Reviewer's report

Title: Anti-invasive and antiangiogenic effects of MMI-166 on glioma cells

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Reviewer: John F de Groot

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This is a straight-forward evaluation of the effects of a new MMP inhibitor, MMI-166, on glioma proliferation, invasion, angiogenesis and tumor growth in an orthotopic glioma model. The effect of MMP inhibitors on glioma invasion and angiogenesis are known and this study confirms that MMI-166 is able to suppress these malignant phenotypes. The study is well written and the objectives, methods and results are clearly explained.

Major Compulsory Revisions:
None

Minor Essential Revisions:
None

Discretionary Revisions:
1. It would be helpful for the authors to highlight the novel findings in their study.
2. Several MMP inhibitors have failed in phase III clinical trials. It would be helpful if the authors put their findings in the broader context of using MMP inhibitors for the treatment of malignant gliomas.
3. T98G, in some laboratories, is invasive in orthotopic models. It would be interesting to know if MMI-166 blocks tumor invasion in vivo. U87 is not invasive and thus no anti-invasive effect can be expected in this model.
4. MMI-166 is not highly potent - the effective dose for 50% effect is at or above 10 micromolar. Does this agent have off target effects at higher doses?

Level of interest: An article whose findings are important to those with closely related research interests

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.