Reviewer’s report

Title: SREBP1 promotes the invasion of colorectal cancer accompanied upregulation of MMP7 expression and NF-κB pathway activation

Version: 0 Date: 08 Apr 2019

Reviewer: Graeme Murray

Reviewer's report:

Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

There is a clear need to understand the mechanisms of colorectal cancer invasion. This study has focused on the sterol-regulatory element binding protein 1 and its interaction with the matrix metalloproteinases and NF kappa B pathway.

Specific comments

1. Are there enough colorectal cancer samples in the study on which to make robust conclusions? Sixty samples seems quite a low number of tumours. There does not appear to be any early stage tumours (i.e. pT1 or pT2) in the patient cohort. This needs commented upon.

2. Did all the tumour samples have a uniform fixation, dissection and histopathological reporting protocol? This is important when interpreting immunohistochemical studies, Tumour differentiation in colorectal cancer is usually graded as well, moderate and poor rather than high, medium and low. How were tumour blocks selected for immunohistochemical study?

3. The choice of colorectal cancer cell lines needs commented upon and the identity of individual cell lines confirmed.

4. Why limit the study to MMP7, MMP8 and MMP9? Membrane type MMPs may also be key targets given their central role (especially MT1-MMP) in MMP activation. The roles of matrix metalloproteinases in tumour invasion has recently been reviewed (see J Pathol 2015;237:273-81 and J Pathol 2019;247:629-40).

5. The manuscript would benefit from reading by a native English language speaker.

6. The quality of the photomicrographs presented in the pdf made it very difficult to evaluate the immunohistochemical staining. Similarly, for the fluorescence photomicrographs of the cell lines.
Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.

No

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

No

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

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English  
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests  
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I am a Scientific Advisor to Vertebrate Antibodies who sell antibodies to matrix metalloproteinases.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal