Reviewer's report

Title: Novel anti-HER2 monoclonal antibodies: synergy and antagonism with tumor necrosis factor-alpha

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Reviewer: Thomas Hughes

Reviewer's report:

In this article the authors create antibodies directed against the extra-cellular domain of her2 and examine their biological activity against a range of breast cancer cell lines, with a view to their development as novel therapeutics. The research area is of considerable interest and potential importance and is certainly suitable for inclusion in BMC Cancer. I find that the article is well-written, the data are persuasive and attractively presented, and the conclusions are worthwhile. I have some minor queries relating to the clarity of the text and some further explanation, but otherwise I would recommend that the article should be accepted.

Minor essential revisions:

1) Introduction, 2nd para. The authors comment that Trastuzumab is “quite efficient” as a treatment – could the authors be more specific about what they mean by this? Similarly, the authors say that acquired resistance is “frequent” – could the authors comment how frequent?

2) Methods. I was surprised that the authors fixed cells before the flow-cytometry assays. Why was this, and would the assays work on live (unfixed) cells? I was also surprised by the use of only a very short incubation allowing cells to attach before additional of test compounds (antibodies/TNF) in cell growth assays. Are the authors confident that cells had actually attached in this period, or is there a possibility that some of the influences they detect relate to inhibition of attachment, rather than influences on growth? Do they get the same results if longer (over-night?) periods are allowed for attachment?

3) The legends for Fig 6 and Additional File 3 suggest that things are described in other files/figures. Do the authors mean this – the files/figures contain more data rather than anything in the way of description.

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