

# Review of: "Selenium Alleviated Oxidative Stress-Mediated Complex Poisoning Mechanism in Lead-Treated Chicken Kidneys: Inflammation, Heat Shock Response, and Autophagy"

ziwei zhang<sup>1</sup>

<sup>1</sup> Northeast Agricultural University

**Potential competing interests:** The author(s) declared that no potential competing interests exist.

It is appreciable that the poisoning mechanism of Pb toxicity in chicken kidney, as oxidative stress, heat shock response, inflammatory response, and autophagy, and the alleviated effects of Se on Pb induced renal damage has been established by the paper. This study enriches the toxicity study of Pb, and provides new theoretical fundamentals for exploration of renal protection by Se. It is of great significance to scientific research and production practice. But then there are certain check points to be given much emphasis.

1. The abstract is not written pleasingly, the authors did not identified meanings of this study. Just for abstract, the methods should be written briefly and p-values are necessary for results.
2. The paper is in need of highlights and abbreviation table
3. The method techniques should be described details, and need more references.
4. Text language needs serious improvement, such as line 81-84 "Na<sub>2</sub>SeO<sub>3</sub>" and " Se group was offered (CH<sub>3</sub>OO)<sub>2</sub>Pb"; line 162 "Histology aerations"
5. The writing format should keep uniform, such as "P > 0.05" or "*P* > 0.05"; "ATG 5" or "ATG5"; "Control" or "control group"
6. Figures - the images in figures 4 need to be improved, the title of X-axis was missing.
7. Line 253 "P < 0.05, vs. the control group or the Se group" If there is statistical difference, authors need identify the object
8. Line 264 you mention " Many of these diverse toxic effects are manifested at both cellular and molecular levels and share common mechanisms of action across various tissues and organs ". You did not write any reference.
9. Line 302 you mention "But when inflammatory response is inappropriate it can lead to damage of surrounding normal cells" . you are in need of reference.
10. Line 306 you mention "IL-4 and IL-12 $\beta$  were proinflammatory mediators and IL-2 was anti-inflammatory one", you are in need of reference.
11. Line 326 you mention "HSPs also play a role in sensing oxidative stress, are involved in restoring physiological protein conformation during and after oxidative stress, and which are characteristic

features of a number of pathological conditions". Also, you are in need of reference.

12. Line 362 – 363 the authors write " Previous studies have confirmed potent antioxidative ... . Some researches demonstrated that. " If those "Some researches" were included in "Previous studies"? and "Previous studies" need to prove the references.

13. Conclusion need improvement, should including the research meanings.

The manuscript requires minor revisions before publication is possible.