Reviewer's report

Title: Pyrrolo[1,2-B][1,2,5]Benzothiadiazepines (PBTDs) induces apoptosis in K562 cells

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Reviewer: Yoo Hong Min

Reviewer's report:

General

Marfe G et al reported that PBTD-1 and -3 treatments induce the apoptosis of K562 leukemia cells through the activation of caspase cascades. In addition, they showed that the treatment of K562 cells with PBTD-1 and -3 is associated with down-regulation of BCL-2 and up-regulation of Bax.

I think this paper does not provide any significant scientific progress compared to their previous paper entitled as “Pyrrolo[1,2-b][1,2,5]benzothiadiazepines (PBTDs): A new class of agents with apoptotic activity in chronic myelogenous leukemia K562 cells and in cells from patients at onset and who were imatinib-resistant” (Silvestri R, et al, J Med Chem 49(19):5840-4, 2006). Although the authors suggested that BCL-2 is down-regulated after PBTD treatment, which seems to be one of the major findings in their research, the decreased levels of BCL-2 is not evident in the Fig. 2. In addition, they did not provide the mechanism underlying the down-regulation of BCL-2 protein, in relation to Bcr-Abl molecule, after treatment of K562 cells with PBTD. Manuscript was not concise and well organized. Most of the introduction and discussion is filled with general principles of apoptosis rather than proper description. Although this manuscript has some interesting points about PBTD-induced apoptosis in K562 cells, it is not acceptable for publication in BMC journal because it does not provide the originality and exceptional scientific importance.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because too small an advance to publish
Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.