Reviewer’s report

Title: Role of the microRNA-183 family in the diagnosis and prognosis of human lung cancer

Version: 1 Date: 27 July 2011

Reviewer: Lynne Bemis

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Minor essential Revisions

Questions from the Journal

1. Is the question posed by the authors well defined?
   Yes the authors are looking for serum and tumor biomarkers of prognosis.
2. Are the methods appropriate and well described?
   For the most part the methods are solid (a few comments are listed below)
3. Are the data sound? yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? yes
5. Are the discussion and conclusions well balanced and adequately supported by the data?
   With some minor modifications (see below)
6. Are limitations of the work clearly stated?
   No they could address more clearly that they don’t know the targets or that much larger studies will be needed to confirm the use of this miR as a biomarker.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? yes
8. Do the title and abstract accurately convey what has been found?
   Title should not include diagnosis because the samples were all collected in 2008 and so the current study does not justify the use of the word diagnostic in the title. The abstract is fine with a bit of rewording (see note below)
9. Is the writing acceptable?
   Yes (few small things see below)

Overview:

As an initial study this is a solid study identifying miR-96, a member of the miR-183 family, as correlated between tumor and serum and predictive in lung cancer. As an initial study the data is well developed, although future studies of more patients and the role of miR-96 in contrast to other members of the
miR-183 family will be of interest.

The authors should also give more details concerning how much RNA was utilized in the reverse transcription assays and several of the conclusions are seeming without experimental support (see below).

The following sentence in the abstract does not make sense.

To identify specific miRNAs with diagnostic and prognostic value for patients with lung cancer, and reveal any correlation between their expression profiles and patient survival.

There does not seem to be any experimental explanation for the authors to draw this conclusion about metastasis.

These results imply that the miR-183 family of miRNAs might participate in the process of cancer metastasis.

In this next section we need a more detailed explanation of why the authors conclude that this family of microRNAs is involved in progression.

Their statement: This suggests that upregulation of the miR-183 family might contribute to lung cancer progression. Needs to be explained in more detail because it is hard to determine how they come to this conclusion with the current study.

A more comprehensive discussion of about the previous studies of the miR-183 family could be included and it ends abruptly with the statement: This needs to be determined.

More detailed methods would be helpful, for example what was the purpose of the 15% polyacrylamide gels?

Several small errors are noted:

transcription followed by real-time quantitative

The results showed that high expressions of

The sentence should read lung cancer primary tissues because lung primary tissues can be misconstrued as normal lung.

"family were highly expressed in lung primary tissues and sera"

**Level of interest:** An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests