Reviewer's report

**Title:** Chinese herb mix TG-Decoction up-regulates expression of oestrogen receptors ER alpha and beta in ovariectomized rats

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**Reviewer:** Han-Jung Chae

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Chinese herb mix Tiao-Geng-Tang (TG-Decoction) up-regulates expression of estrogen receptors ER# and # in ovariectomized rats.

This study aims to Chinese herbal mixture extract, in balancing female hormones, in regulating expression of estrogen receptors and in preventing aging-related tissue damage. They used Ovariectomized 5-month-old female rats. Their results are not enough to suggest the mechanism of TG-decoction.

1. They need to show representative expression patterns of protein level.
2. ER expression is related with anti-oxidant effect in hypothalamus?? The authors need to show their rationals. Is it casually related or resultantly related with it??

There are GAP between ER alpha, beta expression and SOD activity...

They need to clarify the relationship logically not casually.

3. I don't think they are showing their mechanism clearly in this study. In addition, the discussion section is not enough to suggest their mechanism. They need to upgrade their discussion.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'