Reviewer's report

Title: Resistance gene expression determines the in vitro chemosensitivity of non-small cell lung cancer (NSCLC)

Version: 2 Date: 23 June 2009

Reviewer: Paul Boutros

Reviewer's report:

The authors have made a strong and admirable effort to address the previous comments. In general I think this has been well-done, but a few minor points remain to be clarified:

1. Statistical analysis of PCR data

At least to me, the statistical analysis section remains unclear. The author's description in the rebuttal letter helped a little, but I'm still confused as to what F < 0.1 means. This is described as a probability, but of course the F-statistic is not a probability but a variable that follows an F-distribution with a given degrees of freedom. I'm still not clear if the authors are referring to an inclusion probability or to an F-threshold. And if the latter, what precise statistical test is being done to generate that F-statistic. Similarly the AIC analysis needs to be at least mentioned in the paper. It's fine if the authors do not want to give detailed results, but it would be inappropriate to use a procedure like that and not to mention its use in the paper I think. From the current description in the Methods, I at least would be unable to replicate the statistical analyses used in this paper.

2. Synergy

I am perfectly fine with the authors not formally evaluating synergy, but the Discussion paragraph on this topic should note that the current dataset could be used to formally evaluate this issue.

3. Figures

My version of the updated manuscript had two figure 3s and legends for figures 1,2,4 only.

4. Raw data deposition

It is my understanding that GEO will support PCR platforms. Regardless, the raw data deposited as a supplementary table is lacking numerous key pieces of information to allow use of this dataset. First, I could not find any clinical parameters for each case. Second, there IndexSUM scores for each case/treatment are not given. Third, several genes are described based on identifiers that are hard to interpret. For example I guess 18S is the ribosomal control, but "cN II" isn't familiar to me. I guess p21 is Cdkn1a, but it's also an alias for Tceal1 and Nsg1 so this is ambiguous. Proper gene-identifiers are needed. Lastly, in the version I received many of the column titles are truncated (e.g.
"gamma H2" for what I presume is "gamma H2AX").

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests