Reviewer’s report

Title: Effect of dabrafenib on melanoma cell lines harboring the BRAFV600D/R mutations

Version: 2 Date: 5 October 2012

Reviewer: Michael Davies

Reviewer’s report:

- Major Compulsory Revisions

1. The paper by Yang et all (Cancer Res, 70(13): 5518-27, 2010) reported the sensitivity of a panel of human melanoma cell lines to the selective BRAF inhibitor PLX4032 (vemurafenib). This study included human melanoma cell lines with BRAF V600D (including WM2664) and V600R mutations, and showed that they were more sensitive than BRAF-WT cell lines. Similar results were reported for WM2664 in PCMR (Deng, PCMR, 25(2): 248-58, 2012). Neither of these papers is cited in the manuscript. As to date all data supports that the sensitivity profiles of dabrafenib and vemurafenib are the same, it is not clear how the current paper adds to existing data, other than showing that similar results are observed with dabrafenib as have been reported previously with vemurafenib/PLX4720. The authors need to cite these previous manuscripts and explain how he current result add unique information that will be of value to the field.

- Minor Essential Revisions

1. In figure 1B, error bars should be shown reflecting the standard deviations, and the significance of differences in the results observed with the different cell lines should be determined (i.e. t-tests).

2. In figure 1C, total protein levels of ERK should be shown as a loading control. In addition, the methods or legend should indicate the duration of the BRAF inhibitor treatment.

3. The manuscript needs grammatical editing/revision.

4. The authors need to acknowledge the limitations of making conclusions based on experiments with a single cell line of each of the genotypes of interest.

- Discretionary Revisions

1. The effects of dabrafenib should be compared not only to a BRAF-wild-type melanoma cell line, but also to one or more cell lines with a BRAF V600E mutation.

Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.