Reviewer’s report

**Title:** Inhibition of PI3K/AKT molecular pathway mediated by membrane estrogen receptor GPER accounts for cryptotanshinone induced antiproliferative effect on breast cancer SKBR-3 cells

**Version:** 0  **Date:** 22 Oct 2019

**Reviewer:** Aniella Abi-Gerges

**Reviewer's report:**

This study addresses the role of the membrane estrogen receptor (GPER) in SKBR-3 cells. The authors tested the effect of cryptotanshinone (CPT) on the survival and proliferation of these cells. Results showed that CPT decreases the survival rate of SBR-3 cells and blocks their proliferation, an effect due to GPER via PI3K/pAKT pathway.

The study is complete however, please find my minor comments below:

1- **Edit:** Written English

The text needs to be edited. Please have your manuscript revised/edited by an English language professional.

2- Regarding the figures, for a better comprehension, I would recommend to switch the order of the results. For instance, in Fig 1B, show CON, CPT 5 uM and then CPT 10 uM in the histogram. Please apply this order to figures: 3, 4 and 5.

Besides, in Fig 6A switch the order as well: CON, CPT, CPT+G1; CPT+G15. Apply the same strategy to the figures when appropriate.

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**

If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**

If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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