Reviewer's report

Title: Epigenetic mechanisms involved in differential MDR1 mRNA expression between gastric and colon cancer cell lines and rationales for clinical chemotherapy

Version: 4 Date: 23 May 2008

Reviewer: Masakazu Yashiro

Reviewer's report:

Discretionary Revisions

The authors added new experimental data in response to the reviewers’ comments. They provided evidence of DNA methylation status by bisulfate DNA sequencing assay. Authors demonstrated that methylation status by quantification PCR-based methylation analysis were completely matched with the results obtained by bisulfite DNA sequencing assay. They suggested that complete methylation in the extended MS1 site was responsible for increased MDR1 mRNA expression by the treatment with 5AC. In addition, MS1 site derived from exon1 of MDR1 promoter has shown to be more important with respect to gene expression than MS2 site from intron 1 of MDR1 promoter. This DNA sequencing studies revised the manuscript extensively.

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.