Reviewer's report

Title: 3,4-Dihydroxytoluene, a Metabolite of Rutin, Inhibits Inflammatory Responses in Lipopolysaccharide-Activated Macrophages by Reducing the Activation of NF-kappaB Signaling

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Reviewer: lamia Guizani-Tabbane

Reviewer's report:

The manuscript still contains a myriad of errors and should be corrected by a native English speaker prior to be acceptable for publication.

Examples below:

Results and discussion

- To test the inhibitory effect of rutin metabolites on inflammation, we first measured the nitric oxide (NO) production, an inflammation marker, on LPS-simulated RAW 264.7 cells pretreated with rutin or its metabolites including DHT, DHPAA, HPAA and HVA. The result indicates that DHT had a powerful inhibitory effect at 10mM on NO product…

- In the sentence: “Since NO production can be catalyzed by inducible NO synthase (iNOS), we further reduces iNOS expression in a dose dependent manner.” There must be some words missing: Since NO production can be catalyzed by inducible NO synthase (iNOS), we further investigated the effect of DHT on iNOS expression. The result showed that DHT can significantly reduce iNOS expression in a dose dependent manner.

- The results indicate that LPS can indeed induce MAPK signaling, however, DHT had no effect on this signaling (Figure 4). Indeed, …

- According to this signaling, we found that DHT can significantly reduce the phosphorylation level of IκB-a in LPS-stimulated RAW 264.7 cells.

- These results indicate that DHT treatment attenuate the activation of LPS-stimulated NF-κB signaling cascade in macrophages.

- Taken together, our results show that the metabolites of rutin, DHT, can efficiently inhibit LPS-stimulated inflammatory response via IκB-NFκB signaling.

- Our results suggeste that the reduction of iNOS and COX-2 may be the consequence of NF-κB inactivation.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

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