Reviewer’s report

**Title**: The use of biofluorescence and high-frequency ultrasound imaging for in vivo evaluation of gene therapy vectors

**Version**: 1  **Date**: 13 July 2013

**Reviewer**: Michael Bouvet

**Reviewer’s report:**

1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? Yes
6. Are limitations of the work clearly stated? No
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable? Yes

This is a well written study that compared caliper versus high frequency ultrasound (HF-US) monitoring of subcutaneous tumor growth in nude mice. The authors also evaluated the effect of Herpesvirus-based amplicon for in vitro GFP expression on tumor growth patterns. The authors concluded that HF-US imaging of xenografts resulted in an accurate and informative xenograft volume in a longitudinal study. The volumes generated correlated better with final ex vivo xenograft volume than mechanical calipers. Imaging xenografts with HF-US showed that the amplicon caused lobe formation.

Overall, the manuscript should provide useful and practical information to the many researches who utilize subcutaneous xenografts for in vivo experiments. Curiously, the Herpes amplicon resulted in lobe formation in tumors that was not seen in parental controls. Do the authors have any idea why this occurred? Also, there is statement of the limitations of the work.

**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.