuperScript III first-Strand Synthesis System) for the cDNA synthesis."

This makes it clear that 8ul is not a typographic error.

**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 I have no competing interests