Reviewer's report

Title: Differentially Expressed Alternatively Spliced Genes in Malignant Pleural Mesothelioma Identified Using Massively Parallel Transcriptome Sequencing

Version: 4 Date: 14 August 2009

Reviewer: Cristi King

Reviewer's report:

Minor Essential Revisions:

The authors have identified alternatively spliced genes in MPM using 454 Sequencing. Overall this was a well-written manuscript, however there were some concerns that the authors should consider:

1. Providing a better explanation regarding their sample size. It mentions that they analyzed 4 MPM samples with 1 normal lung sample a few times (n=5), however they also constantly reference their previous analysis using 4 MPM samples, 1 normal lung sample, and 1 lung adenocarcinoma sample (n=6).

2. Providing a power calculation to show how they determine that 36 samples (18 MPM and 18 normal lung samples) were sufficient for analysis.

3. Providing additional information on why they selected only the 3 top ranked exon junctions at higher levels in normal lung samples while selecting for the top 7 levels in the MPM samples, instead of just selecting for maybe the top 10 in each sample-type (so that they are not weighting just the number of junctions in the tumor samples).

4. Explaining why they removed the redundant exon junctions with the same or similar coordinates (under Methods/Annotation of AceView exon junctions and creation of virtual probes)? Especially since some genes have the potential to be very repetitive.

5. Spelling out "GFF" abbreviation under Methods/AceView transcriptome database Section.

6. In the Methods/Real time quantitative RT-PCR Section, the authors should think about extracting out the information regarding the CT Equation and place in an appendix for further explanation.

7. Consider making an additional supplemental table including the resulting genes/exons and their levels so that the reader doesn't have to sort through the manuscript to look for them.

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