Reviewer’s report

Title: Inhibitory short peptides targeting EPS8/ABI1/SOS1 tri-complex suppress invasion and metastasis of ovarian cancer cells

Version: 1 Date: 08 May 2019

Reviewer: Mamoun Ahram

Reviewer's report:

The manuscript entitled "Inhibitory short peptides targeting EPS8/ABI1/SOS1 tri-complex suppress invasion and metastasis of ovarian cancer cells is a well-conducted, well-presented study of the use of short peptides for the disruption of a complex of three proteins, EPS8, ABI1, and SIS1, and the inhibition of the metastatic and invasive potential of ovarian cancer cells. The investigators clearly showed the ability of these peptides to disrupt the formation of the protein complex and the ability of cells to invade in vitro and metastasize in vivo. However, there are some comments that the authors must consider:

1. Although the writing is clear, some corrections must be with the English language. For example, in the introduction section, page 3, line 7: "Majority of ovarian cancers arises…” needs to be re-written. The use of "the" sometimes is inappropriate, and so on. Little things that can make the manuscript better.

2. Introduce or discuss: Does ABI1 has any other interactors that can affect cell behavior and their metastatic/invasive capabilities?

3. Introduction: What does LPA in normal physiology? Is it produced by cancer cells? How is it linked to the tri-complex?

4. What is the source of the fetal bovine serum and media components? This can make a difference sometimes in study outcome?

5. Methods: In Matrigel invasion assay: "under well" should be changed to lower chamber

6. What is usually the stability of peptides when added to cells or in vivo?

7. In the last sub-section of the results section, the authors described the metastatic potential of the cells in vivo after injecting the TAT-p+p-8 prides, but not the TAT-SH3-3 peptide? Do the results match the in vitro experiments?

8. In the discussion section (page 12, line 9), the authors abbreviated the name of the complex when it was not abbreviated throughout the manuscript.
9. Page 20, line:19: fix "SOS-1 displays Ras specify"

10. Is it SOS1 or SOS-1? Be consistent.

11. In the conclusion section, the authors claimed that there was "little toxicity". This was not shown or discussion. Besides, what does "little" mean?

12. Fig 4C: arrows are needed to show metastases? What the difference between the upper images of C versus the lower ones?

13. The resolution of the figures needs to be improved
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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Needs some language corrections before being published

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