Reviewer's report

Title: Impact of kinesin Eg5 inhibition by 3,4-dihydropyrimidin-2(1H)-one derivatives on various breast cancer cell features

Version: 5 Date: 5 March 2015

Reviewer: Marzia Pennati

Reviewer's report:

In the revised version of their manuscript, the authors did not satisfactorily address the concerns raised. Consequently, the study has not been improved at all compared to the original version.

Major compulsory revisions

1-2) These points have been poorly fulfilled. I criticized the use of doses considerably higher than IC50 values (1.0 mM for 4m, 0.8 mM for 4bt, 0.4 mM for 4p, 1.0 mM for 4bc, and 0.8 mM for 4x) to assess the effects of the compound on cell cycle phase distribution and induction of apoptosis. The new data reported in Additional file 4 are not convincing. As already suggested in the first revision, the authors have to analyze the effects of DHPMs on cell cycle perturbation and induction of apoptosis at least after exposure to IC50 values.

3) The authors fulfilled this point.

Minor points

1) The Authors did not fulfill this point. To obtain the IC50 value from the median curve is not a correct approach. The authors should obtain the IC50 value from each curve generated from a single experiment, and successively calculate the mean value (and the SD).

2) The authors fulfilled this point.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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