Reviewer's report

Title: Survivin selective inhibitor YM155 induce apoptosis in SK-NEP-1 Wilms tumor cells

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Reviewer: Wei Zhang

Reviewer's report:

This study demonstrated YM155, a survivin suppresant, inhibited the growth and induced the apoptosis of SK-NEP-1 cells in vitro and in vivo. So far there are some studies exploring the role of YM155 in cancer therapeutics. And a phase II study in patients with refractory large B-cell lymphoma showed YM155 was well tolerated but with limited single-agent activity. These studies mainly tried to explain the growth inhibition and apoptosis effects induced by YM155 through certain molecules or pathways. In this respect, I consider this study valuable cause it employed Real-time PCR array to show the expression profile of genes regulated after YM155 treatment, and Ingenuity pathway analysis (IPA) represents new potential targets of YM155. YM155 showed very good anti-tumor effects in Wilms tumor cell lines, SK-NEP-1 cells, like in many other types of tumors. This shows YM155 could be a potential pan-antitumor reagent.

Overall I think the study is well designed and the results are presented generally well. But some spellings should be corrected to make it more readable.

Minor revisions:
1. The background in Abstract is repeated described: survivin is described twice as a member of inhibitor of apoptosis protein family.
2. In background, paragraph 2 -line 6: survivin promoter activity should be strongly “activated”, but not "expressed" in tumor cells#
3. In methods describing “Xenograft assays the treatment effect of YM155 in nude mice”: 10 days after injection, mice were “treated” with PBS... not treatment.

Level of interest: An article of importance in its field

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.