Reviewer’s report

Title: Quantitative Assay for the Detection of the V617F variant in the Janus kinase 2 (JAK2) gene using the Luminex xMAP nanotechnology

Version: 1 Date: 17 November 2009

Reviewer: Junko Ohyashiki

Reviewer’s report:

This is a well-written paper containing interesting methodology which merit publication.

The following points should be clarified;

Major criticism

(1) This methodology requires optimal kinetic parameters. Based on the results shown in Figure 4, it is likely the threshold of detection to be more than 2%. Since there was no statistics in the results section, it is hard to conclude the threshold of detection.

(2) The authors used DNA from UKE-1 cells which has 2 mutated alleles or HEL with one mutated allele. It is better to use plasmids containing both wild type and mutated JAK2 as references.

(3) Allelic burden of JAK2 exon 12 is known to be extremely low, therefore, it is obvious that multiplex assay is suitable for detection JAK2 exon 12 (last paragraph).

(4) No description of ethical issue.

Minor

(1) This paper lacks two important references


(2) In Figure 5, there was no A and B. Please indicate.

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.