Reviewer's report

Title: Engineered Measles Virus Edmonston Strain Used as a Novel Oncolytic Viral System Against Human Hepatoblastoma

Version: 4 Date: 3 September 2012

Reviewer: Pavlos Msaouel

Reviewer's report:

The authors have appropriately revised their manuscript. There is one minor revision that needs to be made however:

On their comment regarding the "MV-CEA Successfully Replicates in Human HB Cell Lines and Induces Cell Lysis" the authors state that "The aim of this subsection is just to demonstrate the cell lysis induced by MV-CEA instead of the replication of infectious MV-CEA". However, the interplay between viral replication/gene expression and cell death is very complicated. For example, when Dingli et al. (Blood. 2004 Mar 1;103(5):1641-6) tested a related genetically engineered MV-Edm strain (MV-NIS) in MM1 tumors (which are refractory to MV-Edm lysis) they found that although MV-NIS infection by itself did not cause any significant tumor cell death, it did result in considerable NIS gene expression which led to complete tumor regression when the therapeutic properties of the NIS transgene were exploited.

Pending other clarification/interpretation, I am thus obliged to emphasize that the authors' experiment measures viral gene expression but does not directly quantify cell killing (they did measure in vitro cell death in another experiment). If intrinsic CEA production by the cell lines is negligible, then the CEA concentration measured by the authors reflects the total number of *viable* cells that contain and express the viral genome.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I have been employed within the last 5 years in the Department of Molecular Medicine at the Mayo Clinic where MV-CEA was developed and is currently being tested in clinical trials and I have used and received funding for the preclinical testing of this virus in cancer models.