Reviewer's report

Title: M1 and M2 macrophages derived from THP-1 cells differentially modulate the response of cancer cells to etoposide

Version: 5 Date: 8 December 2014

Reviewer: Birandra Sinha

Reviewer's report:

This report describes mostly on the characterization and differences between M1 and M2 macrophages and authors have done an extensive investigation to show that M1 and M2 are different. However, one of the hallmarks of macrophages is that they induce formation of nitric oxide via induction of iNOS. Authors have no data on iNOS and nitric oxide production in M1 and M2 macrophages. This is important as nitric oxide has been shown to regulate Etoposide toxicity in cells (Sinha et al 2013, 2014) and has also been implicated in Taxol cytotoxicity (Heincke et al 2014) in breast cancer cells. Since authors have used Etoposide as the drug to show that M1 and M2 regulate Etoposide cytotoxicity differently, it would be interesting and necessary to show nitric oxide production differs in M1 and M2 macrophages.

The figures are extremely busy and I had trouble viewing some of them; this extensive characterization of M1 and M2 is not necessary (at least to this reviewer) as most of these have been previously characterized.

Figure 5 is not necessary and can be deleted. Parts of Figure 6 can also be deleted.

Manuscripts needs to be edited; heat decomplemented? inactivated. Quoted? called or described as or noted? Shacked? Reference 14: what is Blut? Please spell it out.

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.