Reviewer’s report

Title: Enhancing SHP-1 expression by 5-Azacytidine inhibits STAT3 activation and confers sensitivity in Lestaurtinib (CEP-701) resistant FLT3-ITD positive Acute Myeloid Leukemia

Version: 2
Date: 13 February 2015
Reviewer: Junko Ohyashiki

Reviewer’s report:

It is of great interest to test the concept of epigenetic “priming” as a strategy to sensitize tumors to subsequent chemotherapy, however, the authors draw a conclusion that is not supported by their data.

Major criticism
1) Down-regulation of DNMT3 is shown by RT-PCR. The authors should present the results of Western blotting or enzyme activity to clarify whether 5-Aza has a definite demethylated effect on the 5-Aza treated-cells.
2) Another concern is the incubation period for priming of 5-Aza. The authors could not completely rule out the possibility that minor population of MV4-11R-cep, which has expression of SHP-1 and lower expression of DNMTs obtained growth advantage during incubation in the presence of AZA. The authors should clarify this point.

Minor criticism
1) Quality of figures is not good (especially Fig1, 4 and 8).
2) Typographical error should be corrected.

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.