Reviewer's report

Title: Proliferation, invasion and activation of cAMP response element binding protein (CREB) through the A2B adenosine receptor in trophoblast cells

Version: 1 Date: 25 September 2013

Reviewer: Augustine Rajakumar

Reviewer's report:

Hypoxia is attributed to be an important player in the pathophysiology of preeclampsia. Hypoxia also causes increases in adenosine levels. The current manuscript tests the hypothesis that hypoxia and A2B adenosine receptor activation influence cAMP production, proliferation, invasion and cAMP-PKA-CREB signaling in trophoblast cells. This was done using the first trimester SV40 transformed cell line HTR8/SVneo.

This is a straightforward study, well conducted and strongly supported by experimental data.

I have some minor points that may need attention for clarification.

1) The title needs to be re-worded for clarity.
2) Abstract. In Background, could add a line about the importance of adenosine increase
3) Abstract. Results. ‘normoxia (2% O2)?
4) Trophoblast integration in to endothelial cells. Is it migration or invasion or just growth potential difference? Explain.
5) Methods. The last sentence about cell passages. This is true only for HUtMVEC. Specify.
6) Figures 1 and 2 should be combined.

Over all, this is a well-written study validated by good data.

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.