Reviewer's report

Title: Snail Transcription Factor Negatively Regulates Maspin Tumor Suppressor in Human Prostate Cancer Cells

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Reviewer: Manu Platt

Reviewer's report:

This manuscript investigates the link between the transcription factor Snail and Maspin, a serine protease inhibitor as potential mechanism for prostate cancer tumor progression either through migration, invasion, or EMT. Overall these researchers have performed complete set of experiments to support their hypothesis that Snail can negatively regulate maspin expression by directly repressing maspin promoter activity, leading to increased cell migration and invasion. However there are some suggestions that could improve this study.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. Some of the nomenclature for the stably transfected cells Neo 10, Snail 10, Snail 30 are confusing in that, without close inspection, it appears to be dosages, but they are just numbers of transfectants. Perhaps renaming them as Snaillow or Snailhi to be clear.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Overall, clarity regarding the rationale for the use of the different types of prostate cancer cell lines would help the readers understand why some experiments were done with 22rv1 cells vs. C4-2 vs. DU-145 cells, etc.

2. There are also some abbreviations that are not explained that would add clarity to the manuscript.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. In figure 1, the RT-PCR is not as clear, but the Western blot data is. A clearer image of the RT-PCR gel should be included that supports the authors’ points that Snail is up in the prostate cancer cells since from the included figure, only C4-2 and 22rv1 seem to have a signal.

2. For figure 2, a representative picture of the cells post migration or post invasion would add credibility to the figure as it is not especially clear how these numbers were quantified.

3. Figure 5, the representative gel shown in figure 5B should match the quantification shown below in 5C or some explanation should be provided as to
why, because as it appears now, leads to questions of the validity of the results in either 5B or 5C.

4. Statistical significance of each of these assays should be performed as well and indicated with asterisks or not.

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

Declaration of competing interests:

'I declare that I have no competing interests