

# Annals of Blood Disorders

Review Report

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**Article Title:** An Uncommon E450G Mutation within the BCR/ABL Kinase Domain in a Chronic Myeloid Leukemia Patient Presenting with Resistance to Imatinib and Nilotinib

**Reviewer:** Sha Yi, Department of Pediatrics, Emory University School of Medicine, USA

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## Review Report

In this study, the authors reported an uncommon isolated mutation (E450G) in a TKI-resistant patient who responded poorly to imatinib and nilotinib. They further detailed the effect of the mutation on BCR/ABL and found that the mutation does not affect the structure of the imatinib/nilotinib binding site but in the secondary and tertiary structure of the ABL kinase by using combination of circular dichroism, intrinsic fluorescence and ANS fluorescence spectra. Although the E450G of the ABL kinase has been reported previously, however, this mutation was always identified along with other mutation. However, in this case, the E450G mutation was detected as an isolated mutation at the time imatinib failure which is really rare. The finding is really interesting, especially, the molecular simulation provides a convenient approach to investigate the mechanisms of TKI-resistance as well as develop more efficient therapies. Overall, the paper was well organized and approximate figures were given. From my point of view, this paper is well-done and thus merits to be published.

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.