Reviewer's report

Title: Decreased erythrocyte nucleoside transport and hENT1 transporter expression in glucose 6-phosphate dehydrogenase deficiency

Version: 2  Date: 7 April 2015

Reviewer: Jane Leopold

Reviewer's report:

This is a very well presented study that examines the expression of hENT1 transporter expression in G6PD-deficient red blood cell membrane. The authors present a clear background and rationale for the study. There is some additional information that is needed to clarify the data presented.

Major compulsory

1. Overall the study provides interesting information but the data should be supported by other experiments that measure the amount the oxidant stress in the samples to understand if this affects the hENT1 activity. Also, a measure of adenosine levels would also support the findings presented.

Discretionary

2. Abstract: The conclusion section makes reference to plasma adenosine levels; however, this was not measured nor was “red metabolism.”

3. Methods: Blood samples were obtained from how many patients? Is there any clinical information on these patients – comorbidities and/or medications that would be associated with mediating levels of oxidant stress? If not, this should be included as a limitation in the Discussion section.

4. Methods: Were the patients genotyped? If not, this should also be included as a limitation in the Discussion section.

5. Methods: SDS-PAGE – how much protein was loaded into each of the gels? Is it the amount listed in the Figures?

6. Methods: Scanning densitometry findings should be quantified as bar graphs and presented with the gels.

7. Methods: the statistical methods section is unclear. What tests were used to determine significance? ANOVA? T tests? Post-hoc testing?

8. Results: typically, data from blot densitometry is expressed as mean +/- SD or SE. The way that these data are presented is difficult to translate.

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

Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.