Reviewer's report

Title: Dietary grape polyphenol resveratrol increases mammary tumor growth and metastasis in immunocompromised mice

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Reviewer: Takako Sakamoto

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(Major Compulsory Revisions)

1. Authors demonstrated that low dose resveratrol promotes breast cancer progression and metastasis in mouse model bearing MDA-MB-231 or MDA-MB-435 human breast cancer cells. It seems to be an important and interesting finding. They showed a trend in upreguation of total AKT, total JNK, and total PAK1 protein in only MBA-MB-231 derived mammary tumors, but not in MDA-MB-435. These results are insufficient to assess activations of these signaling pathways, as I pointed out in comment #6 in previous review.

Authors responded that they attempted to detect the phospho forms of these signaling proteins in the tumor lysates and found that the phospho-groups had degraded in some samples. I recommend authors to reprobe using the same membrane they used in previous experiments with antibodies against phosphorylated (activated) form of these proteins. Alternatively, they may perform immunohistochemical analysis. In addition, authors should explore molecular mechanisms of effect of resveratrol on tumor growth in both cell lines, MBA-MB-231 and MDA-MB-435.

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

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.