Reviewer's report

Title: Chemotherapy induces Notch1-dependent MRP1 up-regulation, inhibition of which sensitizes breast cancer cells to chemotherapy

Version: 2 Date: 30 May 2015

Reviewer: Liwu Fu

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The current study is to show that chemotherapeutical agent such as Dox could induce ABCC1 overexpression in cell and clinical tissue models. The overexpression of ABCC1 is associated with Notch pathway. Downregulation of Notch by siRNA or Notch inhibitors could inhibit ABCC1 overexpression and reverse MDR. Overall, these data are rather novel and interesting. The methods were appropriate. The interpretation of data is in general logic. And it will be of significant interest to investigators in the field of drug resistance.

Comments:
1. How long was ABCC1 overexpression induced by Dox in T47D and HB2 cells?
2. Please confirm the overexpression of Notch and ABCC1 by siRNA in protein level. (Western blot)
3. As we know Dox is also a fluorescent agent, did it affect the examination of calcein accumulation?
4. Could Notch inhibitor reverse MDR in vivo?

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests