Reviewer’s report

Title: MicroRNAs in urine are not biomarkers of multiple myeloma

Version: 2
Date: 13 June 2015

Reviewer: Jorg Ellinger

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The authors describe the presence of microRNAs in urine of patients with Multiple Myeloma (MM); results were compared to healthy individuals (HD) and patients with renal cancer (RCC). After screening microRNA expression using a commercially available microRNA panel in a subcohort of 8 MM and 8 HD, they validated the expression of 8 differentially expressed microRNAs in 47 MM, 7 RCC and 20 HD. However, none of these microRNAs was differentially expressed in the validation cohort.

Specific comments:

MAJOR

1. Screening experiments:
   - Figure 1: I expect blue/yellow bars indicate MM / HD. This should be described.
   - p-values for differentially expressed microRNAs should be reported - If I understand Figure 1 correctly, the differences should be small.
   - The authors did not perform a correction for multiple hypothesis testing or application of a false discovery rate. This may also contribute to the failure of the validation cohort.

2. Validation experiments:
   - Graphical demonstration of results (e.g. boxplots) is warranted. Different detection methods (Exiqon vs. Life Technologies PCR assay) as reason for differences?.

3. Methods:
   - Description according MIQE guidelines is recommended, may be in form of a supplement.

4. Discussion of limitations:
   - The authors should discuss/acknowledge the limitations, e.g. small screening cohort lacking enough power for identification of suitable biomarkers.

MINOR

5. Language:
   - The manuscript needs thorough language editing.

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, and I have assessed the statistics in my report.