Reviewer’s report

Title: Antitumour activity of a potent MEK inhibitor RDEA119/BAY 869766 combined with rapamycin in human orthotopic primary pancreatic cancer xenografts

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Reviewer: Rolf A Brekken

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Journal: BMC

Manuscript Title: Antitumour activity of a potent MEK inhibitor RDEA119/BAY 869766 combined with rapamycin in human orthotopic primary pancreatic cancer xenografts

Authors: Chang et al

Reviewer Comments:

Chang et al have posed a well-constructed question on the efficacy and biological impact of a novel MEK inhibitor RDEA119. The study is well done, methodologically sound and presented clearly. The model system the authors use is primary human pancreatic cancer xenografts. The presented data demonstrate that RDEA119 is superior to rapamycin treatment in control of tumor growth in 2 of 3 models. The histology/IHC presented and the molecular analyses are well done with demonstrable differences between treatment groups and control. The authors also evaluate plasma PK of RDEA119. The manuscript was written clearly and the figures are annotated well. Overall the study is acceptable pending minor essential adjustments as indicated below.

1. Please indicate in the methods and legend of Figure 2 when therapy was initiated compared to when tumor were implanted.

2. Please indicate in the legend of Figure 3 that the flow cytometric analyses were conducted from primary tumors, as currently written it is not obvious if the analysis is from cells grown in vitro or from tumor isolates.

3. The authors are to be commended on figures 4-6, very nice display of RDEA119 hitting its target in vivo.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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