Reviewer’s report

Title: Effects of uremic solutes on reactive oxygen species in vitro model systems in monitoring the renal function

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Reviewer: Hidehisa Shimizu

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This article describes antioxidant effects of uremic solutes in in vitro. The manuscript show interesting results, but there are some comments should be considered.

Major Compulsory Revisions

1. The authors chose uremic solutes to check antioxidant effects in the study. Why were these uremic solutes chosen? The authors should be described.
2. In the patients of CKD and HD, one of the highest uremic solute in serum is indoxyl sulfate. Why did the authors not check antioxidant effects of indoxyl sulfate?
3. There are reporting that L-arginine is a useful molecule to prevent life-style diseases. Therefore, it is possible that L-arginine also prevents progression of CKD and HD through antioxidant effects. However, p-cresol is a typical uremic toxin and induces production of reactive oxygen species (ROS) in some tissues. The authors should discuss the character of p-cresol, along with the present results, in the patients with CKD and HD.

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

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.