Reviewer’s report

Title: Resveratrol protects leukemic cells against cytotoxicity induced by proteasome inhibitors via induction of FOXO1 and p27Kip1

Version: 2 Date: 16 December 2010

Reviewer: Alessandra Mocali

Reviewer’s report:

I think that some of my criticisms have not been sufficiently dealt with.

Major Compulsory Revision

1. I have no doubt about the protective effects of resveratrol after 24 h treatment. However I do not find acceptable citation of Chakraborty’s reference as “consistent” with these results, as it is evident also from the title: “Resveratrol induces apoptosis in K562 (chronic myelogenous leukemia) cells by targeting…..”, without any further discussion. At least I suggest to discuss the difference by sub-G1 fractions quantification and annexin V staining image. For instance, the use of 5 uM concentration of resveratrol in present work could be emphasized.

Minor essential revisions:

1. I didn’t find, within the Discussion section, any sentence about the possibility of induction of cell differentiation by cell cycle blockage. Please, discuss this topic more extensively.
2. In the legend to fig 2, the staining procedure for annexin V should be added to explain the type of FACS analysis carried out.
3. In the text some mistakes are still present, e.g. pag 15: “resveratrol also compromised the apoptotic effects of other three structurally different proteasome” should be “proteasome inhibitors”.

Level of interest: An article whose findings are important to those with closely related research interests

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'