

RETRACTION

## Retraction: Protective Effects of Essential Oils as Natural Antioxidants against Hepatotoxicity Induced by Cyclophosphamide in Mice

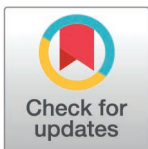
The *PLOS One* Editors

Following the publication of this article [1] concerns were raised with results presented in Figs 3 and 4. Specifically,

- The following panels appear to partially or fully overlap, despite being used to represent different experimental conditions or samples obtained from different animal species, calling into question the reliability of the associated quantified results:
  - All  $\beta$ -actin panels in Figs 2 and 3 of this article [1] and all  $\beta$ -actin panels in Figs 1 of [2], [3], and [4].
  - The Fig 3 C-reductase panel, the Fig 3C CYP2C6 panel, and lanes 8–10 of the Fig 3 CYP3A4 panel.
- Similarities were noted between multiple regions within Fig 4C.

In light of these concerns, which call into question the integrity and reliability of the published results, the *PLOS One* Editors retract this article.

All authors either did not respond directly or could not be reached.



### References

1. Sheweita SA, El-Hosseiny LS, Nashashibi MA. RETRACTED: Protective Effects of Essential Oils as Natural Antioxidants against Hepatotoxicity Induced by Cyclophosphamide in Mice. *PLoS ONE*. 2016;11(11):e0165667. <https://doi.org/10.1371/journal.pone.0165667>
2. Sheweita SA, Meftah AA, Sheweita MS, Balbaa ME. Erectile dysfunction drugs altered the activities of antioxidant enzymes, oxidative stress and the protein expressions of some cytochrome P450 isozymes involved in the steroidogenesis of steroid hormones. *PLoS One*. 2020;15(11):e0241509. <https://doi.org/10.1371/journal.pone.0241509> PMID: [33166302](https://pubmed.ncbi.nlm.nih.gov/33166302/)
3. Sheweita SA, Almasmari AA, El-Banna SG. Tramadol-induced hepato- and nephrotoxicity in rats: Role of Curcumin and Gallic acid as antioxidants. *PLoS One*. 2018;13(8):e0202110. <https://doi.org/10.1371/journal.pone.0202110> PMID: [30110401](https://pubmed.ncbi.nlm.nih.gov/30110401/)
4. Sheweita SA, Wally M, Hassan M. Erectile Dysfunction Drugs Changed the Protein Expressions and Activities of Drug-Metabolising Enzymes in the Liver of Male Rats. *Oxid Med Cell Longev*. 2016;2016:4970906. <https://doi.org/10.1155/2016/4970906> PMID: [27800121](https://pubmed.ncbi.nlm.nih.gov/27800121/)

### OPEN ACCESS

**Citation:** The *PLOS One* Editors (2026) Retraction: Protective Effects of Essential Oils as Natural Antioxidants against Hepatotoxicity Induced by Cyclophosphamide in Mice. *PLoS One* 21(3): e0344547. <https://doi.org/10.1371/journal.pone.0344547>

**Published:** March 10, 2026

**Copyright:** © 2026 The *PLOS One* Editors. This is an open access article distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.