Reviewer’s report

Title: MicroRNA-100 is a potential molecular marker of non-small cell lung cancer and functions as a tumor suppressor by targeting polo-like kinase 1

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Reviewer: Olivier E Pardo

Reviewer’s report:

The manuscript describes (1) the downregulation of miR-100 in NSCLC, (2) the effects of modulating miR-100 on the biology of A549 cells, (3) the correlation between PLK1 and the levels and activity of miR-100 in vivo and in vitro.

Despite the limitation that the in vitro work is performed on a single NSCLC cell line, A549, the work is carefully executed and the data valuable.

This reviewer therefore suggests the manuscript to be published but suggests the changes below should be made prior to publication.

Minor Essential Revisions:

1. In the Results section entitled “Association of miR-100 expression with clinicopathological features of NSCLC patients”, the authors should refer to Table 1 provided as supplementary data.

2. In the Results section “Effects of miR-100 expression on growth, apoptosis and cell cycle of NSCLC cells”, the authors should show results for apoptotic cell death and cell cycle changes induced by miR100 inhibitors, even if those did not show significance when the experiments were performed. Indeed, this reviewer wonders whether this has been done at all. If not, this should be performed. If it was done and the results were not significant, this should be stated and/or shown.

3. In the Results section “PLK1 is a functional target of miR-100 in NSCLC”, the authors state: “To identify miR-100 targets, we performed in-silico screening using TargetScan with a recently described strategy”. What strategy do they refer to? This should be referenced.

4. In the Results section “MiR-100 expression was inversely correlated with PLK1 mRNA expression in NSCLC tissues”, the sentence “In addition, the expression of PLK1 mRNA with miR-100 expression in 20 NSCLC tissues.” Does not make sense and should be corrected.

5. The statistical method used to generate the P values should be named in the figure legends. While one may guess them to be the result of t-tests, an ANNOVA test would be more appropriate in some cases. This should be corrected.

6. There are a number of typos throughout the text that the authors should correct prior to publication.
**Level of interest:** An article of importance in its field

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

There are no conflicts of interest