Reviewer's report

Title: Antitumor Mechanisms of S-Allyl Mercaptocysteine for Breast Cancer Therapy

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Reviewer: yunxue zhao

Reviewer's report:

This work investigated anticarcinogenic effects of S-allyl mercapto- cysteine (SAMC) for breast cancer therapy with unique mechanisms of apoptosis through the activation of both extrinsic and intrinsic pathways. Their findings may support the therapeutic potential of SAMC in both ER-positive and ER–negative breast cancer patients. The experimental designs were well plotted and based sounding scientific principles. Many state-of-art biological techniques were used in the elucidation of SAMC antitumor mechanisms. Various original experimental results are used to support the proposed pathways.

The article was clearly written and its contents are coherent. The literature review and the novelty of this study were well outlined. The analysis of figures and tables was appropriate. The sufficient discussion of proposed antitumor mechanisms was given based on the sufficient experimental data. The structure of this article clearly meets the standards of publication.

I think this article clearly merits its publication. The manuscript can be accepted on the condition of few minor grammatical revisions as listed below.

Minor grammatical Revisions
1. Page 2, line 10: …by inducing cell cycle arrest in G0/G1 phase...
2. Page 12, line 15: …SAMC was able to improve E-cadherin...
3. Page 15, line 17: It is believed that...

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